TRAFFIC IMPACT ASSESSMENT

26 CAMDEN STREET, PENRITH

Prepared for:	Nepean Plant Hire
Date Prepared:	July 2021
Revision:	1.2
Penrith City Council #:	TBC

Contents

1. Introduction

Safeway has been commissioned by Nepean Plant Hire to undertake a Traffic Impact Assessment of their site located at 26 Camden Street, Penrith. The site is currently operating and being used for storage of trucks, machinery, equipment, and associated offices for the Plant Hire business. It is sought to attain formal approval for the current operation without proposing changes to the use. The site has a total area of 3056sqm. The site is located within the Penrith Council LGA and has been assessed under Penrith Development Control Plan 2014 (DCP).

This report entails our investigations and assesses the impacts of this site use on the surrounding environment and assesses compliance with the DCP and the relevant Australian Standards. This development would not require referral to the Roads and Maritime Services (RMS) under the provisions of SEPP (infrastructure) 2007.

2. Site Location

The site is situated on the eastern side of Camden Street, near the intersection with Gordon Street. The site is situated within an industrial precinct and zoned IN1 (General Industrial).

The site contains a number of structures which comprise office space and shipping containers used for storage. The site location is depicted in Figure 1 and an aerial photograph is depicted in figure 2.

Figure 1: Street Map

Figure 2: Site Plan

3.0 Existing Traffic Conditions

3.1 Road Network

The road hierarchy of the network surrounding the site are described below.

Camden Street: A local dead-end road which runs in a north-south direction from Lugard Street. Camden Street is approximately 440m long. The street has a default 50km/h speed limit and contains No Parking restrictions adjacent to the neighbouring sites access. The restrictions are situated along the northern side in the vicinity of the subject site and extend approximately 10m.

Gordon Street: A local road which runs in an east-west direction between Castlereagh Road and Leland Street. The street has a default 50km/h speed limit. It intersects with Camden Street forming a 4 leg intersection with Stop Control giving Camden Street priority.

Castlereagh Road: A classified road which runs in a north-south direction between Great Western Highway and St Andrews Road. It then narrows and extends to Lennox Street. It has a speed limit of 60km/h.

3.2 Public Transport

The site location is relatively well serviced by buses. The existing bus services that operate in the locality are depicted in Figure 3. Buses are accessible along Castlereagh Road. The following services are provided within the vicinity:

- 673 (Windsor to Penrith via Cranebrook)
- 783 (Werrington to Penrith via Jordan Springs)
- 784 (Penrith to Cranebrook)

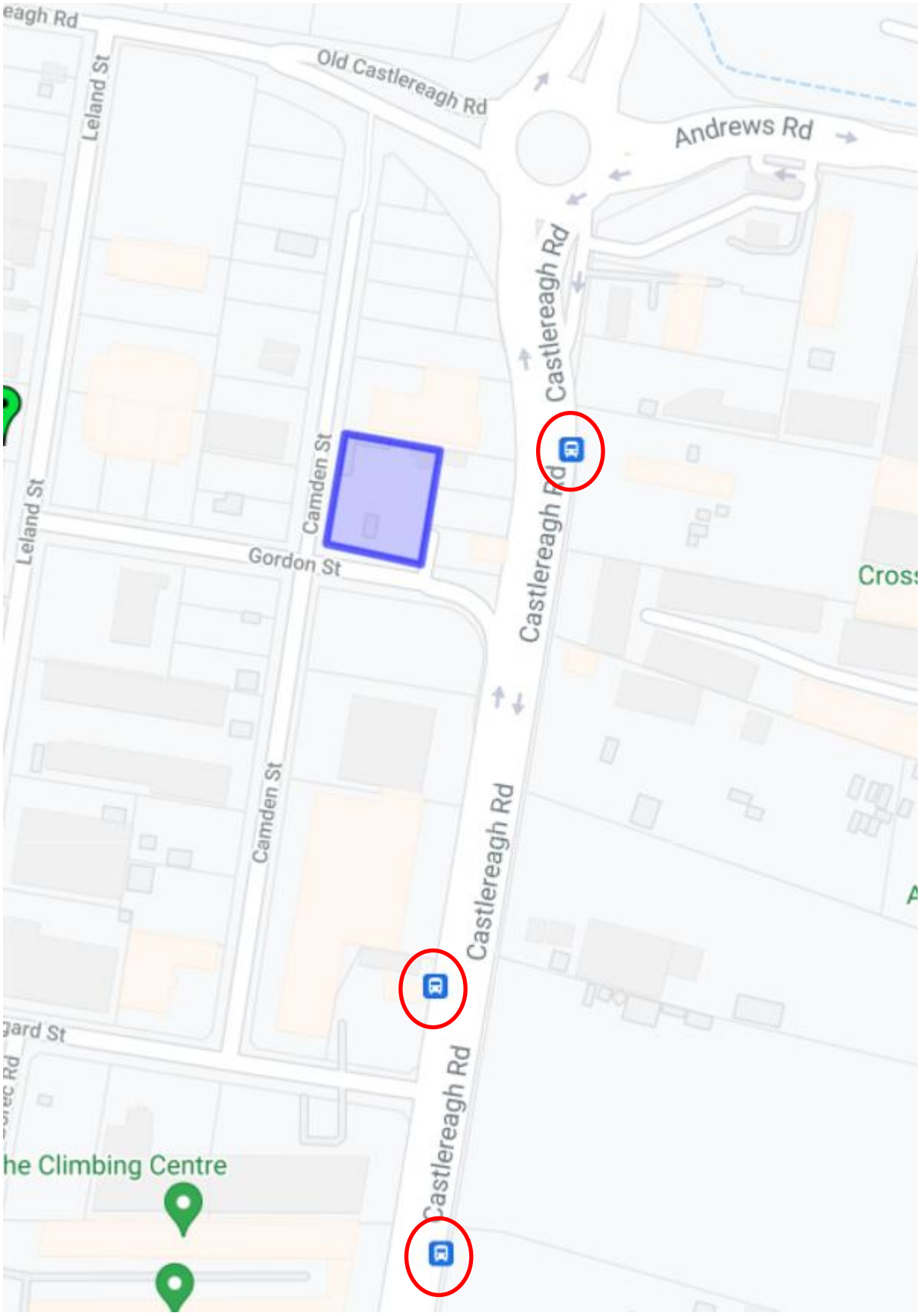


Figure 3: Public Transport Map

3.3 Existing Site Traffic Generation

The subject site currently operates as a storage facility for trucks, machinery and equipment however formal approval is being sought for the existing use. There is no historic data detailing the number of movements associated with its previous use on record. However, the site has been operational for numerous years and seeks to continue operating at the same capacity. The site currently stores 15 trucks, 6 trailers, and 10 machine/plant. Analysis of the business has identified that the trucks and machines are generally leased once a day. This equates to 2 movements per stored truck and machine/plant each day i.e. 62 movements per day (not including office staff movements). Three employees will be on site; this will generate 2 movements per employee per day. Therefore, total number of movements per day is 68.

