

DHL LOGISTICS FACILITY, BADGERYS CREEK (SOUTH)

**STATE SIGNIFICANT DEVELOPMENT APPLICATION 1
TRANSPORT AND ACCESSIBILITY IMPACT ASSESSMENT**

**PREPARED FOR DHL SUPPLY CHAIN (AUSTRALIA) PTY LTD
25 OCTOBER 2024 | 30030581**



DHL Logistics Facility, Badgerys Creek (South)

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DHL Logistics Facility, Badgerys Creek (South)

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1 Introduction

This report supports a State Significant Development Application (**SSDA**) (**SSD-70818708**) submitted to the NSW Department of Planning, Housing and Industry (**DPHI**) on behalf of DHL Supply Chain (Australia) Pty Ltd (**DHL**).

The SSDA constitutes a detailed development application (**DA**) insofar that it is linked to and is consistent with concept plan (**SSD- 70316465**) by seeking consent for the construction and operation of two singular storey industrial buildings for use as a warehouse and logistics facility with 24 hour/ seven day a week operation plus car parking and associated landscaping within part (25 hectares) of Lot 1 in Deposited Plan 1306448 at 1953-2109 Elizabeth Drive, Badgerys Creek known as the DHL Masterplan site.

This SSDA represents the first of two (2) SSDAs proposed by DHL and will apply to the southern half of the DHL Masterplan site, known as “the site” (**the site**) refer to Figure 3. Stage 2 relates to the northern half of the DHL Masterplan site, known as the DHL Stage 2 site and is subject to separate SSDA (**SSD-70817958**).

The project vision is to develop a world class warehouse and logistics facility which is fully integrated with its green infrastructure and Connection to Country. Having been informed by key landscape and Connecting to Country themes, the development of the site can deliver on the objectives that contribute to the Aerotropolis Vision which is to:

- Achieve a landscape led approach and starting with Country- the project has been guided by Cultural Design Principals and local leaders in the Aboriginal community.
- Create a new global gateway which will be a regionally and nationally significant employment area by providing for warehouse and logistics land uses in a highly sought-after location adjacent to the new Western Sydney Airport.
- Design a cool, green new city with a landscape approach that increases urban tree canopy, provides useable open space areas throughout and restores key riparian corridors on the site.
- Transitioning to an Aerotropolis through a sustainable, orderly and transformational development in the Western Sydney Aerotropolis,
- Retaining a green, biodiverse landscape informed by Country and an indigenous lens on maintenance and land management.

1.1 Background

The DHL Masterplan site occupies approximately 25-hectares (ha) of the larger 171.84ha site at 1953-2109 Elizabeth Drive, Badgerys Creek. The wider site is currently the subject of an existing SSDA (**SSD-70316465**).

SSD-70316465: 1953-2109 Elizabeth Drive ‘Burra Park’

SSD- 70316465 is an SSDA which was issued SEARs on the 22 May 2024 and is currently in the process of finalising the application for lodgement following Test of Adequacy with the DPHI in September 2024.



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1 Introduction

SSD- 70316465 is seeking development consent for a concept plan including future development lots and building footprints. The development also seeks consent for the Stage 1 works which will include bulk earthworks across the site, infrastructure delivery, road access/intersections, internal road construction, civil infrastructure and utilities, stormwater infrastructure works and the construction of three (3) warehouse buildings.

The applicant for SSD- 70316465 is the trustee for Burra Park Prop Trust 1 which is a joint venture entity, with ISPT Core Fund and UniSuper each holding an equal share.

DHL intend to develop part of the site for a logistics facility, the subject of this SSDA. The DHL Masterplan Site is known as Super lot 4a and 4b within the wider concept plan. Super lot 5B to the north of the DHL Logistics Facility SSDA lots have been sold to Canberra Data Centres (CDC) refer to Figure 3.

1.2 Site Context

A State Significant Development Application (SSDA) is to be lodged for a proposed industrial development on land legally described as Lot 1 of Deposited Plan 1306448, at 1953-2109 Elizabeth Drive, Badgerys Creek. The SSDA constitutes a detailed development application (DA) insofar that it is linked to and is consistent with Concept SSDA (SSD- 70316465) by seeking consent for the construction and operation of two singular storey industrial buildings ranging in size from 29,205 square metres (Warehouse 3) to 27,960 square metres (Warehouse 4) for use as a warehouse and logistics facility with 24 hour/ seven day a week operation plus car parking and associated landscaping.

This SSDA represents the first of two (2) SSDAs proposed by DHL and will apply to the southern half of their site which is known as “Stage 1 of the DHL Masterplan”. Stage 2 of the DHL Masterplan will be for the northern half of the site (Warehouse 1 and 2) and will be the subject of a separate SSDA.

The SSDA seeks consent for:

- Construction of two industrial buildings ranging in size from 29,205 square metres (Warehouse 3) to 27,960 square metres (Warehouse 4) for use as a warehouse and logistics facility with 24 hour/ seven day a week operation.
- 1,932 square metres of office space (966 square metres per warehouse) and 687 square metres of dock offices
- Fit out of warehouses
- Landscaping works
- Associated hardstand, loading and carparking for approximately 441 cars
- Associated vehicle crossings and drainage connection to the road drainage system
- Signage.

As mentioned, the proposed development site is located within a broader proposed industrial subdivision called Burrah Park which is subject to a separate SSDA (SSD-703164658) that is currently under assessment.



DHL Logistics Facility, Badgerys Creek (South)

1 Introduction

DHL Supply Chain (Australia) Pty Ltd previously commissioned Stantec Australia Pty Ltd in August 2022 to prepare a Transport and Accessibility Impact Assessment to accompany the SSDA for the proposed development.

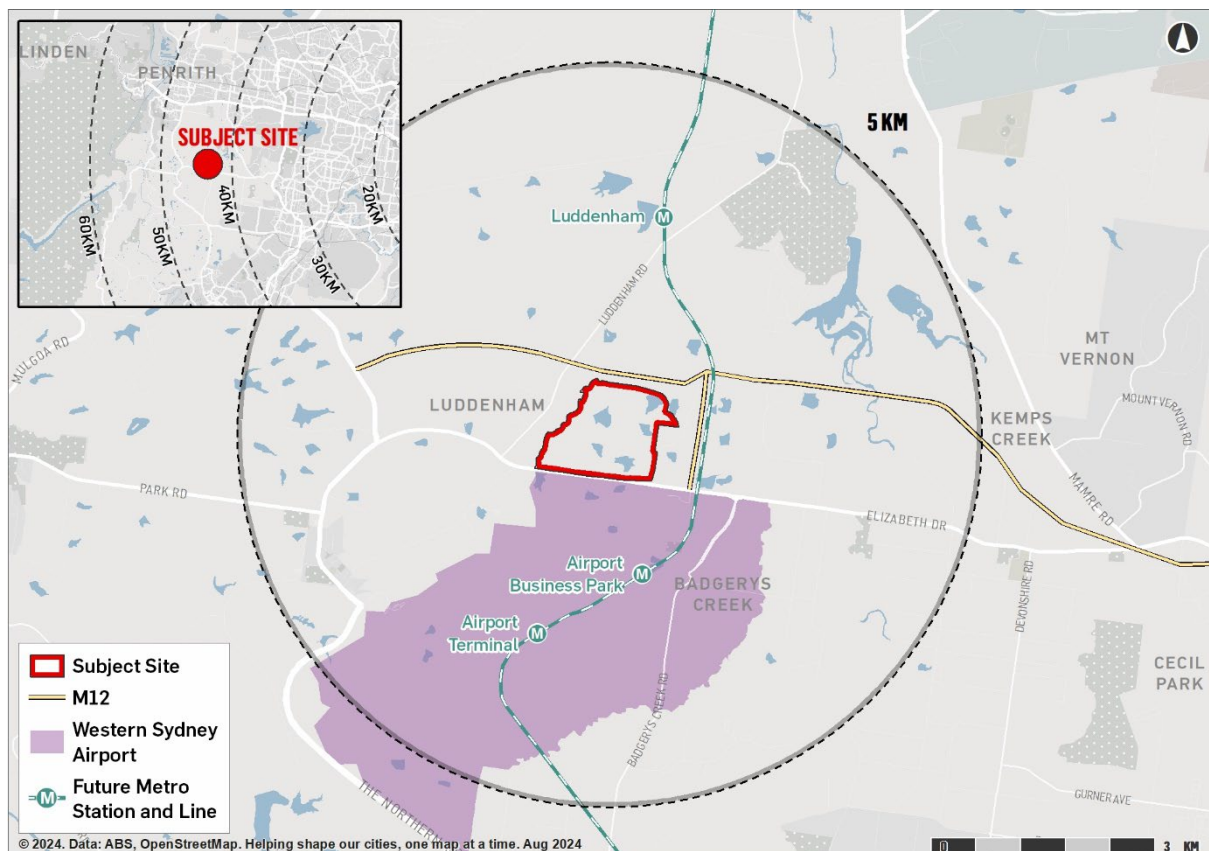
DHL Supply Chain (Australia) Pty Ltd commissioned Stantec Australia Pty Ltd in September 2024 (This report) to update the Transport and Accessibility Impact Assessment to accompany the SSDA for the proposed development.

1.3 Site Description

The subject site is located within part of Lot 1 in Deposited Plan 1306448, at 1953-2109 Elizabeth Drive, Badgerys Creek. The site is approximately 25 hectares in size and situated north of the new Western Sydney Airport. It is located within the Penrith local government area (LGA) and is approximately 12.5km from Penrith Central Business District (CBD), 27km from Parramatta CBD, and 47km from Sydney CBD. The site is owned by Roberts Jones Development Pty Ltd.

The site is currently used for agricultural purposes and is largely cleared of vegetation with areas of dispersed grass and scattered natural and/or planted tree growth. The site contains several farm dams, primarily within the central and southern areas. The location context and aerial plans are depicted in Figure 1 and Figure 2.

Figure 1: Location Context Area Plan



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1 Introduction

Figure 2: Site Location Plan



Figure 3: DHL Masterplan Site



1.4 Planning Approvals Strategy

Development consent is sought under Section 4.12(8) and Division 4.4. of the Environmental Planning and Assessment Act 1979 (**EP&A Act**) and Division 5 of the Environmental Planning and Assessment Regulation 2021 (**EP&A Regulation**) for the construction and operation of a warehouse and logistics facility (**the Project**) under Schedule 1 of State Environmental Planning Policy (Planning Systems) 2021 (**Planning Systems SEPP**).

1.5 Project Description

Specifically, the SSDA seeks consent for:

Staged construction of warehouse buildings for use as a logistics centre with 24 hour/ day, seven days a week operation, comprising the following:

- Construction of two warehouses;
- Building fit out;
- Construction of hardstand, loading and carparking;
- Landscaping works; and
- Signage.

1.6 Secretary's Environmental Assessment Requirements (SEARs)

The Department of Planning and Environment provided industry specific Secretary's Environmental Assessment Requirements (SEARs) to the applicant for the preparation of an Environmental Impact Statement for the proposed development on 22 May 2024.

This report has been prepared to accompany the EIS. It addresses the relevant requirements of the SEARs for the project. A summary of the relevant SEARs is listed below in Table 1.

