

Dexus

**52-60 Collins Street**

Servicing Management Plan

Draft 1 | 5 February 2021

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# Document Verification

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Swept Path

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# 1 Introduction

This report sets out the delivery, servicing and operations management strategies for the proposed mixed-use development located on 52-60 Collins Street, Melbourne (henceforth referred to as ‘the development’). The development incorporates: commercial office, retail, and food and beverage areas.

## 1.1 Site details

60 Collins St is a mixed-use commercial development project in Melbourne’s CBD with 36 levels of commercial office space, 4 levels of basement, 2 plant levels, 1 roof terrace / plant level and, mixed food and beverage, retail, lobby and co-working spaces on the ground levels.

The site of the proposed development is located on the north-west corner of Collins and Exhibition Streets in Melbourne’s CBD, 52 – 60 Collins Street (see Figure 1).

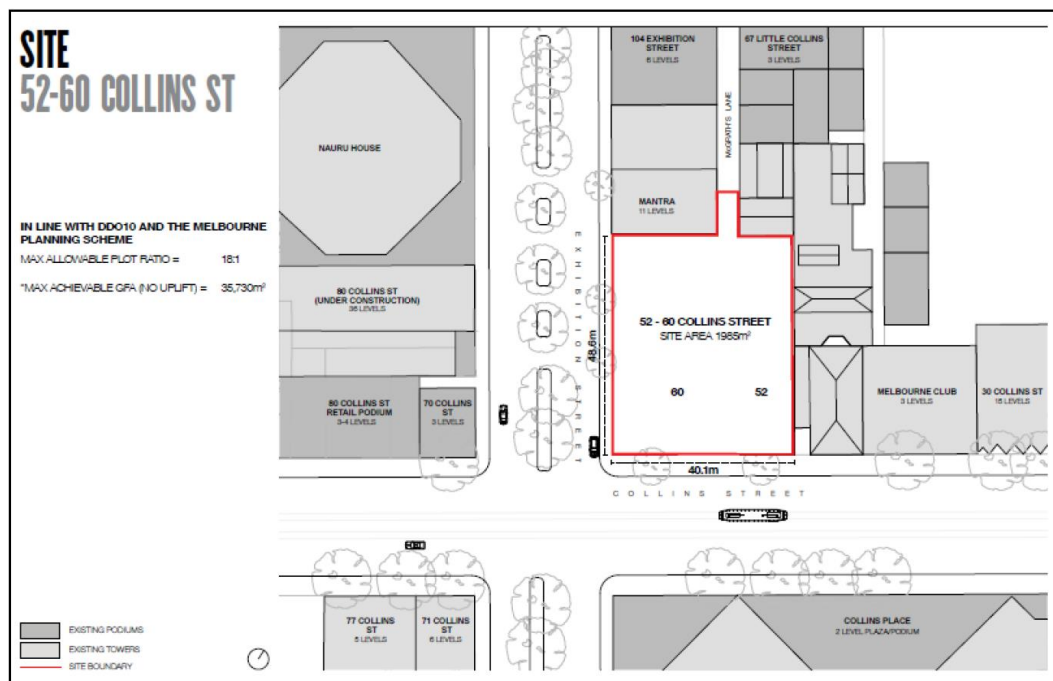


Figure 1: Location of the proposed development

The land for the proposed development is designated as DDO10: Schedule 1 area 2 as stipulated by The State of Victoria and shown in Figure 2.

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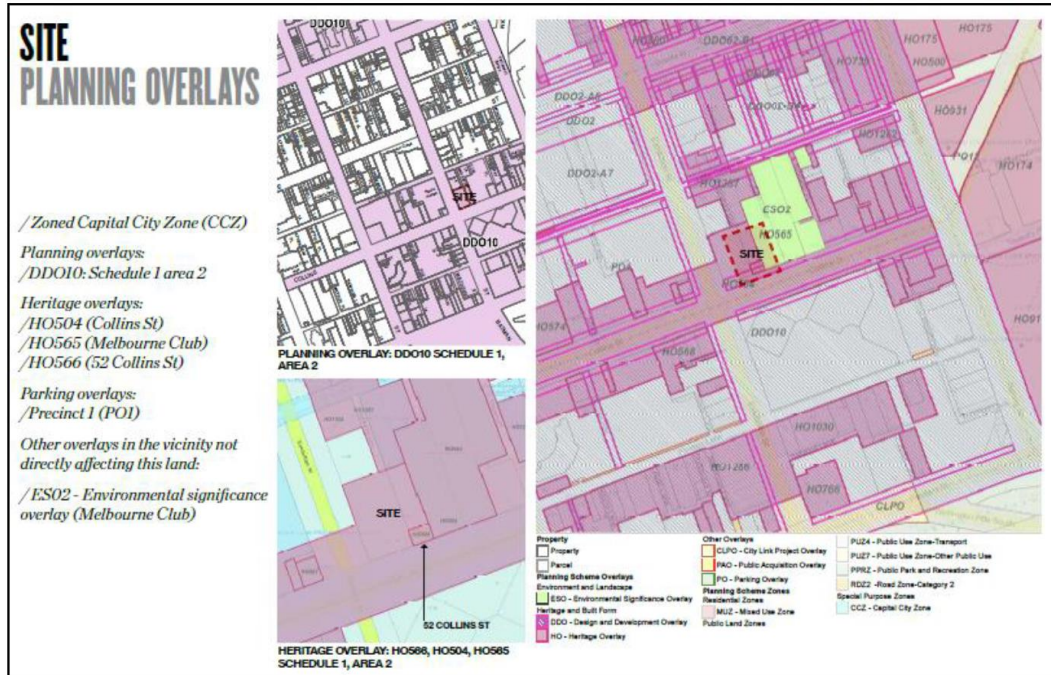


Figure 2: Proposed development land use zoning

## 1.2 Scope

The Servicing Management Plan (SMP) defines the demand, requirements and operation of the Back of House (BOH) facilities and loading dock to ensure the safe, efficient and effective operations of the facility.

The SMP will:

- Determine the vehicle demand that the precinct is likely to generate.
- Define the overall logistics strategy to be employed for the movement of goods into, and waste and goods out of, the development.
- Defines how the loading dock will operate and the facilities are managed.

## 1.3 Applicable standards

The SMP has been developed with reference to:

- Australian Standard AS2890.2-2018 *Off-street Commercial Vehicle Facilities*

## 1.4 Referenced documents

The SMP will reference the following documents:

- [1] Operational Waste Management Plan
- [2] 5201207\_52-60\_Collins\_St\_Area\_Schedule.pdf
- [3] 6201207\_60C\_Architectural\_Backgrounds\_Prelim.pdf

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## 2 Site details

### 2.1 Area use

The relevant elements of the development for the purposes of this report is one commercial tower, referred to as Collins Street, which incorporates office, retail and food and beverage facilities.

Current Gross Floor Area (GFA) and area use information is provided in Table 1. These figures have been gathered from the *Collins St Area Schedule* [1]. These figures have been used as the basis for vehicle demand calculations and the waste generation calculations.

Table 1: Estimated precinct area use and GFA

Area Use	GFA (m2)
Office/Commercial	54,083
Retail	560
Food & Beverage	102
<b>Total</b>	<b>54,745</b>

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#### 2.1.1 Tenancy

The SMP does not make any assumptions on whether the development will be a single tenant or multiple tenancies. The plan has been developed to consider both possibilities.

### 2.2 On-street loading

There is no provision for on-street loading zones for this development. The Loading dock strategy presented in this plan specifically excludes the requirement to utilise any on-street facilities and aims to make the development self-sufficient.