4 Description of Proposed Development

As discussed, the proposed application seeks to attain the formal approval for a site which has been operational for a number of years. The operators do not seek to make changes to the operations or the capacity but rather maintain that the site be used for storage of 15 heavy rigid trucks, 6 trailers and 10 machines and equipment. It is generally anticipated that each of the trucks and machinery are expected to leave the site once per day thereby generating approximately 62 vehicle movements per day. The number of employees also seeks to remain unchanged with 3 employees on site generating a further 6 movements per day. It should be noted that the majority of the movements of the truck and plant would likely be outside the peak traffic periods as they are charged by the hour.

5 Traffic Generation and Impact of the Proposed Development

As discussed, the site has been operational for some years and no changes are proposed to the existing capacity or operations of the site. Therefore, the net increase is nil.

As discussed in section 3.3 the traffic generation will remain the same and each machine and plant is presumed to be leased once per day thereby accumulating 2 movements per day per machine/plant. This is considered a conservative measure as some machines may not be leased on some days or may be in repairs. The following table depicts anticipated vehicle movements assuming each machine is leased twice in a day:

Vehicle Type	Number of vehicles	Inbound / Outbound movements (per vehicle per day)	Total Movements
Inbound			
HRV trucks	15	2	30
Trailer	6	2	14
Equipment / Machinery	10	2	20
Total outbound / inbound			**64**

The movements are generally sporadic and subject to scheduling of particular jobs that the machinery is being used on. Each site would have different requirements and may require the machinery at particular times.

The intersections were observed to be operating satisfactorily, noting that due to Covid-19 and traffic movements on roads may differ from full operation times. Regardless, due to the fact that there will be no increase in traffic generation than existing a further review post Covid-19 is not considered necessary. Further, the site is situated in an industrial precinct and would not have any impact on residents as a result of its machinery and truck movements. It is also worthwhile noting that the size of trucks currently used will also be maintained and there is no proposal to increase the size of trucks attending to pick-up machinery or be stored on site.

6 SITE PARKING

6.1 Car parking

The site provides 5 dedicated car parking spaces, 3 spaces are for the employees on-site and 2 for visitors. The spaces are located on the north-western section of the site, directly outside the office sheds. The provision of the 5 car parking spaces is deemed sufficient as the spaces will mainly be utilised to accommodate employees of the site and the occasional visitors to the site. As discussed in this report 3 employees will be on-site at any one time.

Penrith DCP 2014 and RMS Traffic Generation Development documents do not provide rates for the existing/ proposed use of the site, however based on figures attained from the existing operation, the 5 spaces are sufficient to accommodate parking demand. This

assumes worst case scenario that all employees will attend and leave work as a driver of a private vehicle. It therefore assumes the unlikely notion that no employees will carpool, utilise public transport, walk or cycle to the site.

According to Australian Standard AS2890.1-2004 the proposed development's parking bays would be categorised as a User Class 1 and 1A, namely:

Employee and Commuter parking (Class 1) and Residential, domestic and employee parking (Class 1A).

The requirements for User Class 1 and User Class 1A car parks, as specified in the Australian Standards, are as follows:

- Bay width 2.4m or 2.3m for small cars;
- Bay length 5.4m or 5.0m for small cars; and
- Aisle width 5.8m.

The proposed development provides parking bays with minimum dimensions of 2.5m by 5.4m and circulation aisles well in excess of the minimum width of 5.8m. In this regard these dimensions are compliant with Australian Standards (AS/NZS 2890.1-2004) and it is expected that they will operate in a safe and efficient manner.

6.2 Truck Parking Bays and Machinery Storage

As identified in section 5 of this report the site provides parking and storage for:

- 15 Heavy rigid trucks
- 6 trailers
- 10 machines / plant.

The storage and parking areas are scattered within the site. Swept paths have been undertaken, reproduced in the appendix of this report, depicting the manoeuvrability of vehicles and the location of storage. The layout is relatively consistent with the existing site configuration. It should be noted that the truck parking bays are unmarked as the surface is gravel. The drivers are experienced drivers and relatively familiar with the site.

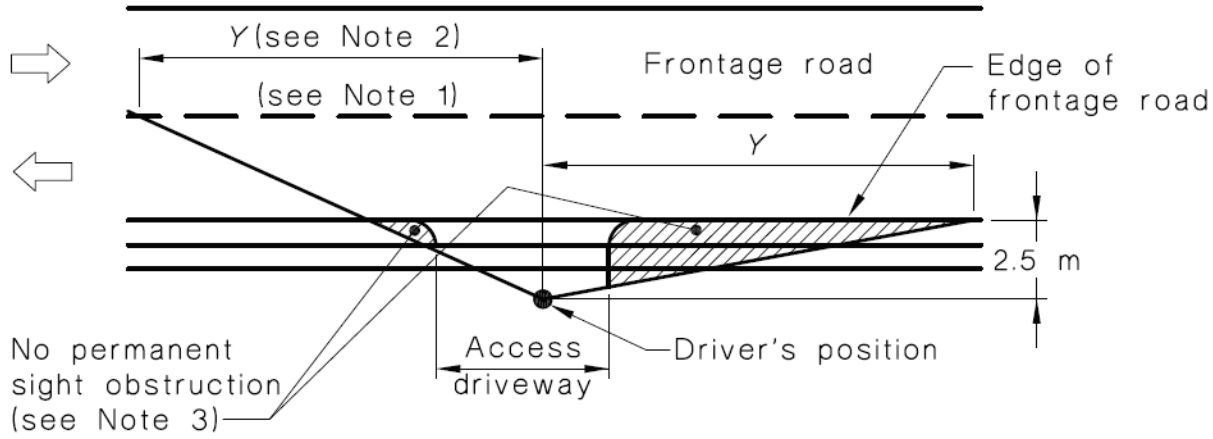
The HRV parking bays, immediately west of the entry driveway will be utilised once the parking bays along the western boundary are occupied.

6.3 Access to the car park

The site has 2 driveways servicing it. Each driveway operates through a one-way system. Entry to the site is provided via the driveway crossover on the southern boundary, along Gordon Street, and the driveway crossover on the western boundary, along Camden Street, serves as an exit only driveway. This one-way system removes any potential conflict which may occur with dual use driveways. AS2890.2-2018 states that one way driveways are required when the access driveways "*lead to or from a major road, serving a major service area*". Therefore, the provisions of this site exceed the requirements of the Australian Standard in this regard as the site is not situated along a major road nor does the site classify as a major service area.