Table 1: SEARs and relevant report reference

Key Assessment Requirement	SEARs Reference	Section where SEARs is addressed in this Report	Comments
Section 6 – Traffic, Transport and Accessibility	Provide a transport and accessibility impact assessment, which includes: • details of all traffic types and volumes likely to be generated during construction and operation, including a description of key access and haul routes.	Section 6 and 8	
	• an assessment of the predicted impacts of this traffic on road safety and the capacity of the road network, including consideration of cumulative traffic impacts at key intersections (using industry standard modelling).	Section 6.4	This report has also relied on the TIA prepared by Arcadis, dated 15 August 2024 which includes traffic modelling and discusses interim and ultimate infrastructure



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1 Introduction

Key Assessment Requirement	SEARs Reference	Section where SEARs is addressed in this Report	Comments
			upgrades for the broader Burrah Park site.
	plans demonstrating how all vehicles likely to be generated during construction and operation and awaiting loading, unloading or servicing can be accommodated on the site to avoid queuing in the street network.	Section 5.3 and 8.4	
	details and plans of any proposed internal road network, loading dock provision and servicing, on-site parking provisions, and sufficient pedestrian and cyclist facilities, in accordance with the relevant Australian Standards.	Section 4 and 5	
	swept path analysis for the largest vehicle requiring access to the development.	Appendix A	
	details of road upgrades, infrastructure works, or new roads or access points required for the development if necessary.	Section 6.4	This report has also relied on the TIA prepared by Arcadis, dated 15 August 2024 which includes traffic modelling and discusses interim and ultimate infrastructure upgrades for the broader Burrah Park site.
	Provide a Construction Traffic Management Plan detailing predicted construction vehicle movements, routes, access and parking arrangements, coordination with other construction occurring in the area, and how impacts on existing traffic, pedestrian and bicycle networks would be managed and mitigated.	Section 8	
	Transport for NSW and Penrith City Council must be closely consulted during preparation of the EIS on any interim and ultimate infrastructure upgrades required to the road network and any traffic modelling requirements. The EIS must include an assessment of road access and delivery, intersection operation and any required infrastructure upgrades.	Section 1.7	This report has also relied on the TIA prepared by Arcadis, dated 15 August 2024 which includes traffic modelling and discusses interim and ultimate infrastructure upgrades for the broader Burrah Park site.



1.7 Agency Consultation

Stantec has regularly met with Transport for NSW (TfNSW) throughout the planning stage for the broader Burrah Park industrial subdivision, with key correspondence and agreements summarised in Table 2. This specifically included discussions and agreement on the modelling approach for the broader subdivision, which in turn is relevant to the DHL site. Further consultation has subsequently occurred during the re-planning of the broader Burrah Park industrial subdivision following a change of ownership.

Table 2: Agency consultation summary

Agency	Correspondence/ meeting date	Correspondence
TfNSW	1 June 2021	A request was made of TfNSW for STFM and PTPM data near the site to understand traffic growth projections on key roads surrounding the site with consideration to future transport infrastructure (i.e. M12 Motorway, Outer Sydney Orbital) and inform future conditions traffic modelling. The STFM traffic volume forecasts were used to inform initial SIDRA modelling inputs (now superseded by broader Burrah Park modelling by Arcadis).
	7 June 2021	Discussion of transport requirements for the SEARs and potential to establish a working group. Agreement was formed that SIDRA modelling would be adequate for addressing the SEARs.
	15 September 2022	TfNSW briefing on the detailed site layout, access and circulation, as well as transport assessment methodology/ scenarios. Feedback requested from TfNSW on broader Precinct infrastructure planning and analysis.

1.8 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 proposed parking in terms of supply (quantum) and layout
- service vehicle requirements
- pedestrian and bicycle requirements
- the traffic generating characteristics of the proposed development
- suitability of the proposed access arrangements for the site
- the transport impact of the development proposal on the surrounding road network.



1.9 References

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

- Western Sydney Aerotropolis Phase 2 Development Control Plan 2022 (Phase 2 DCP)
- Australian Standard/ New Zealand Standard, Parking Facilities, Part 1: Off-Street Car Parking AS/NZS 2890.1:2004
- Australian Standard, Parking Facilities, Part 2: Off-Street Commercial Vehicle Facilities AS 2890.2:2018
- Australian Standard / New Zealand Standard, Parking Facilities, Part 6: Off-Street Parking for People with Disabilities AS/NZS 2890.6:2009
- plans for the proposed development prepared by SBA Architects, Drawing Number 100-101, Revision 3, dated 10/10/2022.
- other documents and data as referenced in this report.



2 Strategic Context

2.1 Planning

The subject site lies in the heart of the Western Sydney Aerotropolis, from which the Western Sydney Airport will form a major catalyst for growth in the Western Parkland City. Development of the aerotropolis has been facilitated by strategies and infrastructure plans/funding programs that will inform future development and the delivery of critical transport infrastructure.

2.1.1 STRATEGIES

Greater Sydney Region Plan - A Metropolis of Three Cities

The Greater Sydney Commission (GSC) outlines how Greater Sydney will manage growth and guide infrastructure delivery. The plan has been prepared in conjunction with the NSW Government's Future Transport 2056 Strategy and informs Infrastructure NSW's State Infrastructure Plan. The GSC's vision is to create connectivity between three cities; a Western Parkland City around the new Aerotropolis, a Central River City at Greater Parramatta and an Eastern Harbour City. The site is within the Western Parkland City.

As illustrated in Figure 4, the Western Parkland City includes established centres at Liverpool, Penrith and Campbelltown-MacArthur.

To optimise business investment, employment and liveability outcomes, the Greater Sydney Regional Plan emphasises the need to integrate the Western Sydney Airport with existing transport networks. It directly sources transport initiatives from the Future Transport Strategy 2056, which was concurrently prepared by TfNSW and is discussed in further detail in the following section.

The Western City District Plan

The Western City District Plan sits under the Metropolis of Three Cities and provides a more detailed 20-year plan to manage growth. The plan identifies the following projects relevant to study area:

Committed transport projects:

- Western Sydney Airport
- The new North South Rail Link from St Marys to the Western Sydney Aerotropolis (to be operational by the time the airport opens in 2026) – now known as Sydney Metro Western Sydney Airport
- M12 Motorway.
- Transport investigation projects
- The M9/ Outer Sydney Orbital road and freight corridor that connects the south west to the north west for investigation in the next 10-20 years
- Rapid Bus Connections between Penrith and the Western Sydney Airport (for investigation in the next 10 years).



Future Transport 2056

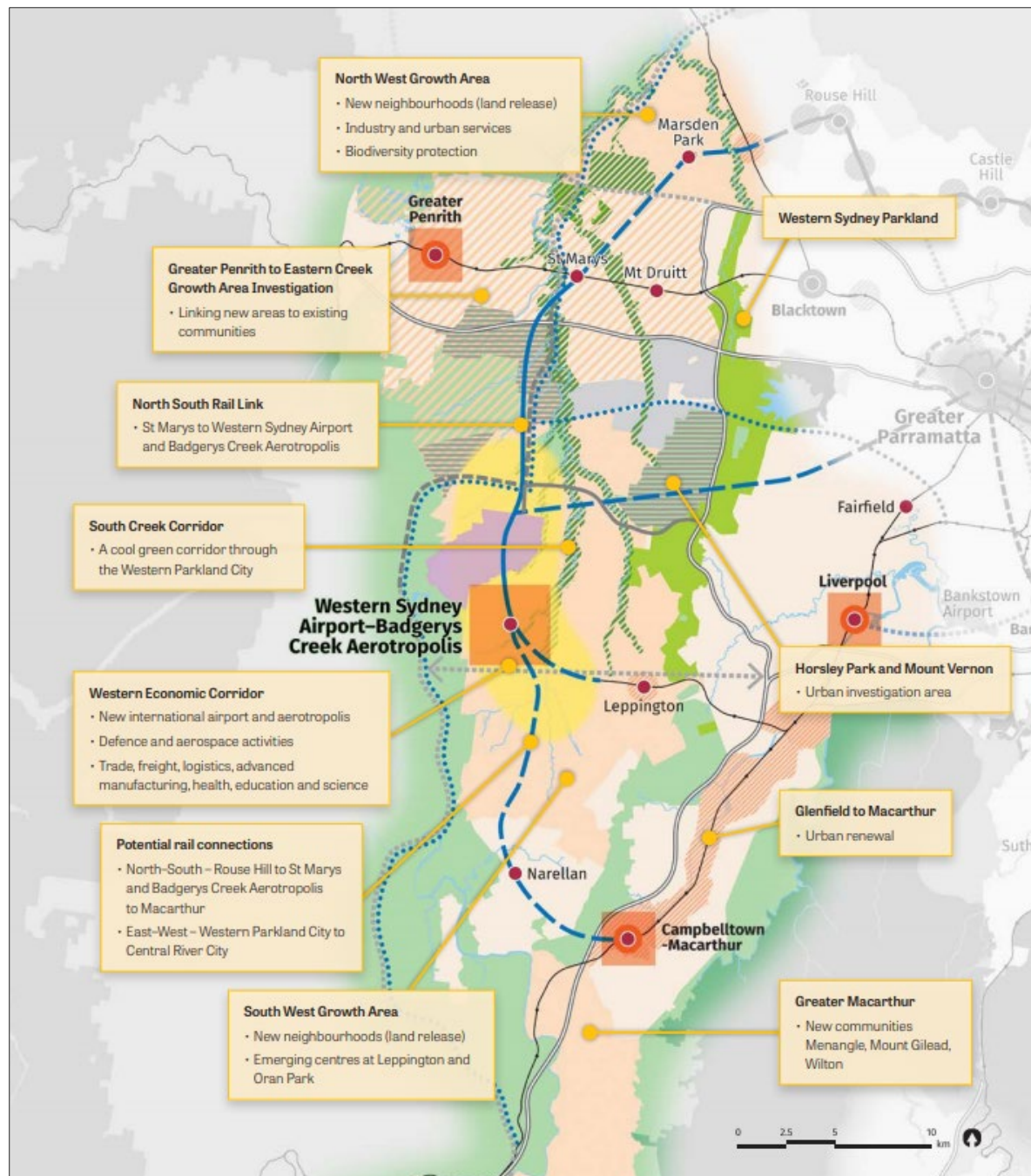
Future Transport 2056 is TfNSW's overarching transport strategy for Greater Sydney and Regional NSW. It aligns with the Greater Sydney Region Plan vision for a metropolis of three cities, "where people can access the jobs, education and services they need within 30 minutes by public or active transport".

The strategy acknowledges the role of the Western Sydney Aerotropolis in anchoring the new Western Parkland City and has flagged the following rail and road corridors to integrate the aerotropolis with the wider transport network in Greater Sydney:

- Rail connections:
 - Western Sydney Airport to St Marys (Sydney Metro – Western Sydney Airport)
 - Western Sydney Airport to Campbelltown-Macarthur (Sydney Metro – Western Sydney Airport)
 - Western Sydney Airport to Parramatta (East West Rail Link)
 - Western Sydney Airport to Leppington (South West Rail Link Extension).
- Road connections:
 - Western Sydney Airport to M7 Motorway (M12 Motorway)
 - Western Sydney Airport to Great Western Highway (Outer Sydney Orbital)
 - Western Sydney Airport to Hume Highway (Outer Sydney Orbital).

The connections envisaged under the Future Transport 2056 strategy will be designed and executed under infrastructure plans for each region. In particular, the Western Sydney Infrastructure Plan proposes upgrades for the Western Sydney Aerotropolis, as discussed in the following section.