### 2.3 Loading dock provision and layout

The development's service areas consist of five (5) loading bays located at Level B03 (4 x SRV and 1 x courier bays). However, the manoeuvring measure into the courier bay requires further swept path analysis. Figure 3 depicts the layout of the loading bays. A spatial allocation of 2m at the rear of the SRV loading bays will allow for tail lift operation and MHE manoeuvring, which will be monitored by the dock master.

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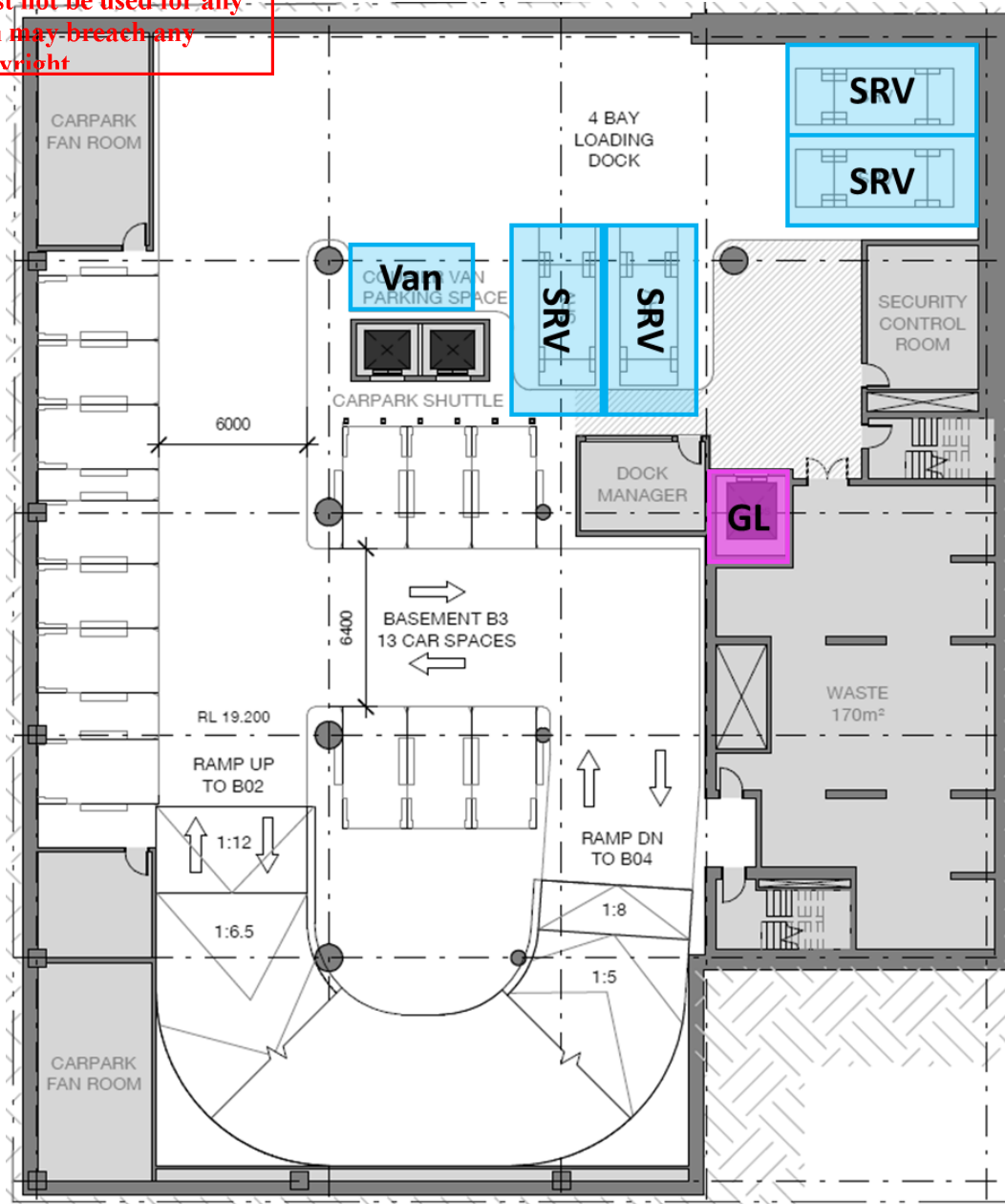


Figure 3: Loading dock layout B03

## 3 Servicing management plan

This section defines the demand, requirements and operation of the Back of House (BOH) facilities and loading dock for the development.

### 3.1 Key principles

This section presents the over-arching logistics concept that defines the management of the loading dock and sets out the key principles of operation.

- No on-street loading areas will be utilised, the development will be self-sufficient in deliveries and servicing.

- The loading dock will be managed by an on-site dock master.
- The design vehicle for the site is a small rigid vehicle (SRV)
- The loading of refuse collection vehicles will occur outside of operating hours

Further detail is provided in subsequent sections of this plan.





## 3.2 Vehicle demand

This section sets out the estimated number of daily deliveries and loading bay requirements for each of the land uses within development.

Trip generation rates are derived from logistics and loading dock survey research and projects that have been undertaken by Arup over a period of 10 years and form the basis of our in-house vehicle demand calculation tool. The studies involved similar mixed-use developments and helped to determine the number of delivery servicing trips expected to be made to the development under normal operations as well as identifying average vehicle dwell times.

An overview of vehicle types expected to service the development is shown in Table 2 below.

Table 2: Servicing and delivery vehicle types and turnaround times

Vehicle Type	Vehicle	Characteristics	Turnaround Time (minutes)
Service vehicle typically a Ute, Van or car (B99)		Typically, 5.2m length, load capacity does not exceed SRV.	45
Courier van		Typically, 5.2m length, load capacity does not exceed SRV.	10 - 15
Small Rigid Vehicle (SRV)		Typically, 6.4m length, 2.33m width, 4-tonne load capacity, single rear axle and either single or dual tyres.	15 - 20
Refuse Collection Vehicles (RCV)		Typically, 9.5m length, 2.6m width, 4m height, 26-tonne load capacity, vehicles may be side loading, rear end loading or front-end loading	20 - 25

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### 3.2.1 Daily delivery and servicing trips

This section presents the number of daily delivery and servicing trips for the development and the loading bay requirements to manage the deliveries.

The estimated daily delivery and servicing trips to the site were calculated using an in-house vehicle generation tool. The tool applies a delivery and servicing vehicle trip rate for each of the proposed building uses to the relevant gross floor



area (GFA) for that building use. The trip rates, which are expressed as vehicles per 100m<sup>2</sup> GFA per day, have been derived from survey data from office, retail and other facilities, as well as relevant design guidelines and local authority regulations.

The following assumptions have been used to determine the daily number of delivery trips:

- 0.18 vehicles/100m<sup>2</sup>/day for Office/commercial deliveries;
- 0.53 vehicles/100m<sup>2</sup>/day for Retail deliveries;
- 2.20 vehicles/100m<sup>2</sup>/day for Restaurant/Café deliveries;

### 3.2.1.1 Loading bay requirement

The number of daily deliveries to the loading dock, based on the area schedule, have been calculated and are shown in Table 3.

Table 3: Daily delivery and servicing trips

Area Use	Estimated GFA (m <sup>2</sup> )	Calculated Daily Deliveries
Office/Commercial	54,083	131
Retail	560	3
Food & Beverage	102	3
<b>Total</b>	<b>54,745</b>	<b>137</b>

From the daily trips rates, the minimum loading bay requirement for an unmanaged loading dock can be calculated and is presented in

Table 4.