6.4 Site distance for vehicles

Camden Street is a local road with default urban speed limit of 50km/h. Referring to Figure 3.3 of AS 2890.1:2004, it is recommended to leave the shaded area in the figure below (excerpt from AS 2890.1:2004) free of permanent obstacles for a length 'Y' of 69 [m].



Frontage road speed (Note 4) km/h	Distance (Y) along frontage road m		
	Access driveways other than domestic (Note 5)		Domestic property access (Note 6)
	Desirable 5 s gap	Minimum SSD	
40	55	35	30
50	69	45	40
60	83	65	55
70	97	85	70
80	111	105	95
90	125	130	Use values from 2nd and 3rd columns
100	139	160	
110	153	190	

Figure 4: AS2890.1-2004 sightline specification

In the vicinity of the exit driveway, Camden Street is relatively straight and flat, sight lines are deemed satisfactory as there are no permanent obstructions.

6.5 On-Street Parking

Camden Street generally has unrestricted parking along both sides, with exception of 10m of 'No Parking' restrictions adjacent to the driveway of the neighbouring site to the north.

7 Swept Paths

Swept path analyses have been undertaken assessing the critical car and truck parking spaces.

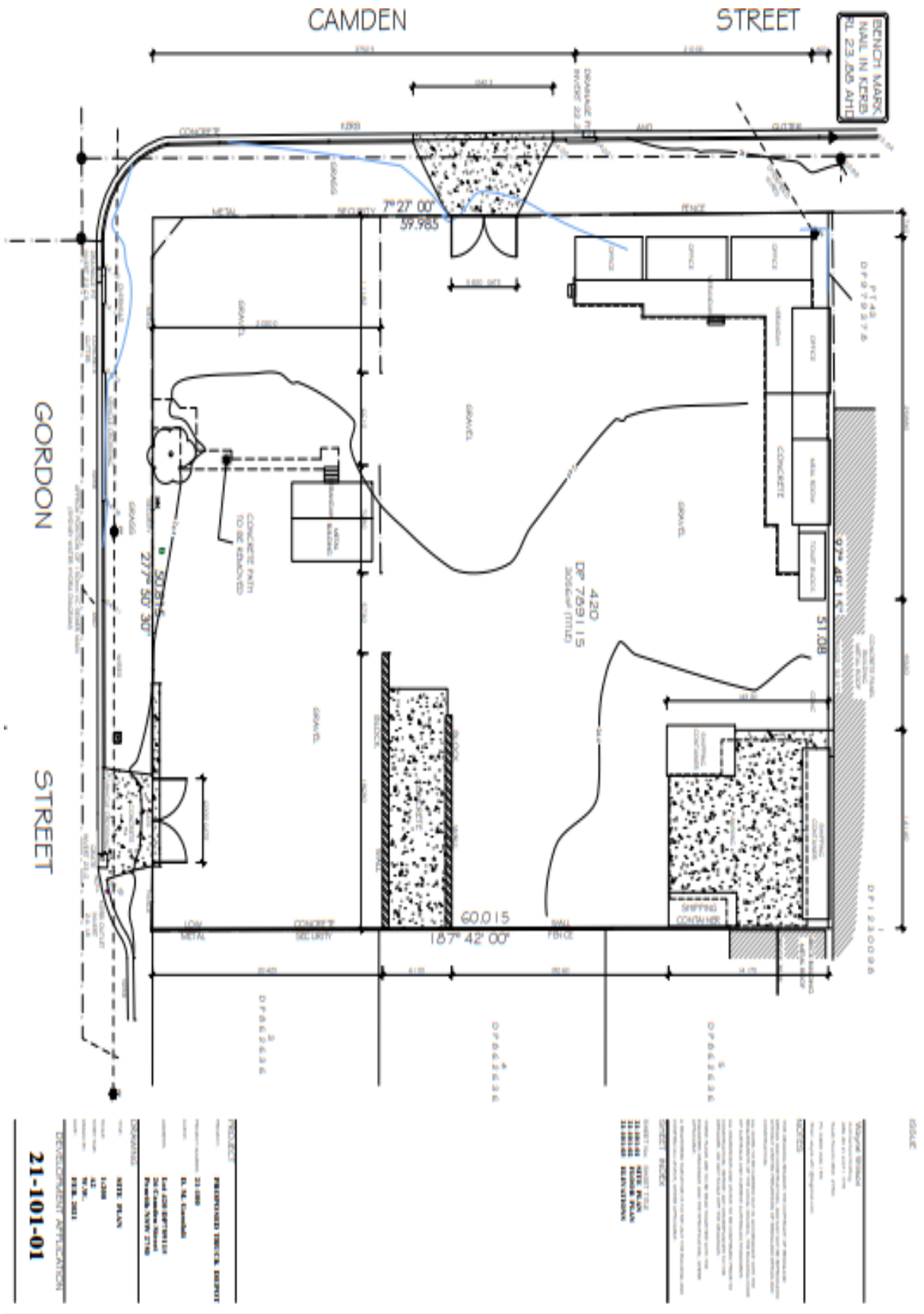
8 Conclusion

- The traffic generation associated with the sites is consistent with the existing operation of the site;
- Trips associated with the site have no adverse impacts on the road network or the operation of surrounding intersections;
- Based on the assessment presented in this report, it is considered that after an inspection the car parking design of the proposed residential development located at 26 Camden Street meets the relevant design standards presented in AS 2890.1-2004 and AS 2890.2-2018;
- The proposed development embraces the policies of the Penrith Council DCP and seeks to provide employment.