Figure 4: ‘A Metropolis of Three Cities’



Source: Greater Sydney Region Plan – ‘A Metropolis of Three Cities’

2.1.2 INFRASTRUCTURE PLANS & FUNDING PROGRAMS

Western Sydney Airport and Badgerys Creek Aerotropolis

The Western Sydney Airport and Badgerys Creek Aerotropolis will deliver major economic growth to the Greater Western Sydney region. It is featured in the heart of the Western Parkland City. Construction of Western Sydney International (Nancy-Bird Walton) Airport is underway and on track to begin operations in 2026. The airport is expected to support almost 28,000 direct and indirect jobs by 2031, five years after the airport opens. To support the airport and surrounding aerotropolis,



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2 Strategic Context

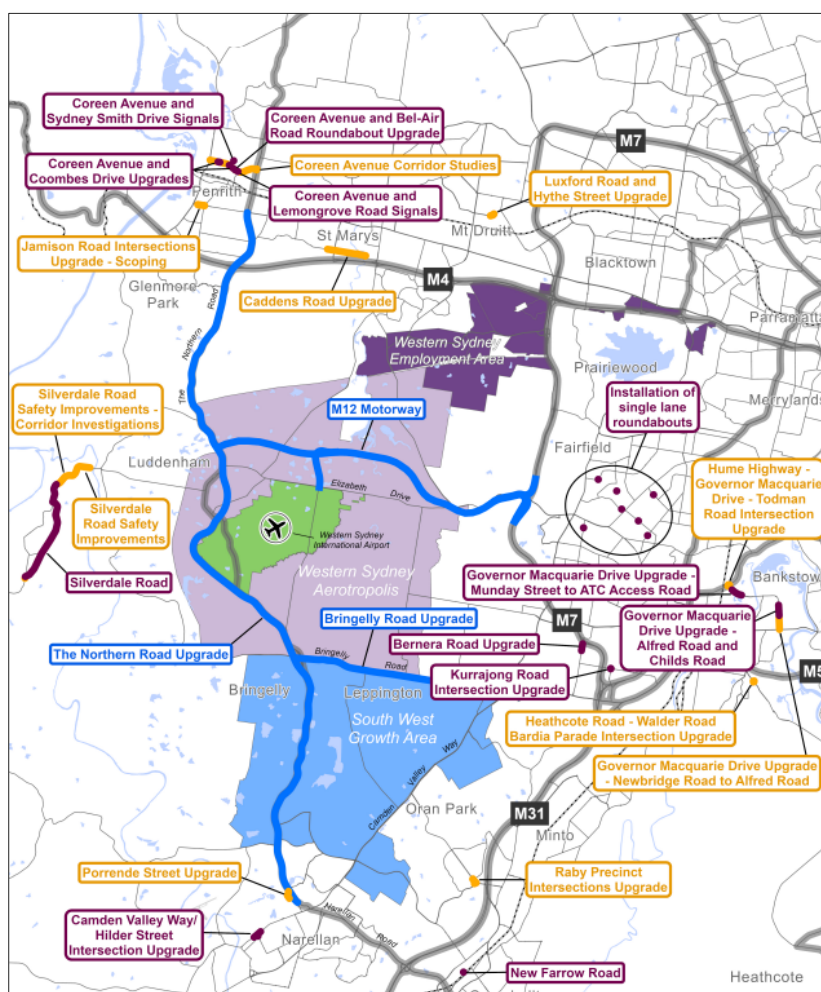
strategic planning is underway for the greenfield land around the proposed airport, including the subject site. New infrastructure including the M12 Motorway is key to supporting the new airport and surrounding area.

Western Sydney Infrastructure Plan (WSIP)

The Western Sydney Infrastructure Plan is a \$4.4 billion funding program involving the Australian and NSW Governments to deliver critical road infrastructure in the Western Parkland City. Capitalising on the construction of the Western Sydney Airport, the program supports an extensive number of projects as shown in Figure 5, including the following major roads within the Western Sydney Aerotropolis:

- Construction of the new M12 Motorway, connecting the M7 Motorway with the Western Sydney Airport and The Northern Road
- Upgrading The Northern Road in stages to a minimum of four lanes between Narellan and Penrith (Jamison Road)
- Upgrading Bringelly Road in stages to a minimum of four lanes between The Northern Road and Camden Valley Way.

Figure 5: Western Sydney Infrastructure Plan



Source: https://investment.infrastructure.gov.au/files/western_sydney_infrastructure_plan/western-sydney-infrastructure-plan-map-v9.pdf dated 11 July 2022



Western Sydney City Deal

The Western Sydney City Deal is a major funding program involving the Australian and NSW Governments as well as eight councils to deliver 38 wide ranging commitments for the Western Parkland City. Notably, the program will support the delivery of public transport infrastructure including:

- Stage 1 of the Sydney Metro – Western Sydney Airport Line, extending between St Marys and the Western Sydney Aerotropolis, and is due to open in 2026 in time for the opening of the Western Sydney Airport
- Rapid Bus Services from the metropolitan centres of Penrith, Liverpool and Campbelltown to the Western Sydney Airport.

2.2 Infrastructure Upgrades

2.2.1 WESTERN SYDNEY INTERNATIONAL AIRPORT

The Western Sydney International (Nancy-Bird Walton) Airport will form the heart of the Western Sydney Aerotropolis and provide a full service airport offering including domestic, international and freight services. Earthworks for the 1,780 hectare site are currently underway, with the Airport to be constructed and expanded in stages.

Stage 1 is due for completion in 2026 and will see the Airport begin operations with a single 3.7 kilometre runway. Along with progressive upgrades, increased passenger numbers will trigger Stage 2 (estimated around 2050), which involves the construction of a second parallel runway. The Airport is likely to generate an estimated \$24.6 billion in direct revenue and contribute a \$23.9 billion increase to Gross Domestic Product in the national economy by 2060.

The Western Sydney International Airport is expected to support almost 28,000 direct and indirect jobs by 2031, after five years of operation. Notwithstanding, the airport is also expected to spur the creation of a high-skill hub for related industries (e.g. defence, aerospace & freight) within the aerotropolis and it is estimated that the Western Sydney Aerotropolis will create up to 200,000 new jobs in the Western Parkland City.

2.2.2 M12 MOTORWAY

The Australian and NSW governments are proposing to build a new motorway as part of the Western Sydney Infrastructure Plan (WSIP) road investment program. The new M12 Motorway will provide direct access to the Western Sydney Airport from Sydney's motorway network. The EIS for the M12 went on exhibition in October 2019, with the start of major construction expected in early 2022.

The current design indicates the airport access road from the M12 and Sydney Metro Greater West will travel under Elizabeth Drive as shown in Figure 6.



Figure 6: M12 Motorway intersection with Elizabeth Drive

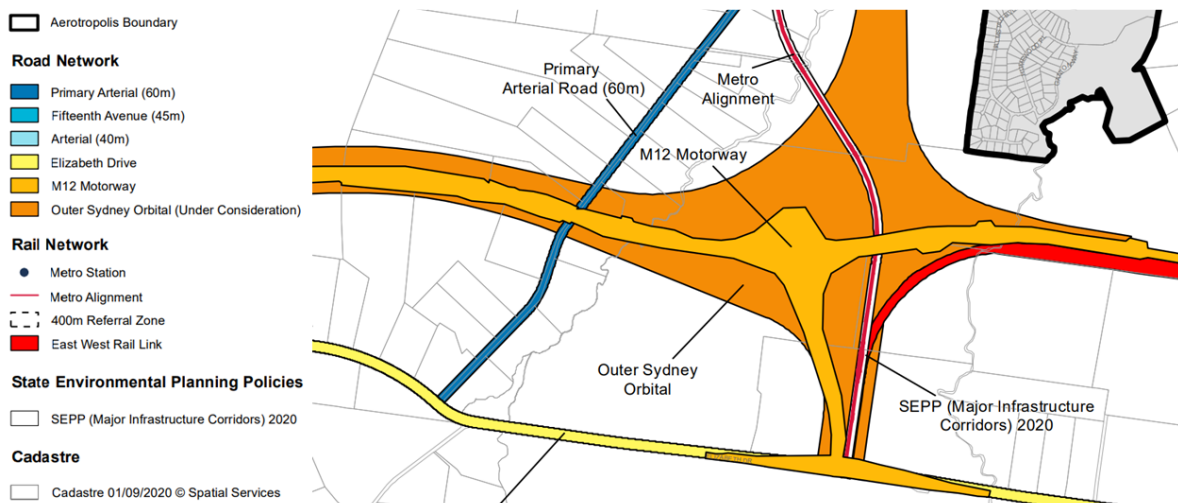


Source: <https://caportal.com.au/rms/m12/map?view=89d466f6483e1b4d6039dabfbfa687261slider>, accessed October 2024

2.2.3 SYDNEY METRO WESTERN SYDNEY AIRPORT

The Sydney Metro Western Sydney Airport will be a new line and provide a connection between St Marys Station and the Aerotropolis Core. The Sydney Metro Western Sydney Airport alignment is shown in Figure 7, which indicates that the route will run directly to the east of the subject site.

Figure 7: Sydney Metro Western Sydney Airport Line interaction with the subject site



Base image source: https://eplanningdlprod.blob.core.windows.net/pdfmaps/SEPP_WSA_TRC_001_060_20200901.pdf dated September 2020

2.2.4 OUTER SYDNEY ORBITAL CORRIDOR

TfNSW consulted on a recommended corridor of land for the Outer Sydney Orbital (OSO1) in June 2018. As the OSO1 is a multi-model transport corridor and is expected to enhance road and freight rail connectivity and transport efficiency between the North West and South West Growth Areas in Western Sydney, preserving areas of land for future transport use. Figure 8 shows the map of recommendation corridor for the Outer Sydney Orbital Stage 1.

Figure 8: Map of recommended corridor

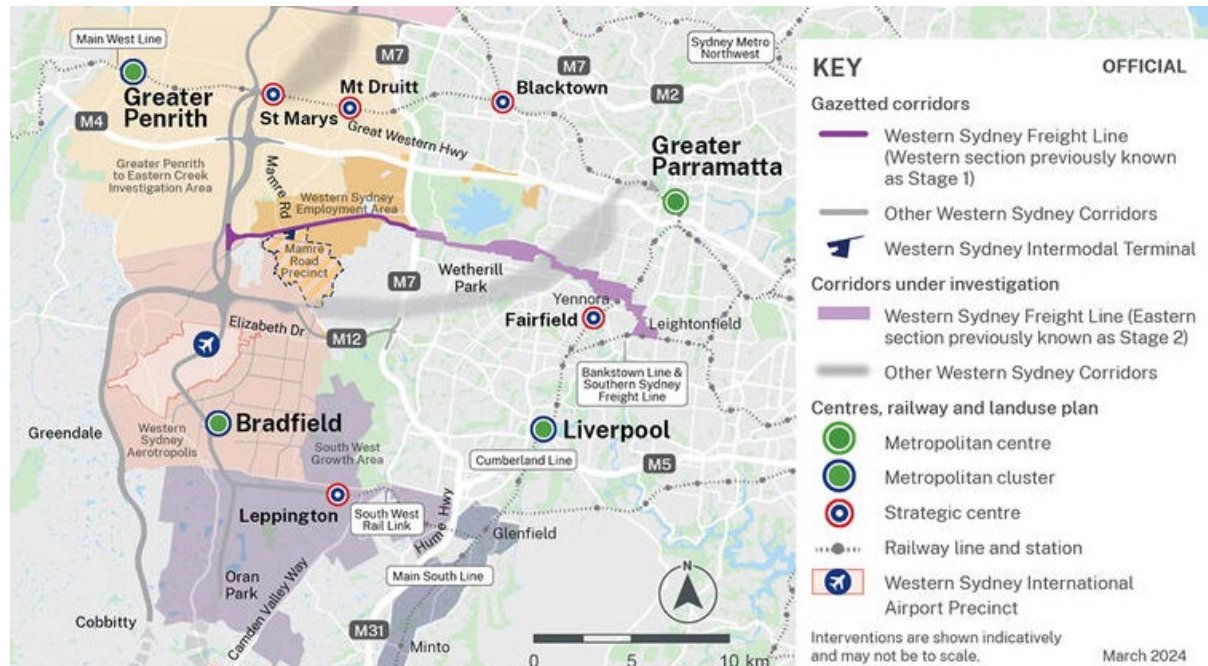


Source: [Outer Sydney Orbital Stage 1 | Transport for NSW](#) (TfNSW, 2024), accessed October 2024

2.2.5 WESTERN SYDNEY FREIGHT LINE

The Western Sydney Freight Line corridor will provide a connection from the Main West Line near St Marys to the Southern Sydney Freight Line near Leightonfield. It will provide opportunities to service existing industrial areas by investing in new and existing intermodal facilities. Stage 1, from the future Outer Sydney Orbital to Horsley Park is now protected, while Stage 2 from the M7 Motorway to Leightonfield is under investigation. The proposed Western Sydney Freight Line is shown below in Figure 9.