The daily peak hour is expected to receive fewer than 15 vehicle arrivals.

Table 4: Loading dock bay requirements

Vehicle Type	Daily Deliveries	Minimum Bay Quantity	Number Provisioned
SRV	94	3	4
Van	33	1	1
Service vehicle	10	1	-
<b>Total</b>	<b>137</b>	<b>5</b>	<b>5</b>

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### 3.3 Loading dock access & manoeuvring

#### 3.3.1 Street entry to site

The single entry and egress for the loading dock is via Turbot Street, a main thoroughfare. There is no provision for on-street loading.

#### 3.3.2 Driveway and access points

The driveway is approximately 8m in width and traverses a footpath, bringing vehicular and pedestrian movement paths into conflict.

Various measures may be incorporated in the driveway to enhance the pedestrian safety, amenity and vehicle movements may include the following:

- Warning signage on each side of the crossover for pedestrians and signage for drivers leaving the driveway and entering the loading dock;
- CCTV surveillance of the access with a connection to the security office;
- Visual alert in the form of flashing warning lights at the site boundary for pedestrians. These lights will be activated by a sensor as vehicles approach to depart the site;
- An auditory alert for visually impaired pedestrians, which will be activated by a sensor as vehicles approach to depart the site;
- An intercom at the entry with an audible device to talk to security;
- Access to the carpark shall be from a security proximity card; and
- Mirrors to assist exiting drivers to view pedestrians on the footpath.

#### 3.3.3 Ramp

The loading dock for the development is located at B03 level. Access from Ground level is provided for via a ramp that sufficiently accommodates the two-way SRV movements along its entire length.

The ramp complies with the AS2890.2 recommended gradient for the developments design vehicle (1:6.5).

#### 3.3.4 Clear height

A height clearance of 3.8m is provided throughout the loading dock. This is sufficient clearance for the largest design vehicle (SRV) expected to access the loading dock.

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## 3.4 Loading dock operation

### 3.4.1 Operations management

The loading dock will be managed by the dock master in accordance with the requirements outlined in this document. A dock master will be on-site during the hours of operation to coordinate the safe movement of goods, vehicles, and personnel within the loading dock area.

The dock master will ensure the loading dock is always kept clear of items and ensure delivery vehicles are moved on once their delivery is complete.

Safe routes for the movement of people and goods between the loading bays and goods lifts that avoid vehicle manoeuvring areas have also been designated. Pavement markings will be required to indicate safe access for people and delivery movement through the loading dock area.

### 3.4.2 Hours of operation

The preferred operating window (when dock master is on-site) will be between 6am and 6pm, a 12 hour operating window.

On occasion, it will be necessary to receive deliveries (e.g. for building materials, plant and other equipment) and removal of builders' waste after hours. The provision of access outside of hours will be at the discretion of, and a special arrangement by, the dock master who may grant access, as required.

### 3.4.3 Access control

A boom gate is recommended to operate at the top of the ramp to control access into the loading dock and carpark. This will ensure that vehicles that are unauthorised to access can be rejected onto the street without entering the basement areas. The placement of the boom gate should be far enough into the building so as not to obstruct traffic flow. During operating hours (when dock master is present), access will be granted only to vehicles known to the facility (either delivery or commercial carparking). Signage to this effect will be displayed prominently at the loading dock entrance to deter entry attempts by unauthorised vehicles.

#### 3.4.3.1 Security

It is recommended that the loading dock itself is secured by a roller shutter after operating hours, which will enable the exclusion of vehicles that may have authorisation to enter basement areas though not to use the loading dock. The shutter will be open during the hours of operation, during which time the dock master will be responsible for security of the dock. Outside of these hours the shutter will be locked, and access will only be granted by the dock master by prior arrangement.






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### 3.4.4 Onward movement of goods

Goods delivery routes from the loading dock to the target users have been designated in Appendix A. Routes from loading bays to storage areas, good lift and waste rooms are at-grade and suitable for use of standard material handling equipment.

Once a delivery is received, material handling equipment (MHE) may be used for the delivery of items. Examples of typical MHE are provided in Table 5.

Table 5: Typical material handling equipment

Container Type	Image	Dimensions			Weight	Load
		L	W	H		
Hand trolley			620mm	1,150mm	15kg	250kg
Platform trolley		1,180mm	765mm	1,000mm	40kg	650kg
Office Trolley		920mm	610mm	1,000mm	45kg	370
Stock trolley		800mm	760mm	1,770mm	40kg	400kg
Manual Pallet Truck		1,150mm	520mm	1,635mm		2,300kg

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Corridors are of a sufficient width (2.0m) for an Australian standard pallet (1,165mm x 1,165mm) to be manoeuvred using manual handling equipment. Double doors are provided which are of a sufficient width to accommodate goods movements. The onward movement of goods from the loading dock area to the goods lift can be seen in.

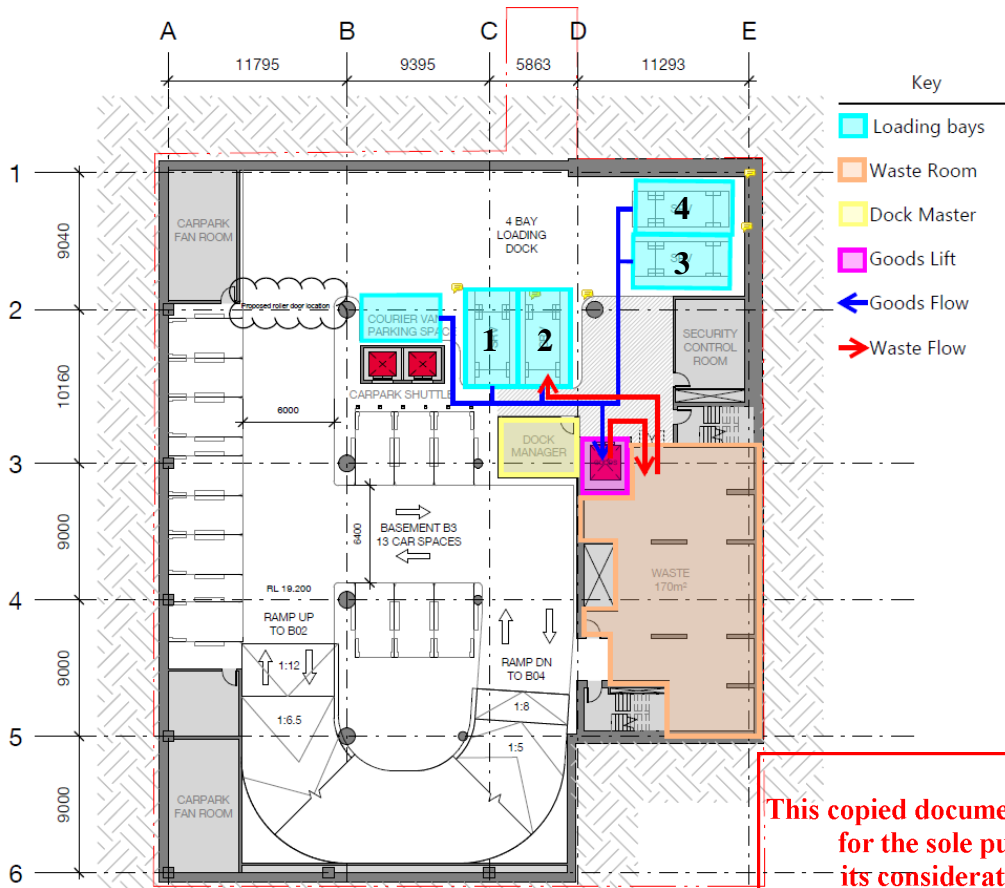


Figure 4: Goods and waste movement within the loading dock area

### 3.4.5 Waste collection

Waste and recycling will be collected outside of operational hours to ensure minimal impact on the operation of the loading dock. Waste bins will be provided, with all waste to be stored in the Waste Room in close proximity to the loading bays. The waste contractor will park in SRV bay 2, collect the bins from the waste room and return them to the waste room prior to the commencement of the dock operations. Further details regarding the layout of the waste room are provided in the *Operational Waste Management Plan [1]*.