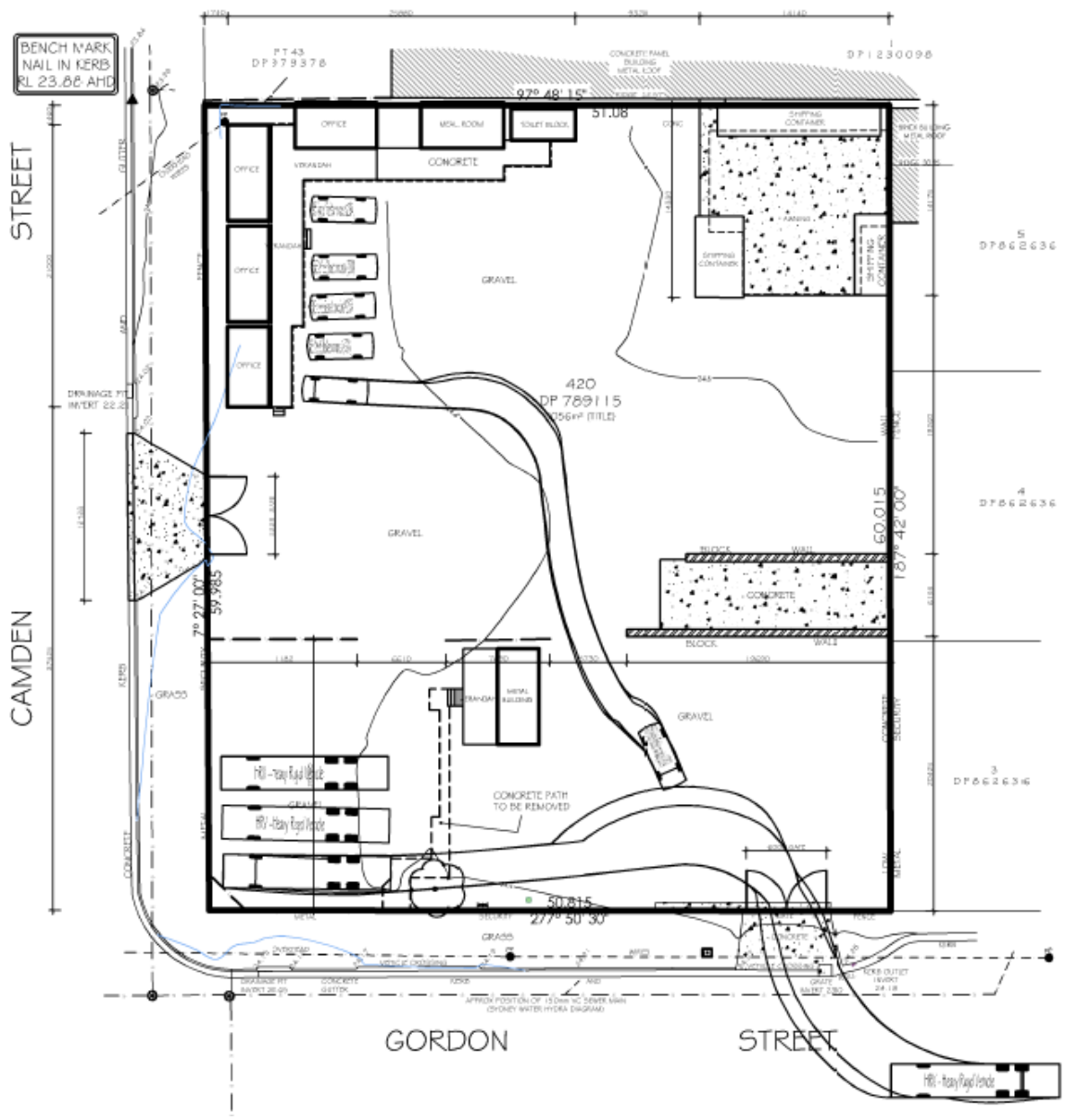
Overall, the proposed development is supportable on traffic planning grounds and will operate in satisfactorily.