Figure 9: Western Sydney Freight Line



Source: <https://www.transport.nsw.gov.au/corridors/wsfli> (TfNSW, 2024), accessed October 2024

2.2.6 EAST WEST RAIL LINK

The East West Rail Link is a proposed future mass transit rail line connecting Greater Parramatta and the Western Sydney Aerotropolis and International Airport, as indicated in Figure 10. The corridor protection for the East West Rail Link was a recommendation of the Western Sydney Rail Needs Scoping Study. The Department of Planning, Industry and Environment exhibited the rail link as part of the draft Western Aerotropolis Plan from December 2019 to February 2020.

DHL Logistics Facility, Badgerys Creek (South) 2 Strategic Context

Figure 10: East West Rail Link



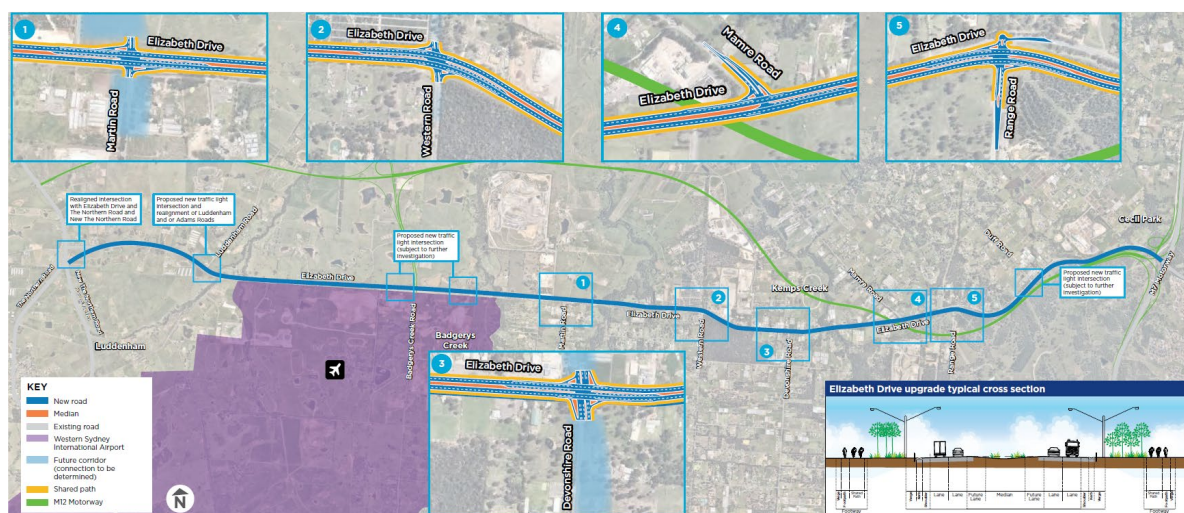
Source: <https://www.transport.nsw.gov.au/projects/current-projects/east-west-rail-link> (TfNSW, 2024), accessed October 2024

2.2.7 ELIZABETH DRIVE UPGRADES

Elizabeth Drive has been embarked to increase capacity with widening of 14 kilometre stretch between the M7 Motorway and Cecil Hills and The Northern Road at Luddenham by the NSW Government. Figure 11 shows the details of key changes which includes:

- Investigations for widening to two lanes in each direction
- Intersection upgrades like installation of traffic lights at a number of intersections to reduce queueing and improve safety
- Pedestrian, cycling and bus stop infrastructure along the length of Elizabeth Drive
- A direct connection to Western Sydney Airport and access across the Western Parkland City.

Figure 11: Elizabeth Drive upgrade



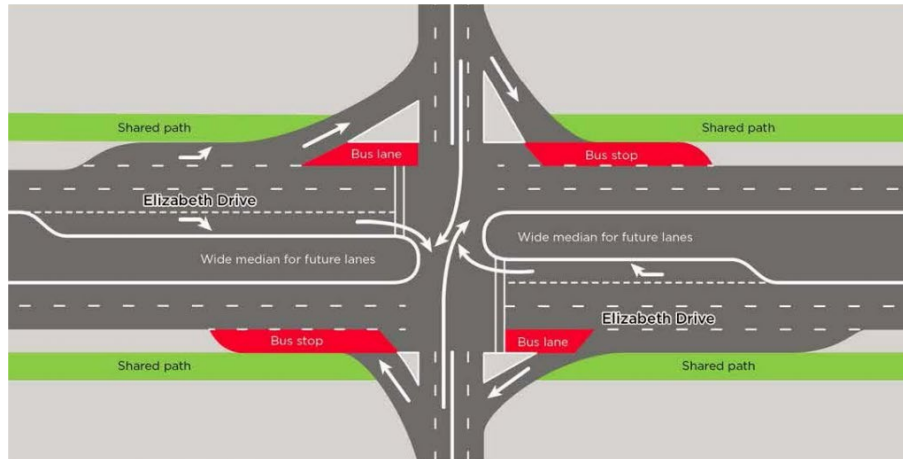
Source: Elizabeth Drive Upgrade Community Update, March 2020

It is noted that while Figure 11 only indicates new traffic signals at existing intersections along Elizabeth Drive, additional signalised intersections are likely to be located along Elizabeth Drive as the surrounding precinct is developed further and new roads are constructed to connect with



Elizabeth Drive. It is understood that such additional intersections would be considered on the general principle of a minimum 800-metre spacing between traffic signals. A typical Elizabeth Drive signalised intersection layout is shown indicatively in Figure 12.

Figure 12: Typical Elizabeth Drive signalised intersection layout



Source: Elizabeth Drive Upgrade Community Consultation Report February 2020

2.3 Burrah Park Industrial Subdivision

The Burrah Park project (SSD- 70316465) comprises a concept plan to guide the staged development of a warehouse and logistics estate at 1953-2109 Elizabeth Drive, Badgerys Creek. An SSDA has been lodged for the initial subdivision of the southern side of the site seeking consent for the following:

- Concept Proposal (Concept Plan) to guide the development of the Site in a staged manner and includes development controls that can form the basis for the design and assessment of future applications.
- Stage 1 Estate Works relate to the entire development area to which consent is being sought under this SSDA and comprises site preparation and civil and infrastructure works required to facilitate the development of the Site in accordance with the proposed Concept Plan.
- Stage 1 Development (Warehouse 1.1) includes the detailed design, development, and fit-out of Warehouse 1.1 for use as a warehouse and distribution centre.

The proposed Concept Plan for the Burrah Park site involves around 295,000 square metres gross floor area (GFA) including around 270,000 square metres GFA of warehouse and ancillary office space and around 10,000 square metres GFA of bulky goods retail space and 15,000 square metres of dedicated office space.

Two vehicle accesses are proposed to the Burrah Park site. This includes a primary signalised intersection access on Elizabeth Drive located relatively central to the site and allowing for all movements in and out of the site, while a secondary left-in left-out access is proposed on Elizabeth Drive on the western side of the site.

The DHL site is located within the Burrah Park site. The DHL site in the context of the Burrah Park Concept Plan is shown Figure 13.



Figure 13: Burrah Park Concept Plan



3 Existing Conditions

3.1 Location

The subject site is located on land legally described as Lot 1 in Deposited Plan 1306448. As mentioned, the site is located within a broader proposed industrial subdivision at 1953-2109 Elizabeth Drive, Badgerys Creek called Burrah Park that has a frontage to Elizabeth Drive. The site is zoned as Enterprise under the Aerotropolis SEPP. The site is within the Western Sydney Aerotropolis.

The site is a strategic landholding situated immediately north of the new Western Sydney Airport. It is located within the Penrith local government area (LGA) and is approximately 12.5km from Penrith Central Business District (CBD), 27km from Parramatta CBD, and 47km from Sydney CBD. The surrounding properties are currently predominantly rural properties.

The site and its surrounding environs are shown in Figure 14 .

Figure 14: Subject site and its environs



Source: Nearmap

3.2 Transport Network

3.2.1 ROAD HIERARCHY

Roads are classified according to the functions they perform. The main purpose of defining a road's functional class is to provide a basis for establishing the policies which guide the management of the road according to their intended service or qualities.

In terms of functional road classification, State roads are strategically important as they form the primary network used for the movement of people and goods between regions, and throughout the



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3 Existing Conditions

State. TfNSW is responsible for funding, prioritising and carrying out works on State roads. State roads generally include roads classified as freeways, state highways, and main roads under the Roads Act 1993, and the regulation to manage the road system is stated in the Australian Road Rules.

TfNSW defines four levels in a typical functional road hierarchy, ranking from high mobility and low accessibility, to high accessibility and low mobility. These road classes are:

- Arterial Roads – Controlled by TfNSW, typically no limit in flow and designed to carry vehicles long distance between regional centres.
- Sub-Arterial Roads – Managed by either Council or TfNSW under a joint agreement. Typically, their operating capacity ranges between 10,000 and 20,000 vehicles per day, and their aim is to carry through traffic between specific areas in a sub region or provide connectivity from arterial road routes (regional links).
- Collector Roads – Provide connectivity between local sites and the sub-arterial road network, and typically carry between 2,000 and 10,000 vehicles per day.
- Local Roads – Provide direct access to properties and the collector road system and typically carry between 500 and 4,000 vehicles per day.

3.2.2 SURROUNDING ROAD NETWORK

Elizabeth Drive

Elizabeth Drive is a State arterial road aligned in an east-west direction along the southern boundary of the site. Elizabeth Drive is the main east-west corridor between Liverpool and surrounding suburbs. Elizabeth Drive, from the M7 Motorway to Badgerys Creek, is approximately 14 kilometres in length and predominantly a two-lane undivided road, with no footpaths, no median and a speed limit of 80km/h.

As discussed, the NSW Government has allocated funding to investigating improvements to Elizabeth Drive between the M7 Motorway at Cecil Hills and The Northern Road at Luddenham. Current planning indicates Elizabeth Drive will be upgraded to two lanes in each direction, with a central median and allowance for an addition future lane in each direction.