### 3.4.6 Associated infrastructure

This section describes the associated infrastructure required for the loading dock to operate effectively.

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## 3.4.6.1 Dock master office

A dock master office has been provided in the loading dock area. This will typically house a desk and chair, computer equipment, small amount of interim storage and other facilities required for the dock master to perform their duties.

## 3.4.6.2 Interim storage

An area has been provided in the loading dock area for the temporary set down and storage of goods. The storage area will be used for temporary holding of deliveries prior to onward distribution and may have separate lockable sections for the FM team and for individual tenants. For security reasons, the storage area should only be accessible by approved Facility Management and designated tenant staff.

## 3.4.6.3 Goods lifts

The development is provisioned with one (1) goods lift which connects the loading dock level - B03, to the remainder of the building, including the rooftop terrace. The entrance to the goods lift is 1400mm wide, sufficient to accept an Australian standard pallet. A dedicated goods lift lobby is provided on all floors. From the lift, goods will be distributed to their destination using manual handling equipment, see Table 5.

With a single lift provided, an alternative route has been designated via a passenger lift when the goods lift is unavailable due to break down or maintenance. Suitable heavy canvas protective covers will be required to protect the lift car walls from damage.

Direct access at-grade has been provided for the movement of goods from the loading bays and storage rooms to the goods lift. From the lift, goods will be distributed to target users.

## 3.4.7 Swept Path Analysis

Swept path analysis has been conducted to ascertain whether the arrangement of the loading dock is able to accommodate the manoeuvring and parking of service vehicles requiring access.

The swept path analysis was conducted for the Small Rigid Vehicle and is displayed in Appendix B.

## 4 Next steps

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This SMP forms a framework to implement good practice for service vehicle management across all design and planning stages. If planning approval is granted for the proposed development, this SMP will:

- Ensure that detailed design and fit-out of the building is consistent with good practice standards and plans for service vehicle management.

- Inform all plans and procedures for service vehicle management.