Appendix

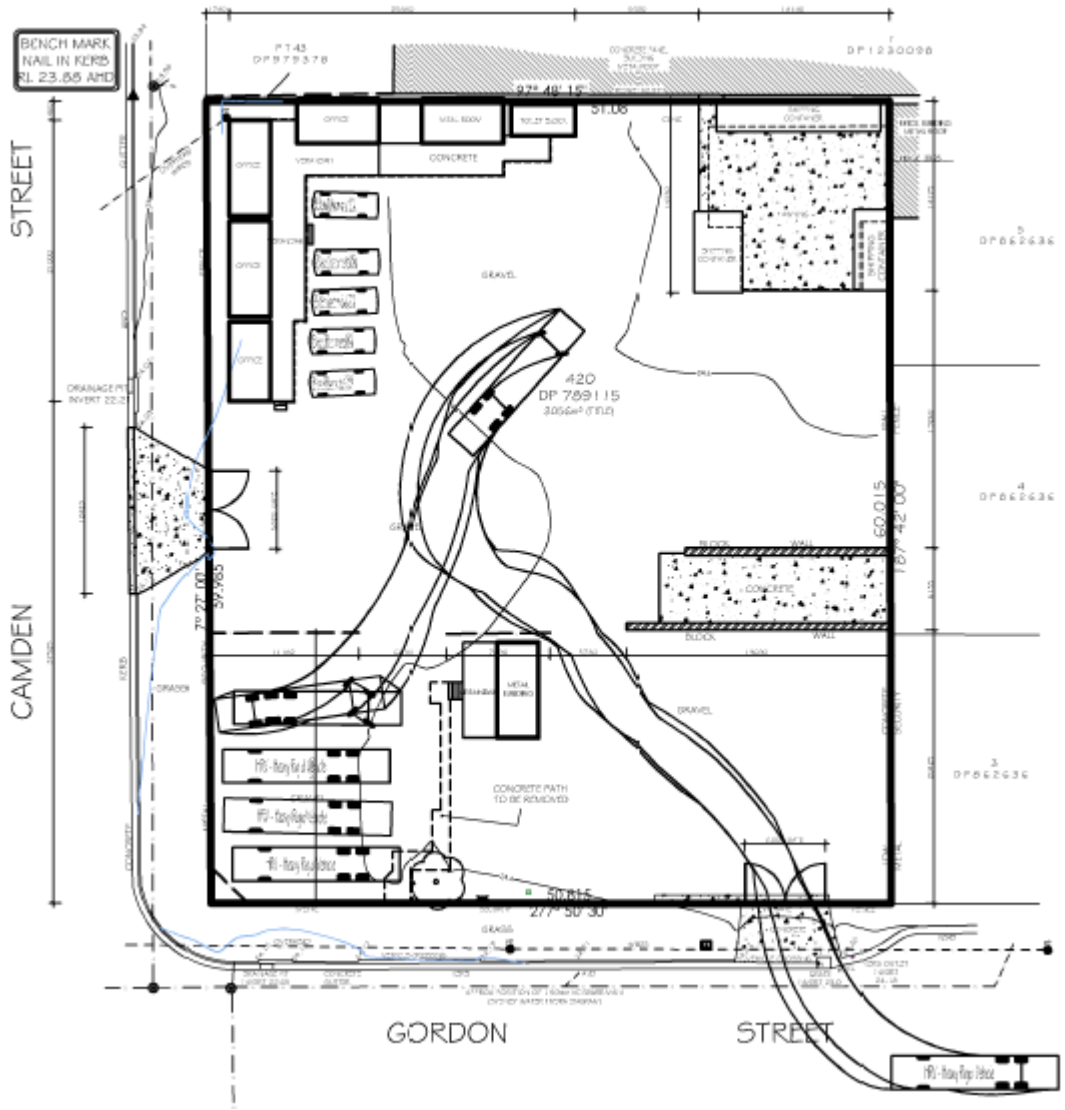
Appendix A: Reduced Plans



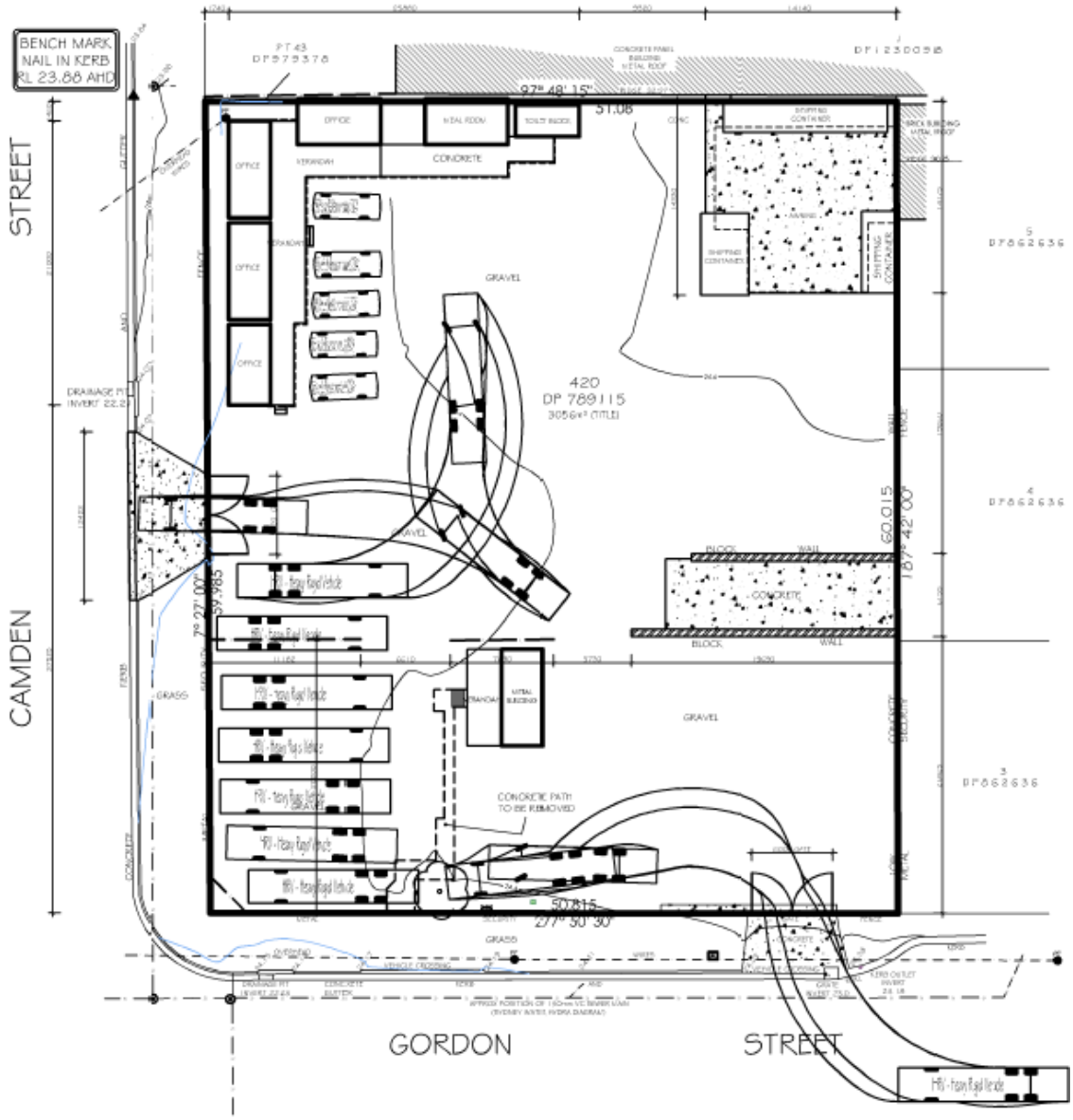
Appendix B: Swept Paths



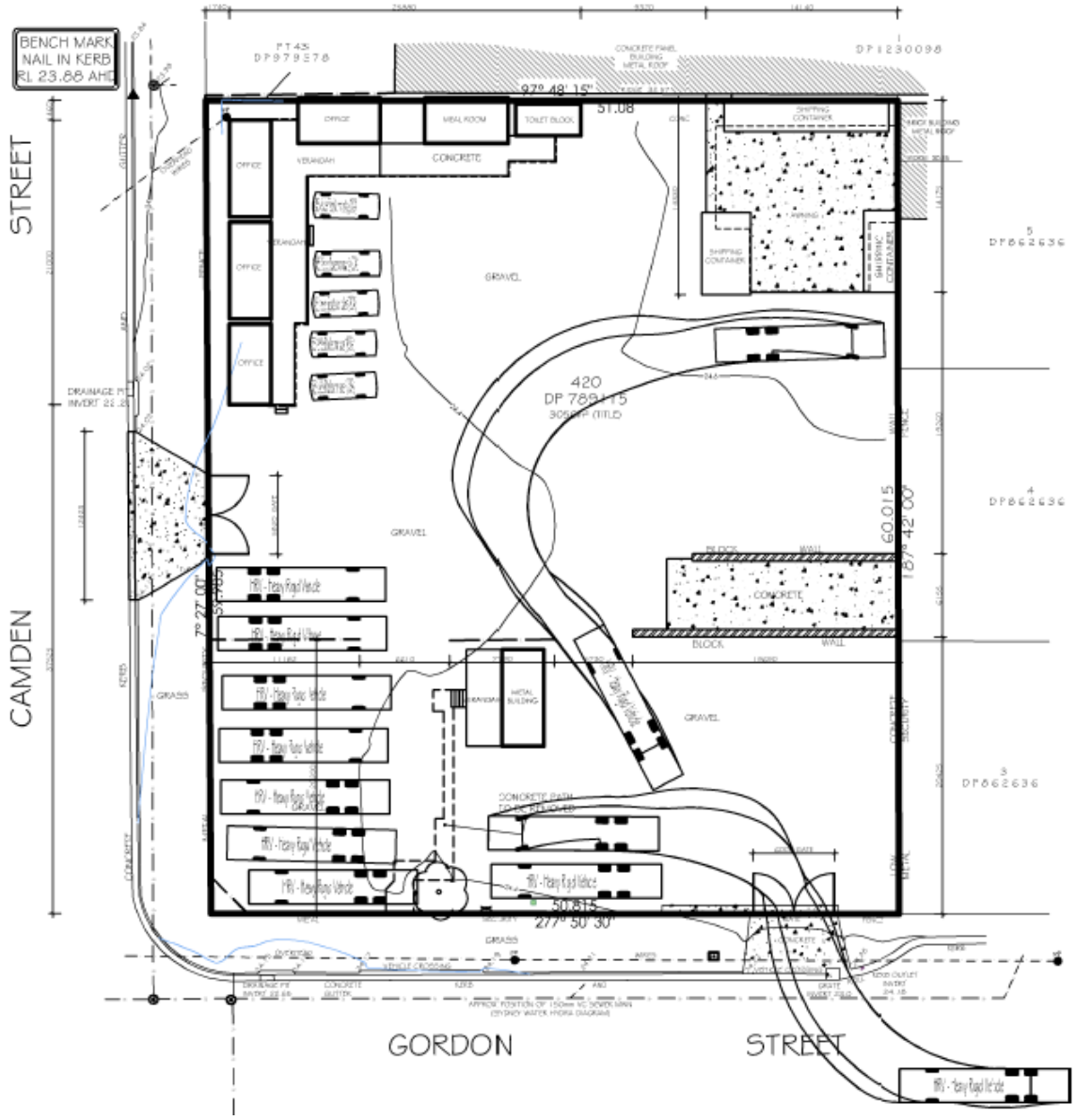
HRV entering south western parking bay & B85 using employee parking