Luddenham Road

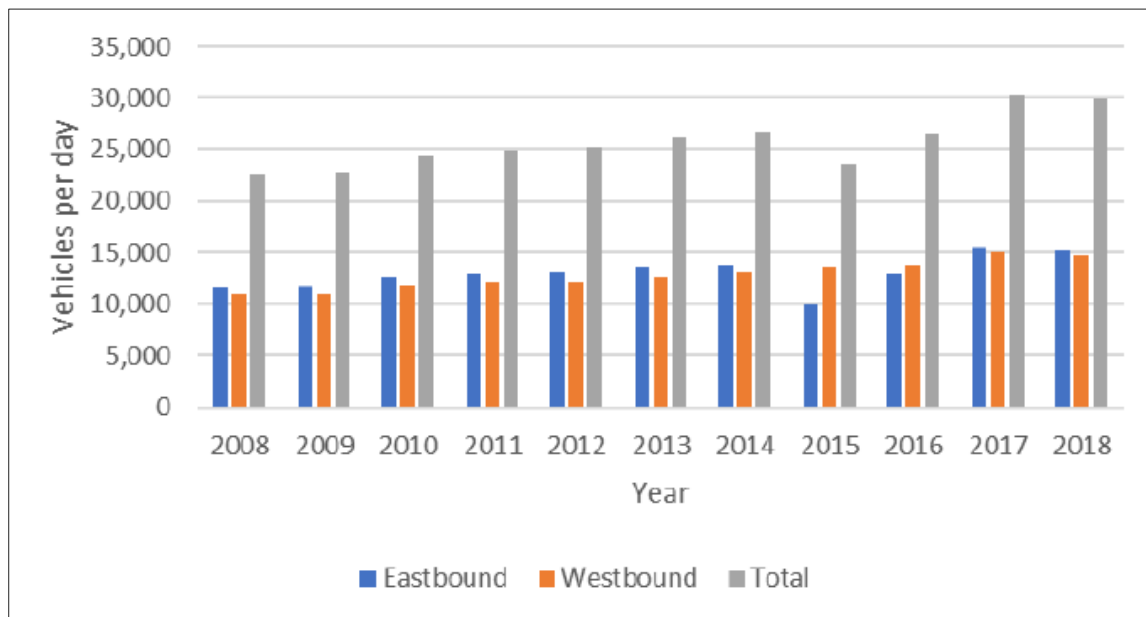
Luddenham Road is a State arterial road aligned in a north-south direction to the west of the site. It is a two-way road configured with one-lane in each direction with an undivided carriageway. It is a key road in south-west Sydney, connecting Elizabeth Drive and Mamre Road to the south of St Marys. Luddenham Road has an 80 km/h speed limit.

3.3 Traffic Volumes

Noting the current works occurring in the surrounding area associated with the Western Sydney Aerotropolis, historical traffic counts along Elizabeth Drive have been sourced from the M12 EIS (TfNSW, October 2019). A summary of the Average Annual Daily Traffic (AADT) volumes along Elizabeth Drive between 2008 and 2018 is provided in Figure 15.



Figure 15: Average annual daily traffic on Elizabeth Drive



Source: M12 Motorway Environmental Impact Statement, October 2019

Figure 15 indicates an AADT volume of around 30,000 vehicles (two-way) along Elizabeth Drive in 2018. Traffic volume data from 2008 indicates around 2.9 per cent per annum growth has occurred on Elizabeth Drive.

3.4 Public Transport

As the subject site is located in a predominately rural landscape, there are limited public transport services currently operating in the area. The 801-bus route currently operates between Badgerys Creek and Liverpool with limited services throughout the day. The closest bus stops to the site are on Badgerys Creek Road just south of Elizabeth Drive.

It can be expected that public bus services will be expanded to service the broader Burrah Park industrial subdivision as more lots are developed and demand increases.

3.5 Walking and Cycling

The existing site and surrounding area is rural and isolated from nearby local centres. There are no provisions for active transport links in the vicinity as the land is completely private owned. The only publicly available cycle routes are on road shoulders of the nearby major roads of Luddenham Road, Mamre Road and Elizabeth Drive, which are all high-speed environments. There are no immediate residential areas or attractors, therefore it is assumed the majority of existing cyclists traversing through the site are recreational.

As part of the broader Burrah Park industrial subdivision, footpaths and/ or shared paths will be provided on both sides of all roads within the site, facilitating connection to future paths along Elizabeth Drive and the M12 Motorway.

4 Development Proposal

4.1 Land Uses

The SSDA constitutes a detailed DA insofar that it is linked to and is consistent with Concept SSDA (SSD- 70316465) by seeking consent for the construction and operation of two industrial buildings ranging in size from 29,205 square metres (Warehouse 3) to 27,960 square metres (Warehouse 4) for use as a warehouse and logistics facility with 24 hour/ seven day a week operation plus car parking and associated landscaping.

This SSDA represents the first of two (2) SSDAs proposed by DHL and will apply to the southern half of their site which is known as “Stage 1 of the DHL Masterplan”. Stage 2 of the DHL Masterplan will be for the northern half of the site and will be the subject of a separate SSDA.

The SSDA seeks consent for:

- Construction of two industrial buildings ranging in size from 29,205 square metres (Warehouse 3) to 27,960 square metres (Warehouse 4) for use as a warehouse and logistics facility with 24 hour/ seven day a week operation.
- This also includes 1,932 square metres of office space (966 square metres per warehouse) and 687 square metres of dock offices
- Fit out of warehouses
- Landscaping works
- Associated hardstand, loading and carparking for approximately 441 cars
- Associated vehicle crossings and drainage connection to the road drainage system
- Signage.

A summary of the proposed development yields is provided Table 3.

Table 3: Development schedule

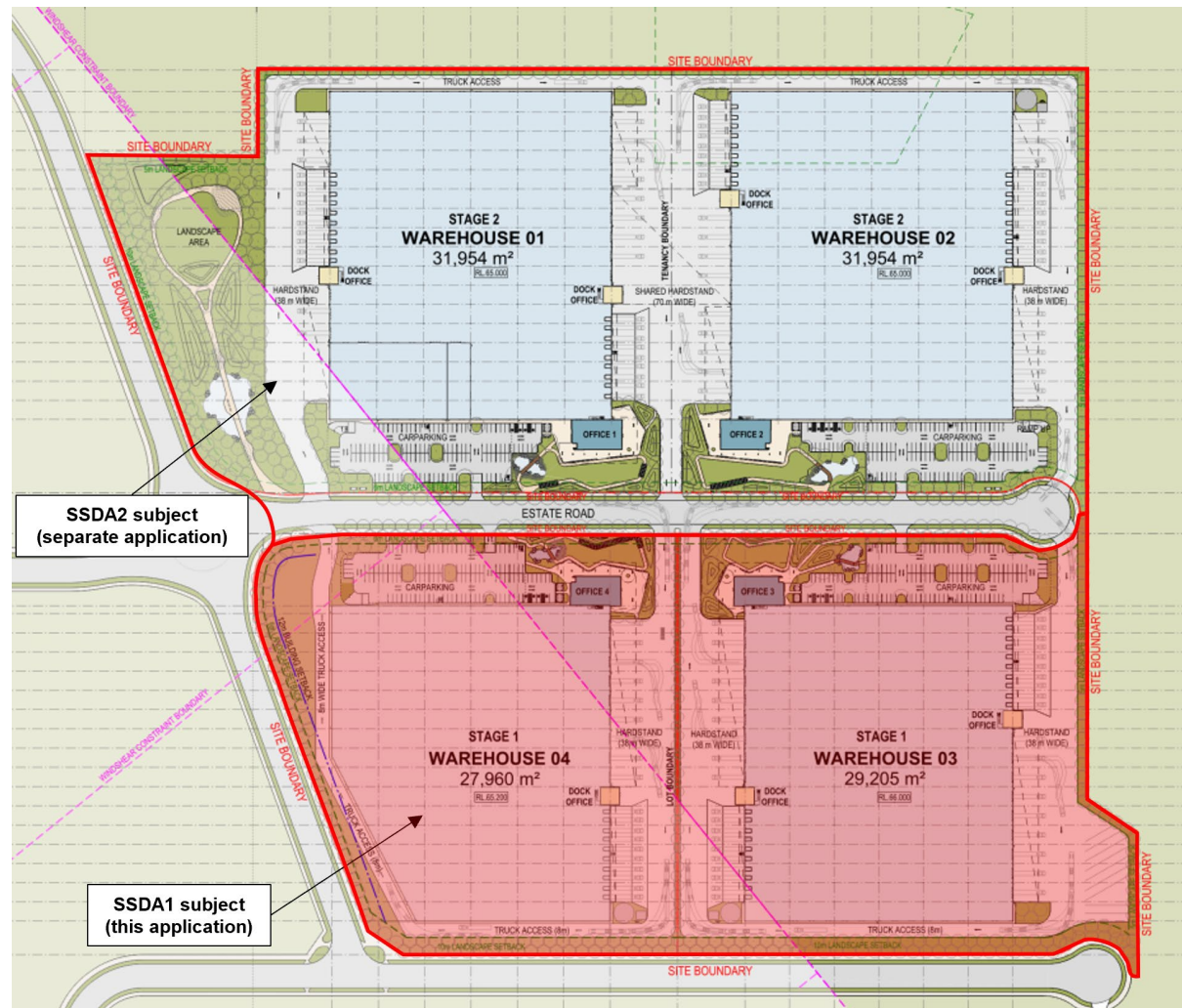
Warehouse	Use	Size (sqm GFA)
Warehouse 3	Warehouse	29,205
	Ancillary office	1,424
	<i>Sub-total</i>	<i>30,629</i>
Warehouse 4	Warehouse	27,960
	Ancillary office	1,195
	<i>Sub-total</i>	<i>29,155</i>
Total		59,784

The Master Plan for the subject site is shown in Figure 16 for context, while the proposed site plan subject to this SSDA is shown in Figure 17.



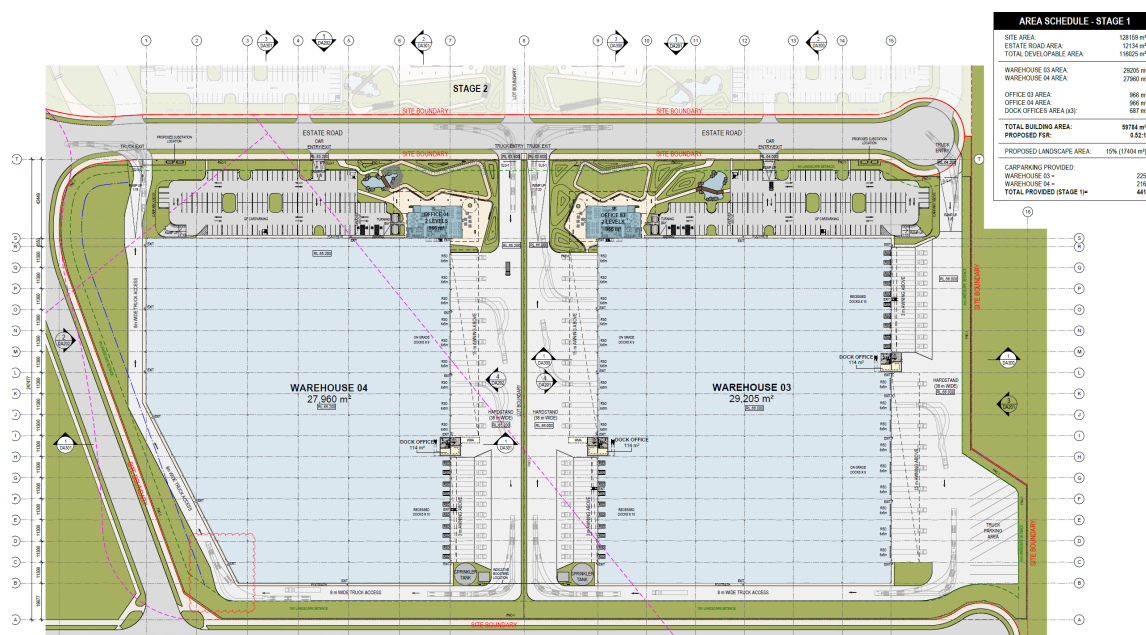
DHL Logistics Facility, Badgerys Creek (South) 4 Development Proposal

Figure 16: Proposed Master Plan



Base image source: SBA Architects, Master Plan/ Development Summary, Drawing Number DA100, Rev 7 dated 30 September 2024

Figure 17: Proposed SSDA1 ground floor plan



Base image source: SBA Architects, GF Plan – Stage 1, Drawing Number DA101, Rev 6, dated 29 August 2024



4.2 Vehicle Access, Loading and Car Parking

A total of six vehicle accesses are proposed to be provided from the broader estate road along the northern boundary of the two warehouses, with three vehicle accesses for each warehouse.