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## Appendix A

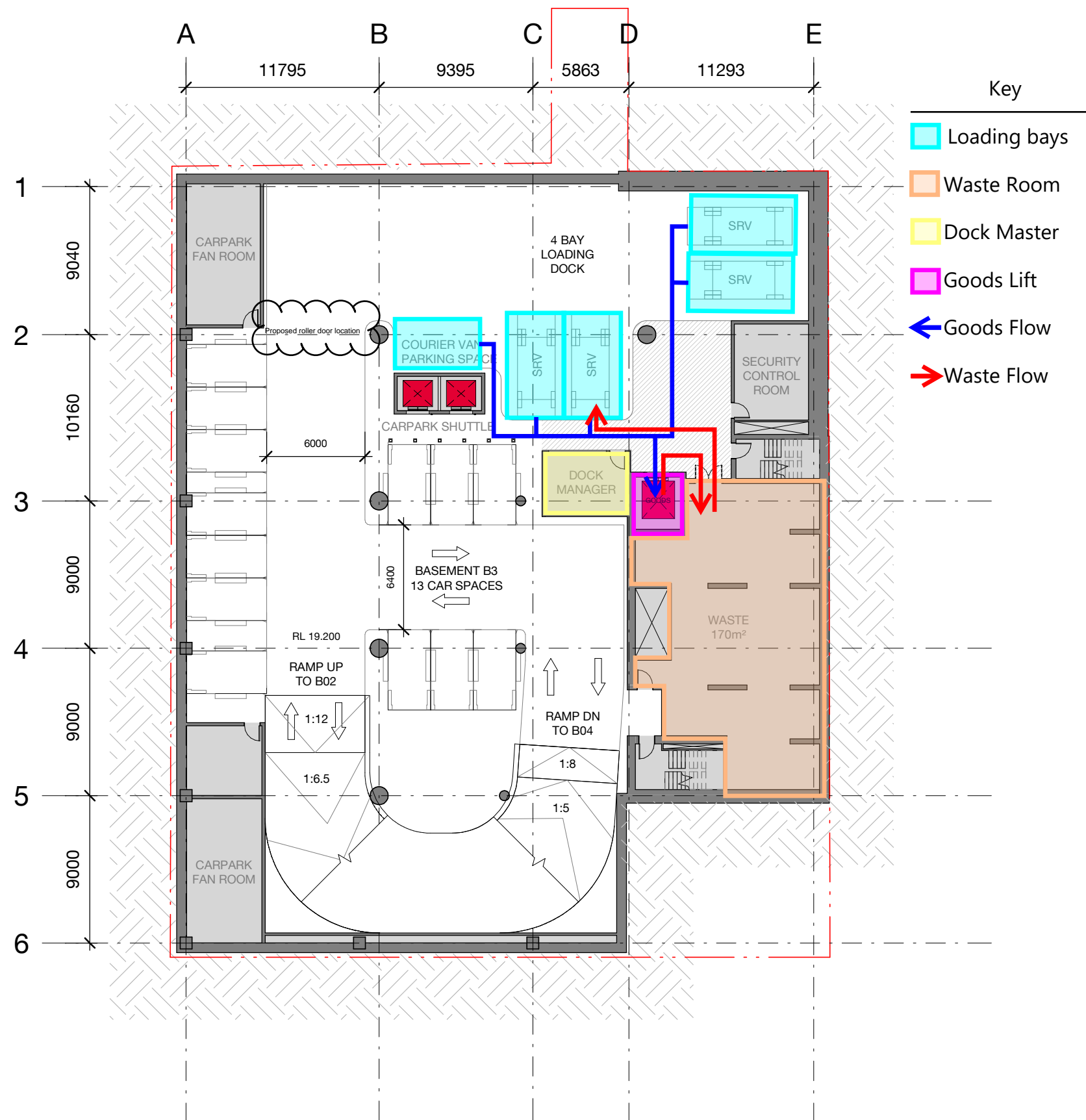
### Goods Distribution Routes

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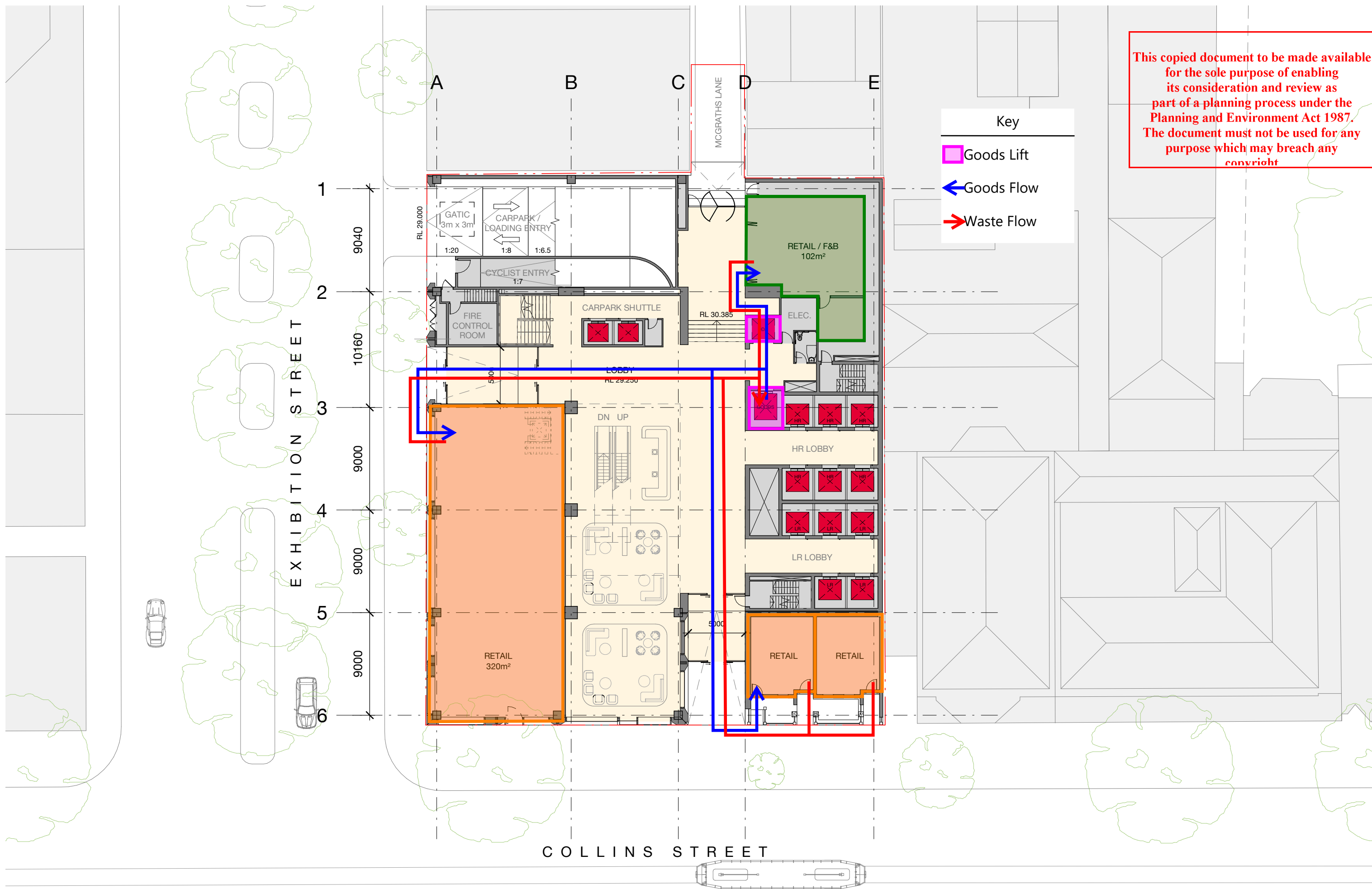
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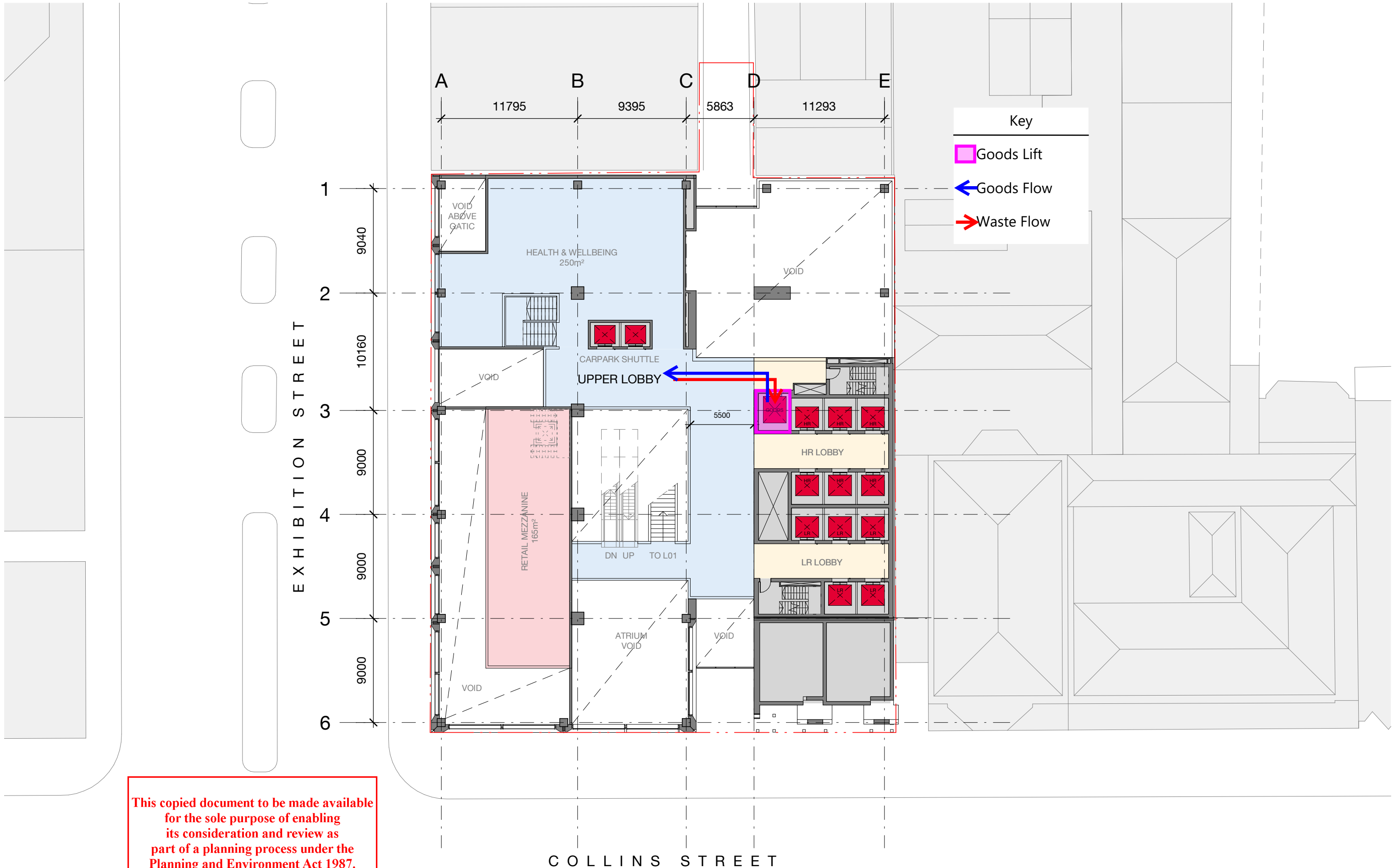