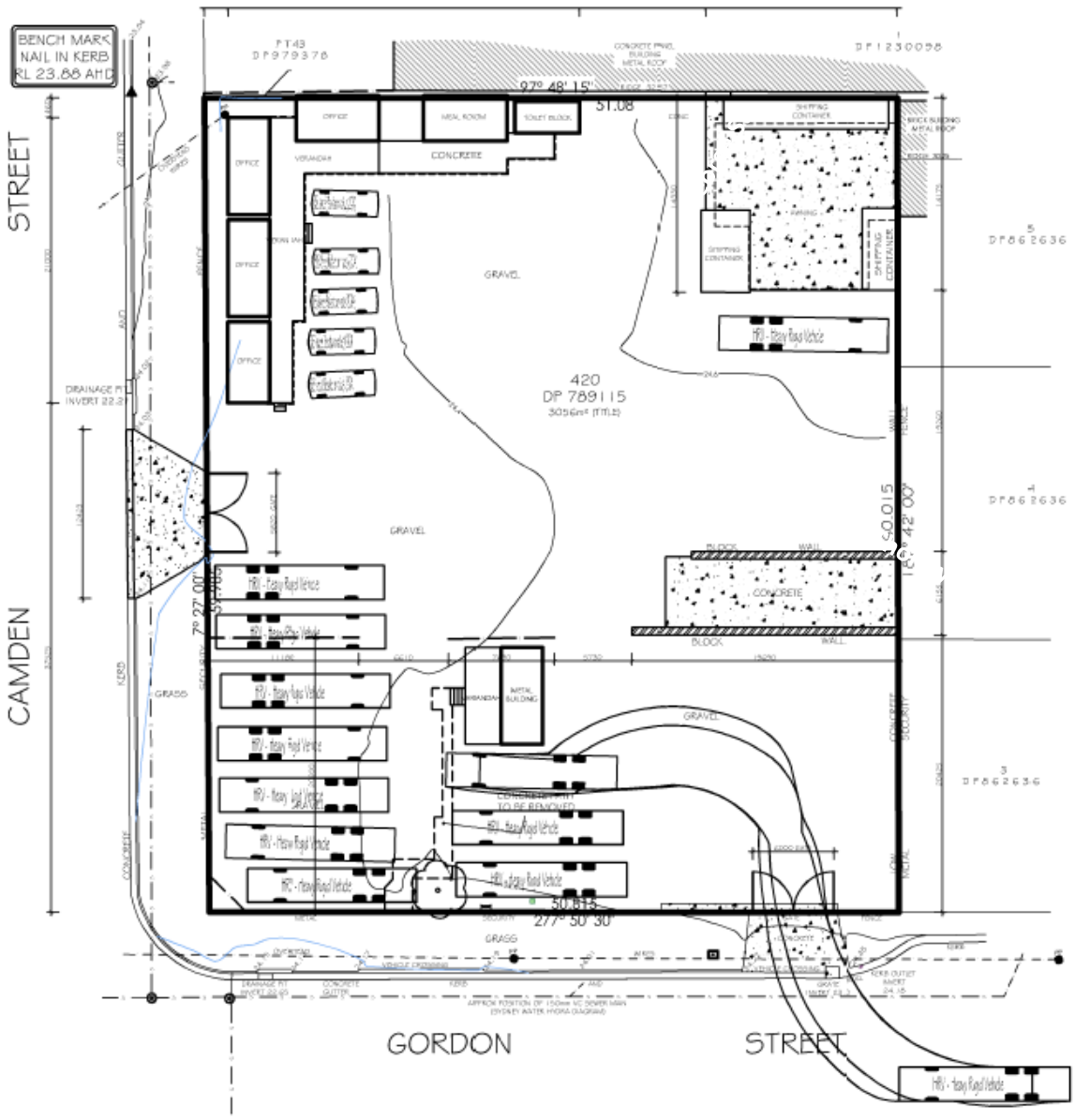
HRV using south western parking bay



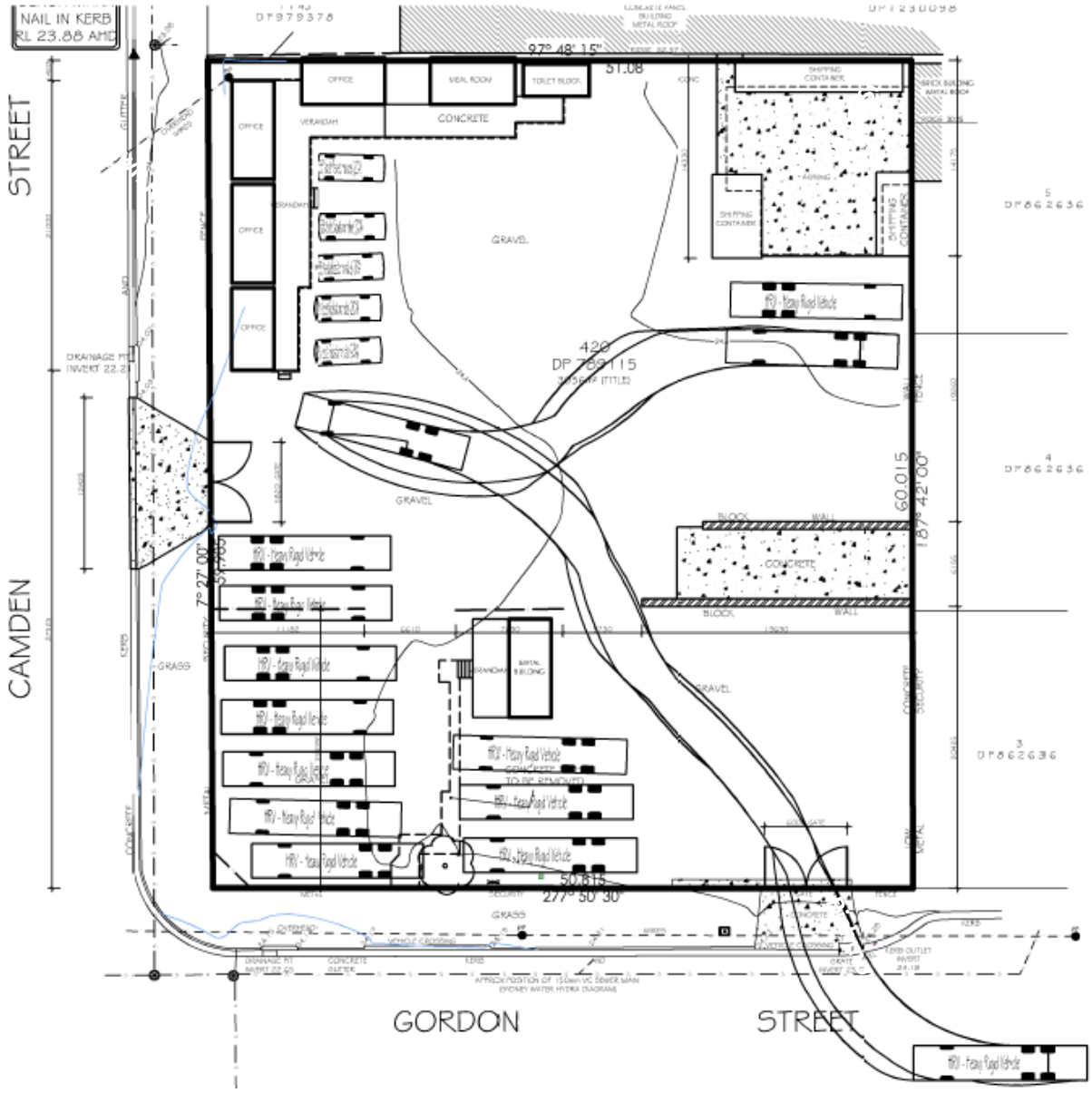
HRV using south western parking bays