Each warehouse will operate under a one-way clockwise circulation arrangement for heavy vehicles, with vehicles entering via the eastern-most access and exiting via the western-most access. These accesses have been designed to accommodate vehicles up to and including 30-metre B-Doubles.

The central vehicle access for each warehouse will be for light vehicles only and will facilitate two-way access to/ from the site warehouse car parks. Each warehouse will include a multi-storey car park, with the Warehouse 3 car park containing 225 car parking spaces while the Warehouse 4 car park contains 216 spaces.

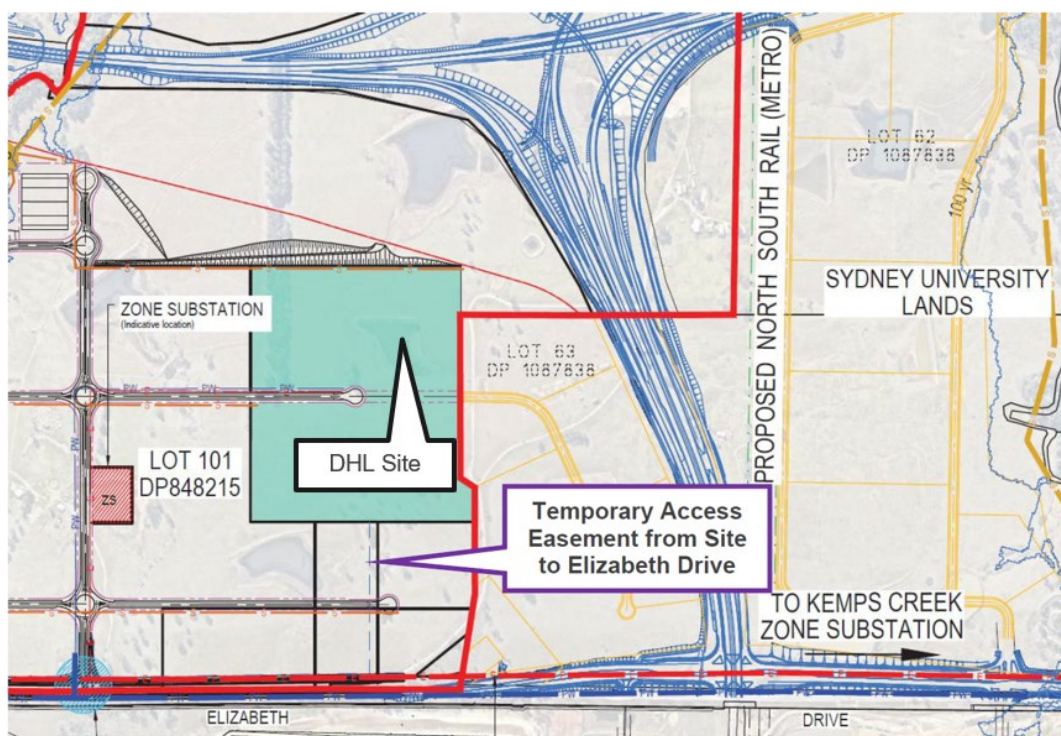
In addition to the above, the site layout allows for larger 30-metre B-Doubles to pull up adjacent to each warehouse to be loaded/ unloaded from the side using forklifts.

4.3 Relationship Between Burrah Park (SSD- 70316465) and This Application (SSD-70818708)

The proposed development subject to this SSDA can be delivered independently of the Burrah Park SSDA (SSD- 70316465) by providing a temporary access easement over an existing dirt road off Elizabeth Drive which connects the southern portion of the site to Elizabeth Drive. This road would be upgraded to provide access. This access road would be subject to survey and would be designed with reference to the appropriate Australian Standards.

The temporary access easement is shown indicatively in Figure 18.

Figure 18: Temporary access easement



Source: AT&L Access Easement



5 Parking and Loading Assessment

5.1 Car Parking

The car parking requirements for different development types are set out in Western Sydney Aerotropolis Phase 2 Development Control Plan 2022 (Phase 2 DCP). The Phase 2 DCP recommends parking for warehouses or distribution centres to be provided at a minimum rate of one parking space per 300 square metres and a maximum rate of one parking space per 100 square metres (for developments located greater than 800m walking distance of a metro station). For ancillary offices, a rate of 1 space per 40 square metres GFA is to be applied.

Considering the above, Table 4 sets out the car parking requirements for the proposed development.

Table 4: Phase 2 DCP car parking requirements

Use		Size (sqm GFA)	Car parking rate		Car parking requirement	
			Minimum	Maximum	Minimum	Maximum
Warehouse 3	Warehouse	29,205	1 space per 300sqm GFA	1 space per 100sqm GFA	97	292
	Ancillary office	1,424	1 space per 40sqm GFA		36	
Warehouse 4	Warehouse	27,960	1 space per 300sqm GFA	1 space per 100sqm GFA	93	280
	Ancillary office	1,195	1 space per 40sqm GFA		30	
	Total				256	638

Based on the above, the proposed development is required to provide between 256 and 638 car parking spaces.

As mentioned, a total of 441 car parking spaces are proposed, with 225 spaces for Warehouse 3 and 216 spaces for Warehouse 4 therefore meeting the Phase 2 DCP requirements.

Accessible parking should be provided at a rate of two per cent of the total car parking spaces in accordance with Phase 2 DCP requirements. Based on the proposed parking provision for each warehouse, this results in a requirement for four accessible spaces for both Warehouse 3 and 4. A total of eight accessible spaces will be provided within the total parking provision for each warehouse, therefore meeting the accessible parking requirements.

The Phase 2 DCP also requires car share and electrical vehicle (EV) parking spaces to be provided at a rate of one space per 40 car parking spaces, resulting in a minimum requirement for six of each (i.e. car share and EV parking) for Warehouse 3 and five of each for Warehouse 4. Six EV spaces will be included within the total parking provision for each warehouse. No car share spaces are proposed as car share spaces are not considered practical for industrial developments.

5.2 Bicycle Parking

Phase 2 DCP recommends bicycle parking to be provided for industrial developments at a rate of one space per 1,000 square metres. Based on the proposed 30,629 square metres for Warehouse 3 and 29,155 square metres for Warehouse 4, the development is required to provide 31 and 29 bicycle parking spaces respectively. One electric bicycle charging station is also required to be provided for



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first five bicycle spaces, plus one per 10 bicycle parking spaces thereafter. This results in a requirement for four electric bicycle charging stations for both Warehouse 3 and 4.

In addition, the Phase 2 DCP also sets out the following requirements for end-of-trip facilities:

- one locker per bicycle space
- one shower and change cubicle for the first five bicycle spaces, plus an additional shower for every 10 bicycle parking spaces thereafter.

A summary of the end-of-trip facility requirements for the proposed development is provided in Table 5.

Table 5: Phase 2 DCP end-of-trip requirements summary

Use	Size (sqm GFA)	Bicycle parking requirement	Electric bicycle charging station requirement	Locker requirement	Shower and change cubicle requirement
Warehouse 3 and ancillary office	30,629	31	4	31	4
Warehouse 4 and ancillary office	29,155	29	4	29	4
Total		60	8	60	8

Each warehouse will ensure the requirements outlined in Table 5 are achieved.

5.3 Loading Assessment

The Phase 2 DCP states that off-street loading and unloading facilities are provided for all commercial and industrial premises. The number and size of loading bays will be determined by the consent authority having regard to the:

- Intended use of the premises
- Frequency of deliveries/collections
- Size and bulk of goods to be delivered/collected
- Size of vehicles to be used
- Likely impacts on traffic safety and efficiency on adjoining roads.

The proposed development includes 38 loading docks for Warehouse 3 and 19 loading docks for Warehouse 4 suitable for use by 20-metre articulated vehicles. In addition, for Warehouse 3, a further nine parking bays suitable for a mix of 20-metre articulated vehicles and 26-metre B-Doubles.

DHL has confirmed the proposed loading provision and loading arrangement is suitable for meeting the loading demand for the site.



5.4 Site Layout Review

The site layout has been reviewed against the requirements of the Australian Standard for Off Street Car Parking (AS/NZS2890.1:2004 and AS/NZS2890.6:2009) and Off-Street Commercial Vehicle Facilities (AS2890.2:2018). This assessment included a review of the following:

- bay and aisle width
- adjacent structures
- turnaround facilities
- circulation roads and ramps
- ramp grades
- height clearances
- internal queuing
- parking for persons with disabilities

This review indicates that the proposed site layout is expected to operate satisfactorily subject to detailed design.

The car parks have been designed in accordance to meet or exceed the minimum dimensional requirements of AS/NZS2890.1:2004, with 2.6-metre-wide and 5.4-metre-long spaces and aisles that are at least 5.8-metres-wide. Similarly, accessible spaces have been designed in accordance with AS2890.6:2009 requirements with a minimum 2.4-metre-wide and 5.4-metre-long spaces, with adjacent 2.4-metre-wide shared areas.

All loading docks allow for a 3.5-metre-wide and 20-metre-long loading bay to be provided suitable for articulated vehicles to reverse into the dock. A swept path assessment has been completed and is provided in Appendix A demonstrating suitable access arrangements are allowed for across both warehouse sites. The proposed access arrangement of having three crossovers also ensures light and heavy vehicles remain physically separated and facilitates a one-way circulation arrangement for all heavy vehicles.

External to the site, the exit driveway for Warehouse 4 is located around 40 metres east of the estate road roundabout. This offset is considered suitable, noting that the largest design vehicles accessing the site are 30-metre B-Doubles.



6 Traffic Impact Assessment

6.1 Burrah Park TIA

A TIA, dated 15 August 2024, was completed by Arcadis for 1953-2109 Elizabeth Drive, Badgerys Creek, which assessed the broader Burrah Park. The following sections will make reference to the assessment completed by Arcadis, which includes the land subject to this SSDA.

6.2 Traffic Generation

The traffic generation estimates for the site have adopted the same rates used in the TIA prepared by Arcadis which have been sourced from the TfNSW Guide 2002 and Technical Direction: Updated Traffic Surveys (TDT 2013/04a).

The TDT 2013/04a provide data for key industrial estates located within Erksine Park, Eastern Creek, Helensburgh and Riverwood. It is noted that the Helensburgh site was removed from consideration due to its location outside of metropolitan Sydney and its significantly smaller footprint in comparison to the other sites. A summary of the TDT 2013/04a data is provided in Table 6.

Table 6: Warehouse/ logistics use traffic generation rates

Location	Size (sqm GFA)	AM traffic generation rate (trips/ 100sqm)	PM traffic generation rate (trips/ 100sqm)
Erskine Park	693,605	0.15	0.16
Eastern Creek	406,600	0.20	0.19
Riverwood	29,983	0.43	0.41
Average Traffic Generation		0.26	0.25

Based on the table above, the average traffic generation would be approximately 0.26 vehicle trips per 100m² GFA in the AM peak and 0.25 vehicle trips per 100m² in the PM peak. However, the traffic generation rates differ significantly with the size of the site.

Subsequent to discussions with TfNSW, the Arcadis TIA adopted the following rates to estimate the traffic generation associated with the broader Burrah Park site.