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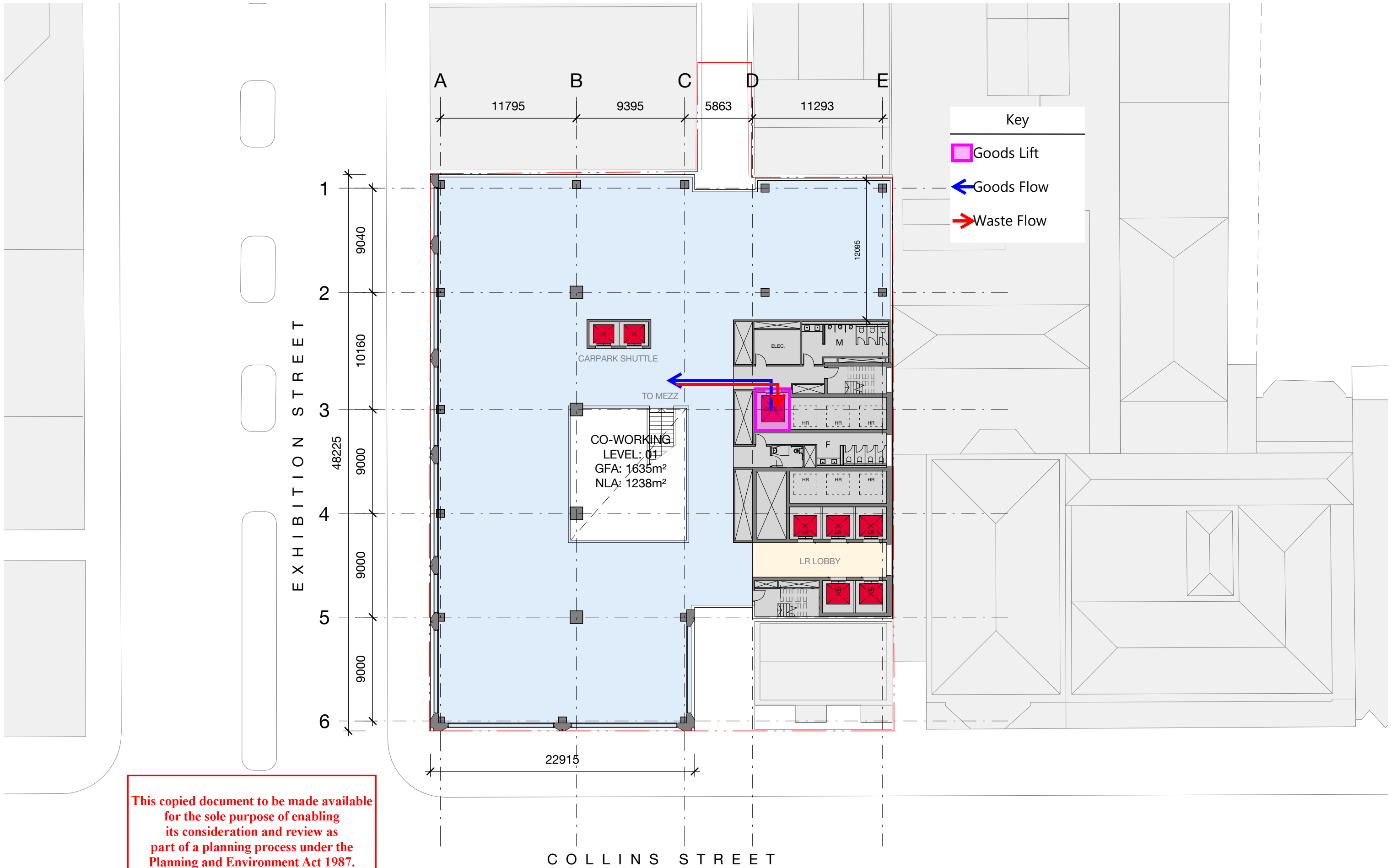
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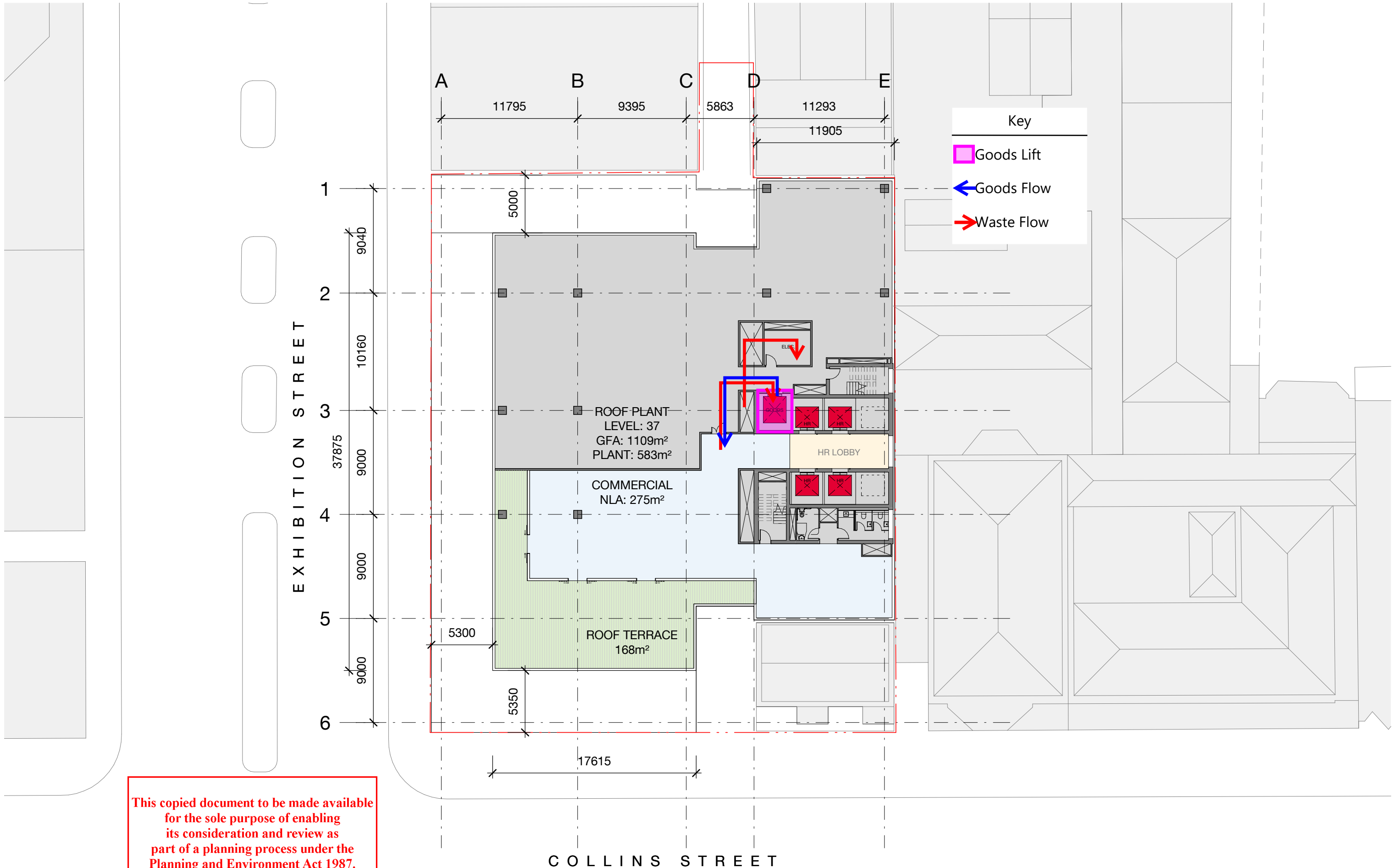
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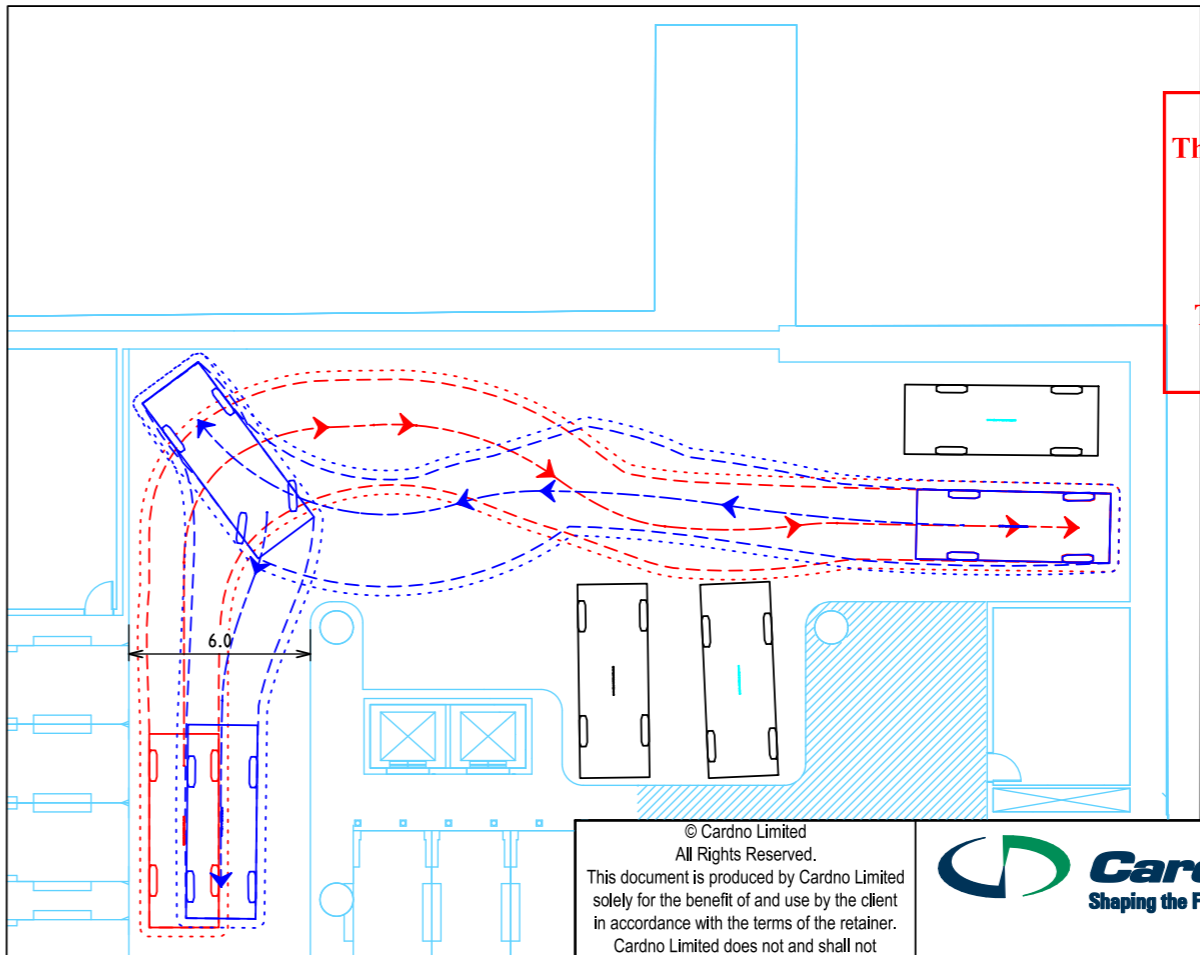