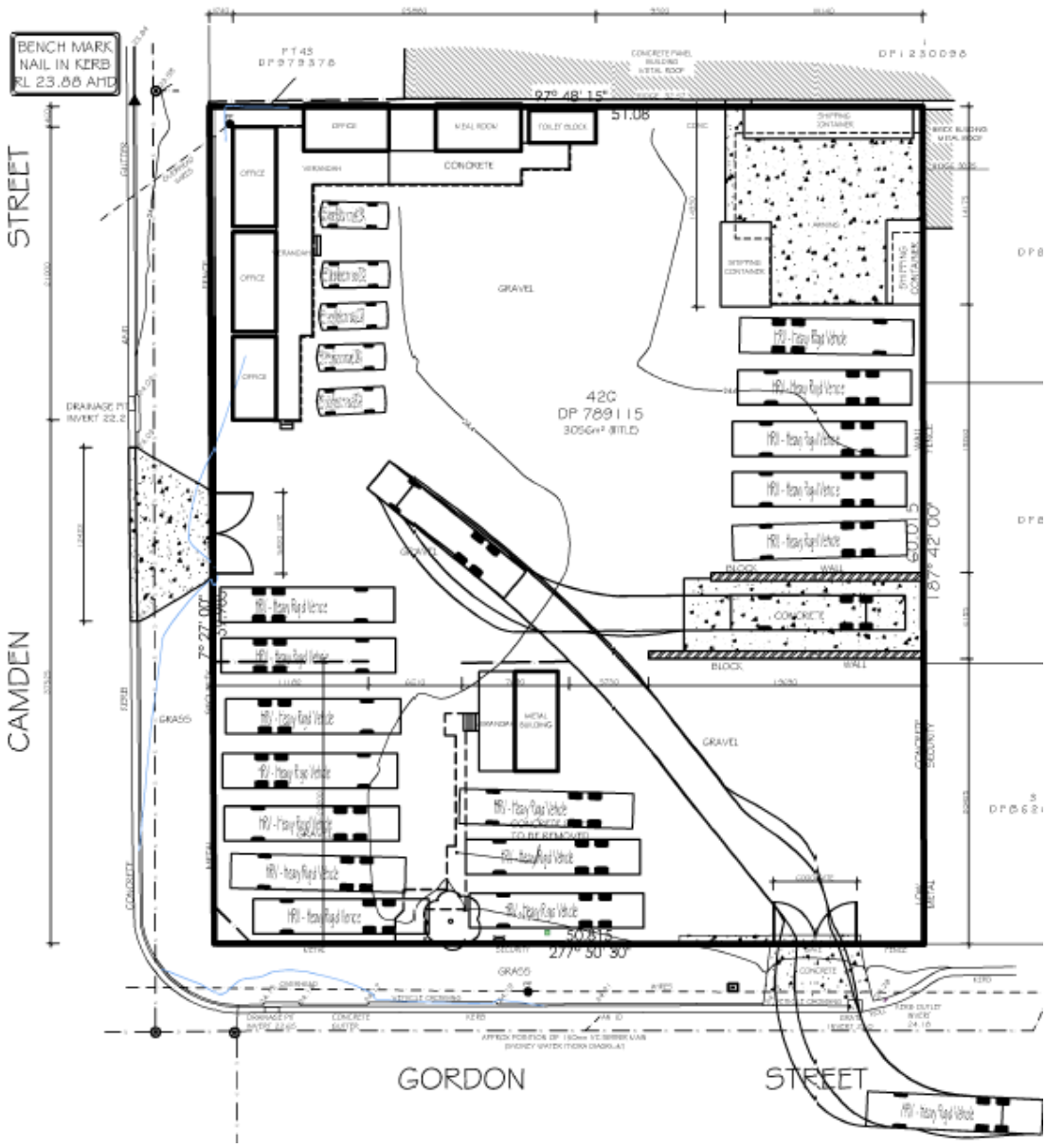
HRV using north eastern parking bays



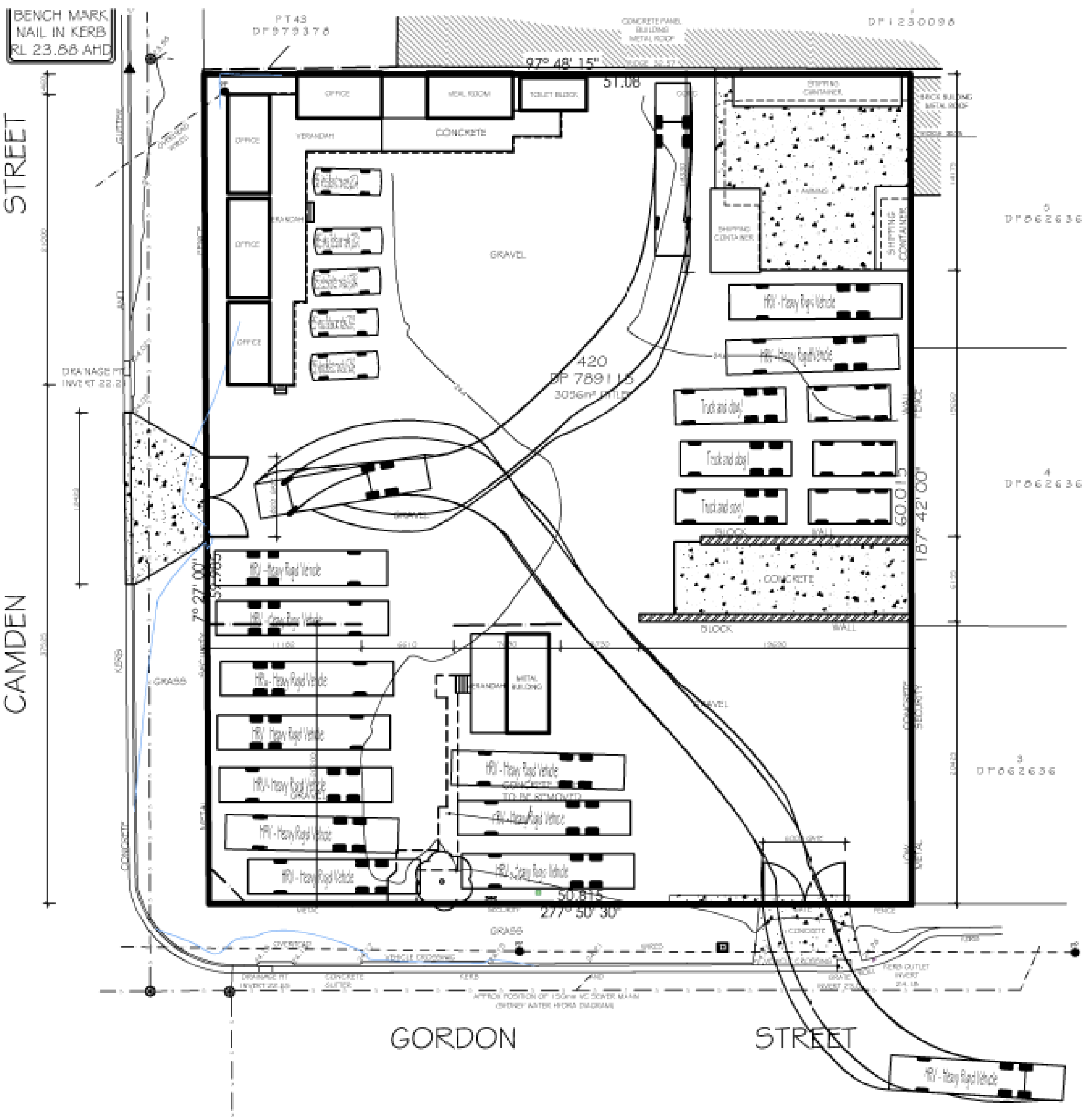
HRV using south western parking bays