- For warehouses:
 - 0.23 trips per 100m² GFA during the AM peak hour
 - 0.24 trips per 100m² GFA during the PM peak hour
- For offices:
 - 2.75 trips per 100m² GFA during the AM peak hour
 - 1.2 trips per 100m² GFA during the PM peak hour



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6 Traffic Impact Assessment

The above warehouse trip generation rates were noted by the Arcadis TIA to be conservatively high when considering contemporary data and the future travel demand projections in the broader Norther gateway Precinct structure planning.

Table 7 has been prepared to summarise the anticipated peak hour traffic generation of the proposed development based on the above traffic generation rates.

Table 7: DHL Stage 1 traffic generation estimates

Warehouse	Land Use	Area (m ² GFA)	AM trips	PM trips
Warehouse 3	Warehouse	29,205	67	70
	Office	1,424	39	17
Warehouse 4	Warehouse	27,960	64	67
	Office	1,195	33	14
Total			203	168

Based on the TIA prepared by Arcadis, the full development of the broader Burrah Park will generate the following trips summarised in Table 8, of which DHL Stage 1 is only a minor proportion.

Table 8: Burrah Park traffic generation estimates

Land Use	Area (m ² GFA)	AM trips	PM trips
Warehouse	561,931	1,290	1,350
Office	65,477	1,800	790
Total		3,093	2,134

6.3 Distribution and Assignment

The TIA prepared by Arcadis adopted the following traffic distribution assumptions for the broader Burrah Park development:

- In the AM peak, 75 per cent of traffic generated by the sites will be inbound traffic, whilst 25 per cent will be outbound.
- In the PM peak, 30 per cent of traffic generated by the sites will be inbound traffic, whilst 70 per cent will be outbound.

The directional distribution and assignment adopted by Arcadis was based on the Sydney Dynamic Traffic Assignment (SDTA) data. Based on this data, the following assumptions were adopted:

- Approximately 25 per cent would travel towards the west via Elizabeth Driver, with 5 per cent travelling to Luddenham Road and 20 per cent travelling towards the west via Elizabeth Drive.
- Approximately 70 per cent would travel towards the east via Elizabeth Drive, with 20 percent travelling to the north via the M12 ramp, 10 percent travelling to the south via the M12 ramps, 15



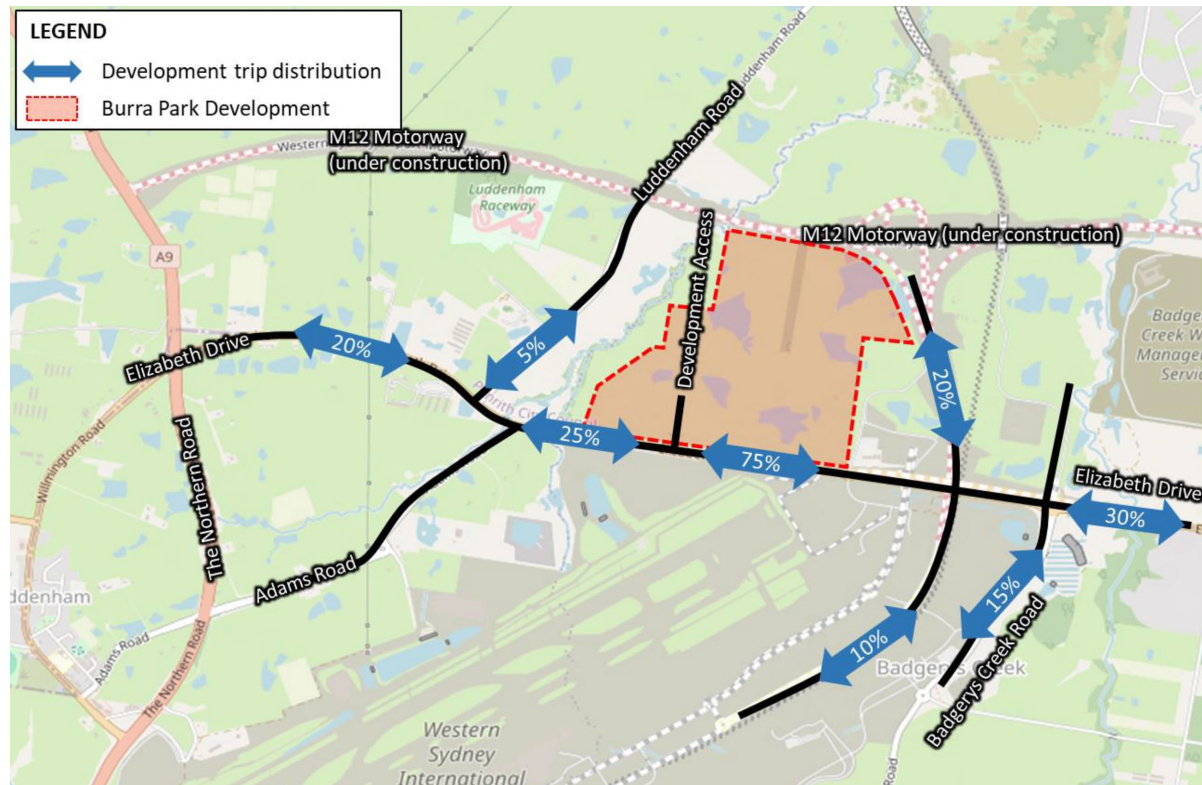
DHL Logistics Facility, Badgerys Creek (South)

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per cent travelling south via Badgerys Creek Road and 30 per cent travelling east via Elizabeth Drive.

This trip distribution is illustrated in Figure 19.

Figure 19: Trip Distribution



6.4 Traffic Impact

The TIA prepared by Arcadis concluded that whilst the broader Burrah Park development (which includes the proposed Warehouse 3 & 4 developments) will generate substantial volume of traffic onto the road network, the modelling analysis indicates that the future road network will have enough capacity for the increased traffic as a result of background traffic growth and the additional traffic generated by the Burrah Park development.

The report concludes that the signalised intersections along Elizabeth Drive will operate at good levels of service (LOS C at worst during peak periods). However, the report acknowledges that the intersection between Elizabeth Drive/ Luddenham Road and Elizabeth Drive/ Adams Road will operate at LOS F due to high volume of traffic along Elizabeth Drive which will make it difficult for vehicles from Luddenham Road and Adams Road to enter the main road. The report does note that with the intersection between Elizabeth Road/ Luddenham Road, the intersection will operate at LOS F with or without the Burrah Park development, and recommends the signalisation of the intersection to alleviate the congestion along Luddenham Road (the Elizabeth Drive upgrade REF documentation suggests this intersection will be upgraded to a signalised intersection, however the timing of this upgrade is uncertain at this time). The volume of traffic along the Adams Road approach is anticipated to be low, and as such the report recommended banning right turns at the intersection between Elizabeth Drive and Adams Road to improve delays and alleviate congestion.



The report also acknowledges for the full development of Burrah Park, further connections will be required to the northern residual parcel and the Sydney University land, and a potential connection to Luddenham Road in the west to improve connectivity to the wider road network and alleviate pressure on Elizabeth Drive.

7 Overview Green Travel Plan

7.1 Introduction

7.1.1 TRAVEL PLAN FRAMEWORK

Transport is a necessary part of life, but it has economic, public health and environmental consequences. The transport sector is one of the fastest growing emissions sectors in Australia, and therefore is one of the key opportunities for reducing greenhouse gases. As well as delivering better environmental outcomes, providing a range of travel choices with a focus on walking, cycling and public transport will have major public health benefits and will ensure a strong and prosperous community.

The physical infrastructure being provided as part of the development is only part of the solution. A green travel plan (GTP) will ensure that the transport infrastructure, services and policies both within and external to the site are tailored to the users and co-ordinated to achieve the most sustainable outcome possible.

7.1.2 WHAT IS A GTP

A GTP is a package of measures aimed at promoting sustainable travel and reducing reliance on the private car. It is not designed to be 'anti-car' however will encourage and support people's aspirations for carrying out their daily business in a more sustainable way. Travel plans can provide both:

- measures which restrict car use (disincentives or 'sticks')
- measures which encourage or support sustainable travel, reduce the need to travel or make travelling more efficient (incentives or 'carrots').

The travel plan would promote the use of transport, other than the private car, provide choice for staff to travel to and from the site, which is more sustainable and environmentally friendly.

Indeed, there are a range of "non-car" transport options that are available at the site which have been described in this report.

Given the developments aim to reduce private travel to the site, the implementation of a GTP would be beneficial.

7.2 Key Objectives

The aim of the GTP is to bring about better transport arrangements for living and working at the site. The key objectives of the Travel Plan are:

- to encourage walking



- to encourage cycling
- to encourage the use of public transport
- to reduce the use of the car, in particular single car occupancy
- where it is necessary to use the car, encourage more efficient use.

It is the intention therefore that the travel plan will deliver the following benefits:

- enable higher public and active travel mode share targets to be achieved
- contribute to greenhouse gas emission reductions and carbon footprint minimisation
- contribute to healthy living for all
- contribute to social equity and reduction in social exclusion
- improve knowledge and contribute to learning.

7.3 Site Specific Measures

The location of the site, in terms of its proximity to a wide range of future public and active transport facilities is a key consideration for development in the precinct. A GTP will put in place measures to raise awareness and further influence the travel patterns of people travelling to/ from the site with a view to encouraging modal shift away from cars.

The following potential measures and initiatives could be implemented to encourage more sustainable travel modes:

1. Limiting on-site parking provision.
2. Provide a Travel Access Guide (TAG) which would be provided to all staff and publicly available to all visitors. The document would be based on facilities available at the site and include detail on the surrounding public transport services and active transport initiatives. The TAG would be updated as the surrounding transport environment changes.
3. Providing public transport information boards/ apps to inform staff and visitors of alternative transport options (the format of such information boards would be based upon the TAG).
4. Providing bicycle facilities including secure bicycle parking for staff, bicycle racks/ rails for visitors and shower and change room facilities.
5. Encouraging staff that drive to work to carpool through creation of a carpooling club or registry/ forum.
6. Regularly promoting ride/ walk to work days.
7. Providing a regular newsletter to all staff members bringing the latest news on sustainable travel initiatives in the area.



7.3.1 TRAVEL ACCESS GUIDE

A TAG provides information to staff and visitors on how to travel to the site using sustainable transport modes such as walking and public transport. The information is presented visually in the format of a map (or app) showing the site location and nearby transport modes highlighting available pedestrian and cycle routes. The information is usually presented as a brochure (or app) to be included in a welcome pack or on the back of company stationery and business cards. The map would outline the various shared user paths within and surrounding the site including proposed future cycling networks including the M12 off-road shared user path.

7.3.2 INFORMATION AND COMMUNICATION

Several opportunities exist to provide staff and visitors with information about nearby transport options. Connecting staff and visitors with information would help to facilitate journey planning and increase their awareness of convenient and inexpensive transport options which support change in travel behaviour. These include:

- TfNSW provides bus and train routes, timetables and journey planning through their Transport Info website: <http://www.transportnsw.info>.
- Council provides a number of services and a range of information and events to encourage active travel: <https://www.penrithcity.nsw.gov.au/facilities-recreation/outdoor-recreation/fitness-trails>.

In addition, connecting staff and visitors via social media may provide a platform to informally pilot new programs or create travel-buddy networks and communication.

7.3.3 MONITORING OF THE GTP

There is no standard methodology for monitoring the GTP, but it is suggested that it be monitored to ensure that it is achieving the desired benefits and modify it if required. It will not be possible at this stage to state what additional modifications might be made as this will be dependent upon the particular circumstances prevailing at that time.