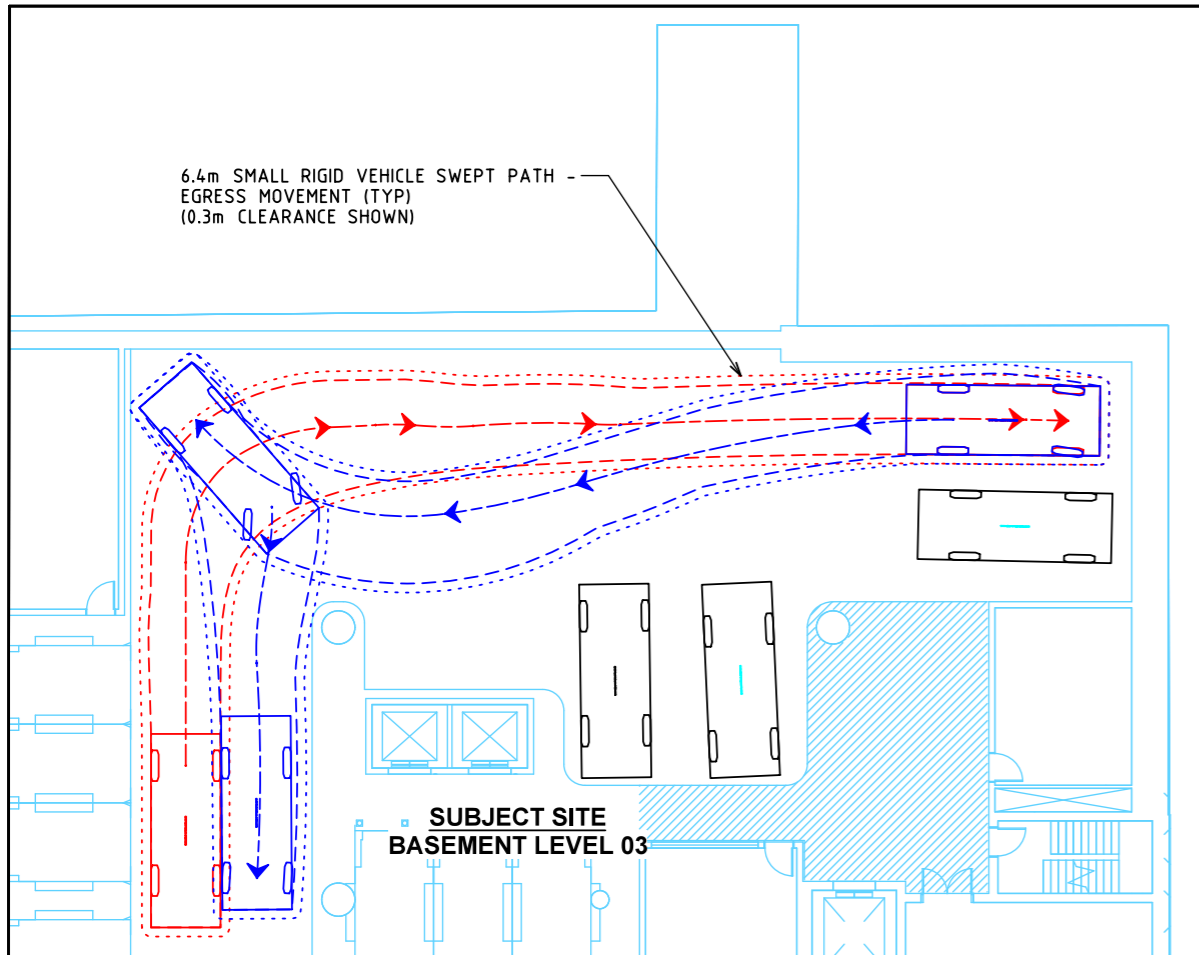
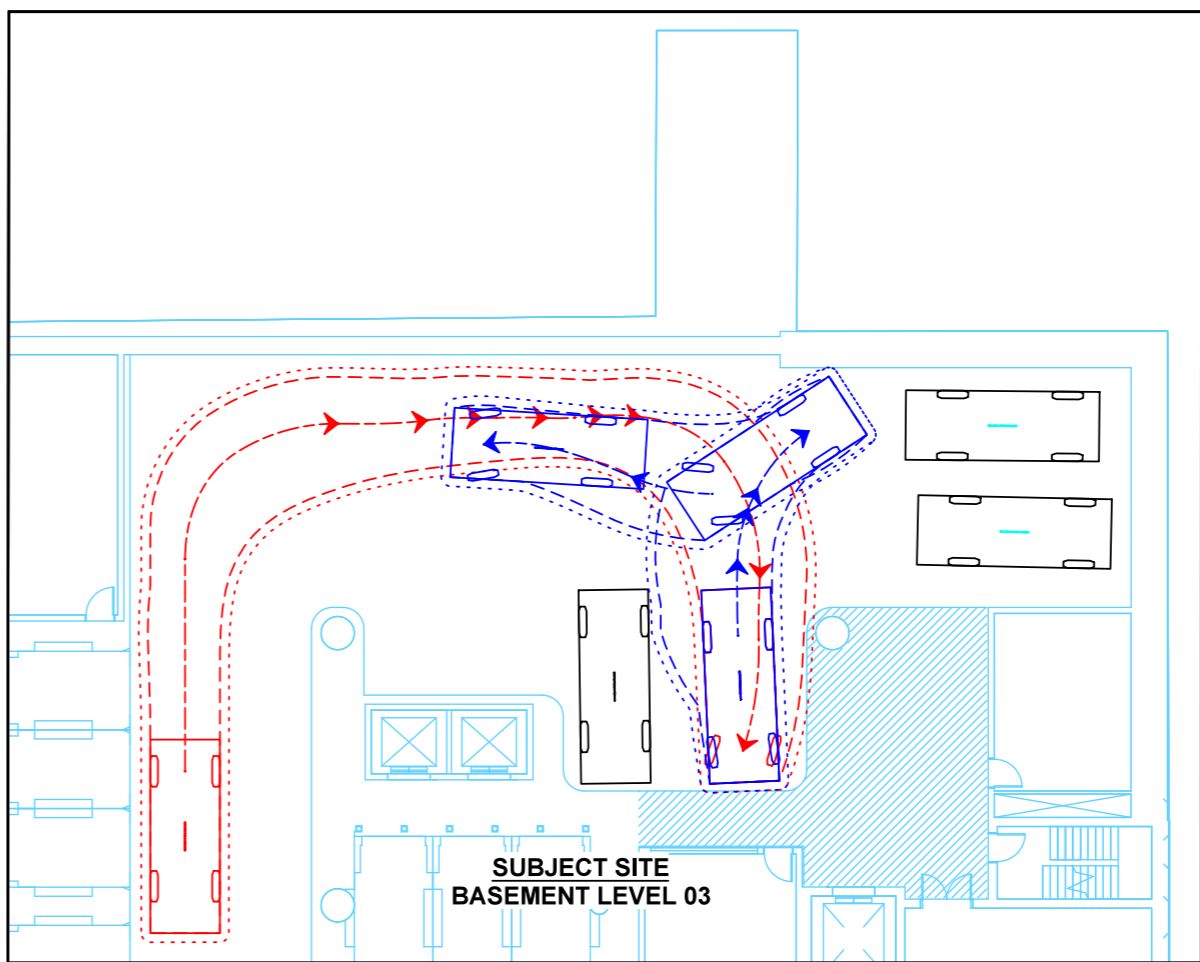
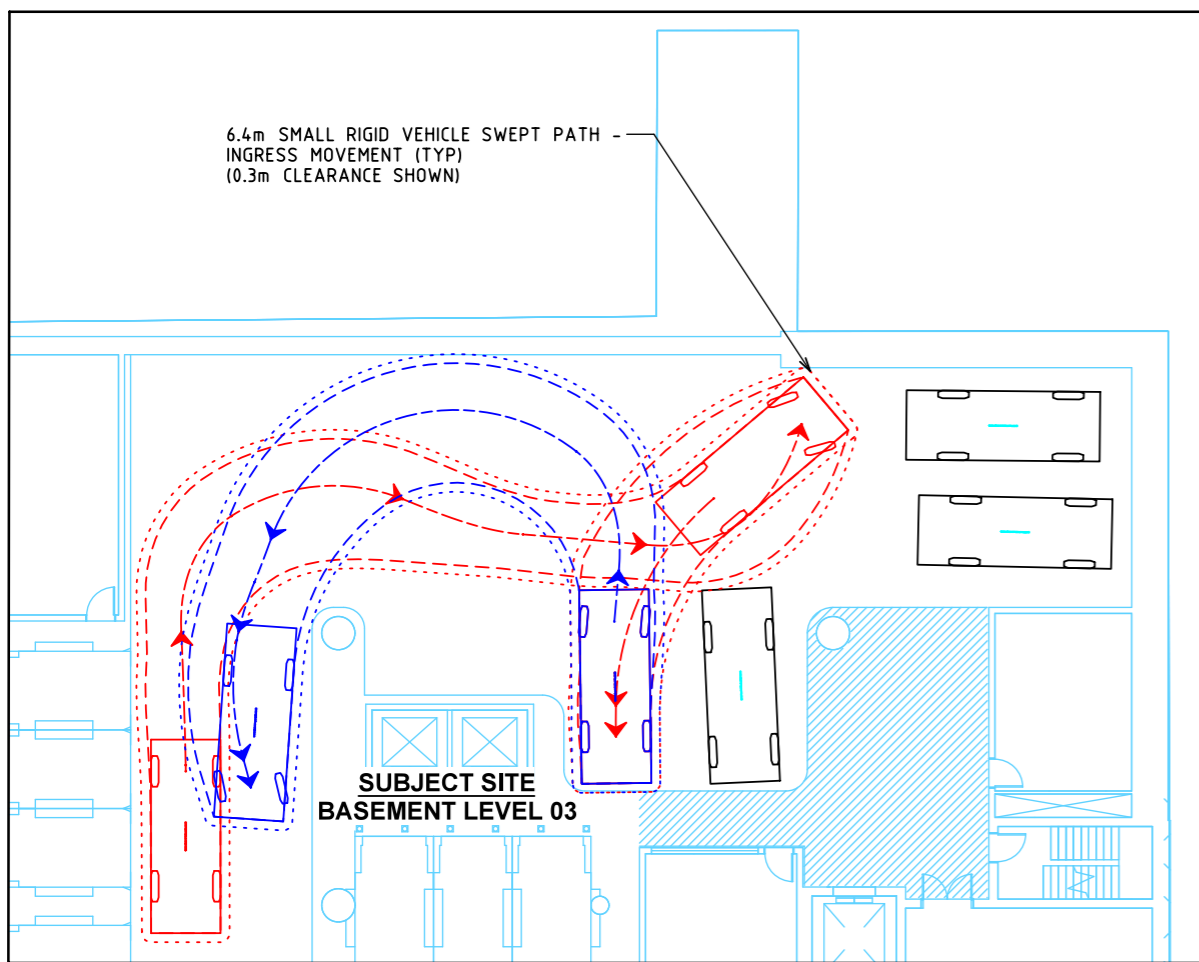
## Appendix B

### Swept Path

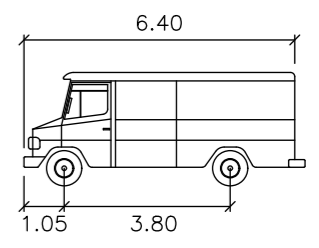
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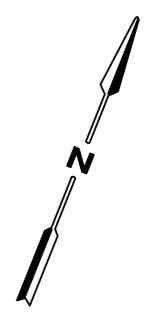
**DESIGN VEHICLE**



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

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AB / VO	18.11.2020	1:250	A3
Drawing Number			Revision
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