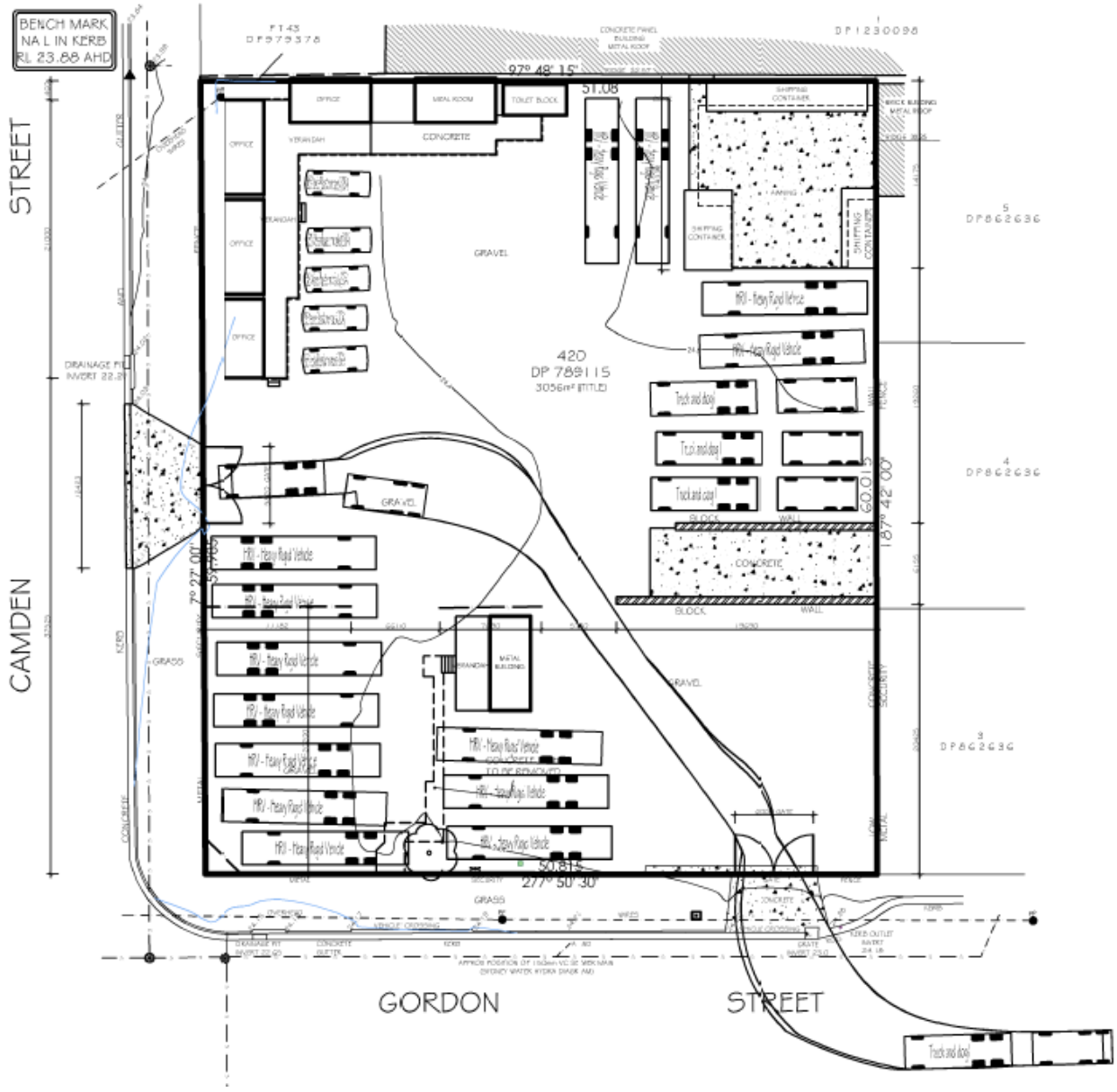
HRV using north eastern parking bays



HRV using eastern parking bay



HRV using northern parking bay



Truck and Dog enter/ exit site