The GTP should be monitored on a regular basis, e.g. yearly, by carrying out travel surveys. Travel surveys will allow the most effective initiatives of the GTP to be identified, and conversely less effective initiatives can be modified or replaced to ensure the best outcomes are achieved. It will clearly be important to understand people's reasons for travelling the way they do: - any barriers to changing their behaviour, and their propensity to change.

To ensure the successful implementation of the GTP, a Travel Plan Coordinator (TPC) should be appointed to ensure the successful implementation of the GTP. This could be the building manager or a member of the body corporate.



8 Overview Construction Traffic Management Plan

8.1 Overview

This section seeks to provide an overview of the Construction Traffic Management Plan (CTMP) initiatives to be implemented as part of the construction works.

Specifically, this overview CTMP considers the following:

- construction site access arrangements
- anticipated truck volumes during construction stages
- truck routes to/ from the site
- requirements for works zones
- pedestrian and cyclist access
- site personnel parking
- traffic control measures
- overview of CTMP requirements.

8.2 Principles of Traffic Management

The general principles of traffic management during construction activities are as follows:

- minimise the impact on pedestrian and cyclist movements
- maintain appropriate public transport access
- minimise the loss of on-street parking
- minimise the impact on adjacent and surrounding buildings
- maintain access to/ from adjacent buildings
- restrict construction vehicle movements to designated routes to/ from the site
- manage and control construction vehicle activity near the site
- carry out construction activity in accordance with approved hours of works.

8.3 Work Hours

Construction work would be undertaken in accordance with development consent conditions. Indicative work hours are as follows:

- Weekdays: 7:00am – 6:00pm
- Saturdays: 8:00am – 3:00pm



- Sundays and public holidays: no work permitted.

Workers would be advised of the approved work hours during induction. Any works outside of the approved work hours would be subject to specific prior approval from the appropriate authorities. Such works may include delivery of cranes, large plant or equipment required on the site that require oversize vehicle access.

8.4 Site Access and Loading

Construction vehicle access will be provided via Elizabeth Drive and through the Burrah Park site, with all loading to take place within the bounds of the site.

As part of the detailed CTMP, a traffic guidance scheme (previously referred to as traffic control plans) will be prepared in accordance with the principles of the Traffic Control at Work Sites manual (TfNSW, 2022). The traffic guidance schemes primarily show where construction signs will be located at specific locations (such as uncontrolled intersections) along the approved truck routes to warn other road users of the increase in construction vehicle movements.

Access to the neighbouring sites by emergency vehicles would not be affected by the works as the road and footpath frontages would be unaffected. Emergency protocols on the site would include a requirement for site personnel to assist with emergency access from the street. All truck movements to the site and/or incident point would be suspended and cleared.

8.5 Construction Staff Parking

The anticipated number of construction workers is currently unknown. Given the limited available public transport services currently in the area, construction worker parking will be provided on site.

8.6 Heavy Vehicle Traffic Generation

Construction vehicles generated by the site would generally include vehicle up to 12.5 metre heavy rigid vehicles, 18.1 metre truck and dog combinations and 19 metre articulated vehicles. Preliminary construction traffic volume estimates based on other similar sized developments suggests that up to 80 vehicles per day could be expected or on average around 10 vehicles per hour.

It is clear that the anticipated construction vehicle volumes associated with the development will be far less than that estimated for the future operation of the site and therefore the impacts of the construction works will be limited.

Notwithstanding, a detailed Construction Traffic Management Plan will be prepared prior to the issue of any Construction Certificate and once the known staging and operational impacts can be assessed in greater detail.

8.7 Pedestrian and Cyclist Management

Pedestrian and cyclist movements are not expected to be impacted by the proposed construction works, with fencing to be constructed around the bounds of the site to provide physical separation between the work site and the public.



8.8 Public Transport

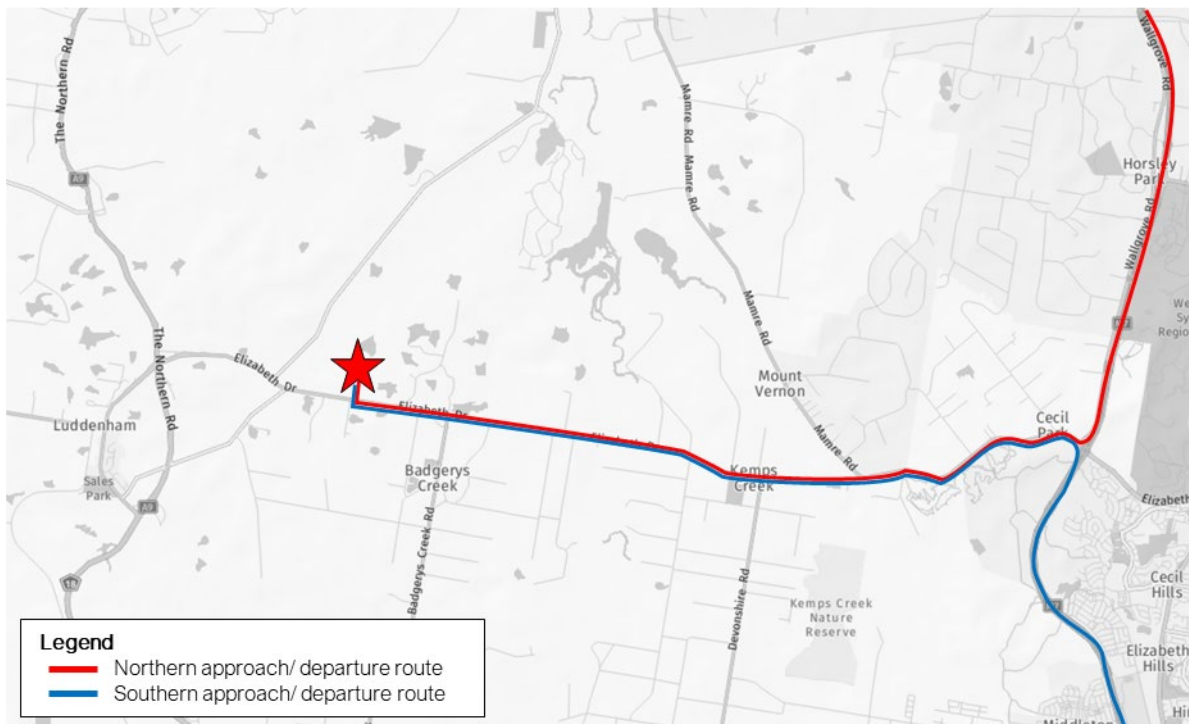
The construction activities are not expected to impact existing public transport services near the site.

8.9 Heavy Vehicle Access Routes

Heavy vehicle movements would be restricted to designated routes and confined to the arterial road network wherever feasible. Truck routes have been identified with the aim of providing the most direct routes to/ from the site as well as minimising the impact of heavy vehicles on local roads.

Figure 19 provides a summary of the anticipated construction vehicle routes to/ from the site, which specifically involves use of the M7 Motorway and Elizabeth Drive to access the site. Truck drivers will be advised of the designated truck routes to/ from the site.

Figure 20: Construction vehicle routes



Base image source: Nearmap

8.10 Cumulative Construction Traffic Impact

There are a number of existing and planned construction sites surrounding the site that will be active during the construction period of the proposed works, including the Western Sydney Airport, M12 Motorway, Elizabeth Drive upgrades and the Burrah Park industrial subdivision. The Appointed Contractor would need to liaise with the other contractors on surrounding projects to minimise the cumulative construction traffic impact as much as possible. Where possible, construction vehicle movements will be minimised during road network peak periods.

Notwithstanding the above, the proposed works are expected to generate up to 10 vehicles per hour which would have a minimal cumulative impact when considering the context of the construction

vehicle traffic generation of the other significant projects such as the Western Sydney Airport and M12 Motorway.

8.11 Overview of CTMP Requirements

This section provides an overview of the CTMP initiatives that would be implemented for the construction activities associated with the proposed development. A detailed CTMP would cover the following additional information:

- Description of construction activities and duration.
- Construction work hours.
- Detailed assessment of construction traffic impacts including any cumulative impacts.
- Details regarding any one-off activities for installation of cranes and other equipment.
- Swept path analysis of heavy vehicle access to the site.
- Detailed assessment of on-street parking impacts.
- Emergency vehicle access.
- Impacts to public transport services.
- Traffic Control Plan(s).
- Contact details of key project personnel.

9 Conclusion

Based on the analysis and discussions presented within this report, the following conclusions are made:

1. This SSDA constitutes a detailed DA insofar that it is linked to and is consistent with concept plan (**SSD- 70316465**) by seeking consent for the construction and operation of two singular storey industrial buildings for use as a warehouse and logistics facility with 24 hour/ seven day a week operation plus car parking and associated landscaping within part (25 hectares) of Lot 1 in Deposited Plan 1306448 at 1953-2109 Elizabeth Drive, Badgerys Creek known as the DHL Masterplan site. The proposed development site is located within a broader proposed industrial subdivision called Burrah Park which is subject to a separate SSDA currently under assessment.
2. This SSDA represents the first of two (2) SSDAs proposed by DHL and will apply to the southern half of the DHL Masterplan site which includes Warehouses 3 & 4. The development includes the construction of 57,165m² GFA of warehouse space and 2,619m² GFA of ancillary office space.
3. A total 441 car parking spaces are proposed, with 225 spaces for Warehouse 3 and 216 spaces for Warehouse 4, therefore meeting the Phase 2 DCP requirements of minimum 199 spaces and maximum 598 spaces.
4. The proposed development is also required to provide a minimum 60 bicycle parking spaces, eight electric bicycle charging stations, 60 lockers and eight shower/ change cubicles. The proposed development will ensure these requirements are achieved.
5. The proposed development includes 38 loading docks for Warehouse 3 and 19 loading docks for Warehouse 4 suitable for use by 20-metre articulated vehicles. In addition, for Warehouse 3, a further nine parking bays suitable for a mix of 20-metre articulated vehicles and 26-metre B-Doubles will be provided. DHL has confirmed the proposed loading provision and loading arrangement is suitable for meeting the loading demand for the site.
6. The site layout has been reviewed against the requirements of the Australian Standard for Off Street Car Parking (AS/NZS2890.1:2004 and AS/NZS2890.6:2009) and Off-Street Commercial Vehicle Facilities (AS2890.2:2018). This review indicates that the proposed site layout is expected to operate satisfactorily subject to detailed design.
7. The two warehouses will generate approximately 203 vehicle trips in the morning peak hour and 168 vehicle trips in the afternoon peak hour.
8. A TIA, dated 15 August 2024, was completed by Arcadis for the broader Burrah Park TIA estimated that the full development of the Burrah Park site will generate approximately 3,093 vehicle trips in the morning peak hour and 2,134 vehicle trips in the afternoon peak hour.
9. The report concluded that the future road network will have enough capacity for the increases traffic as a results of background traffic growth and the additional traffic generated by the Burrah Park development, with the exception of the intersection between Elizabeth Drive/ Luddenham Road and Elizabeth Drive/ Adams Road. These intersections will operate at LOS F due to the high volume of through traffic anticipated along Elizabeth Drive, which will cause difficulties for vehicles from Luddenham Road and Adams Road to exit onto Elizabeth Drive. The report has recommended the intersection of Elizabeth Drive and Luddenham Road to be signalised whilst



the right turns at the intersection of Elizabeth Drive and Adams Road to be banned. This will improve intersection operations and alleviate congestion.

10. The proposed development would be able to develop and distribute a travel plan to future staff to actively promote increased use of sustainable transport modes.
11. The construction traffic impact of the proposed development is anticipated to be comparatively minor and can be addressed through a detailed construction traffic management plan for the site prior to construction certification.
12. Overall, the proposed development can be supported from traffic and transport perspective.

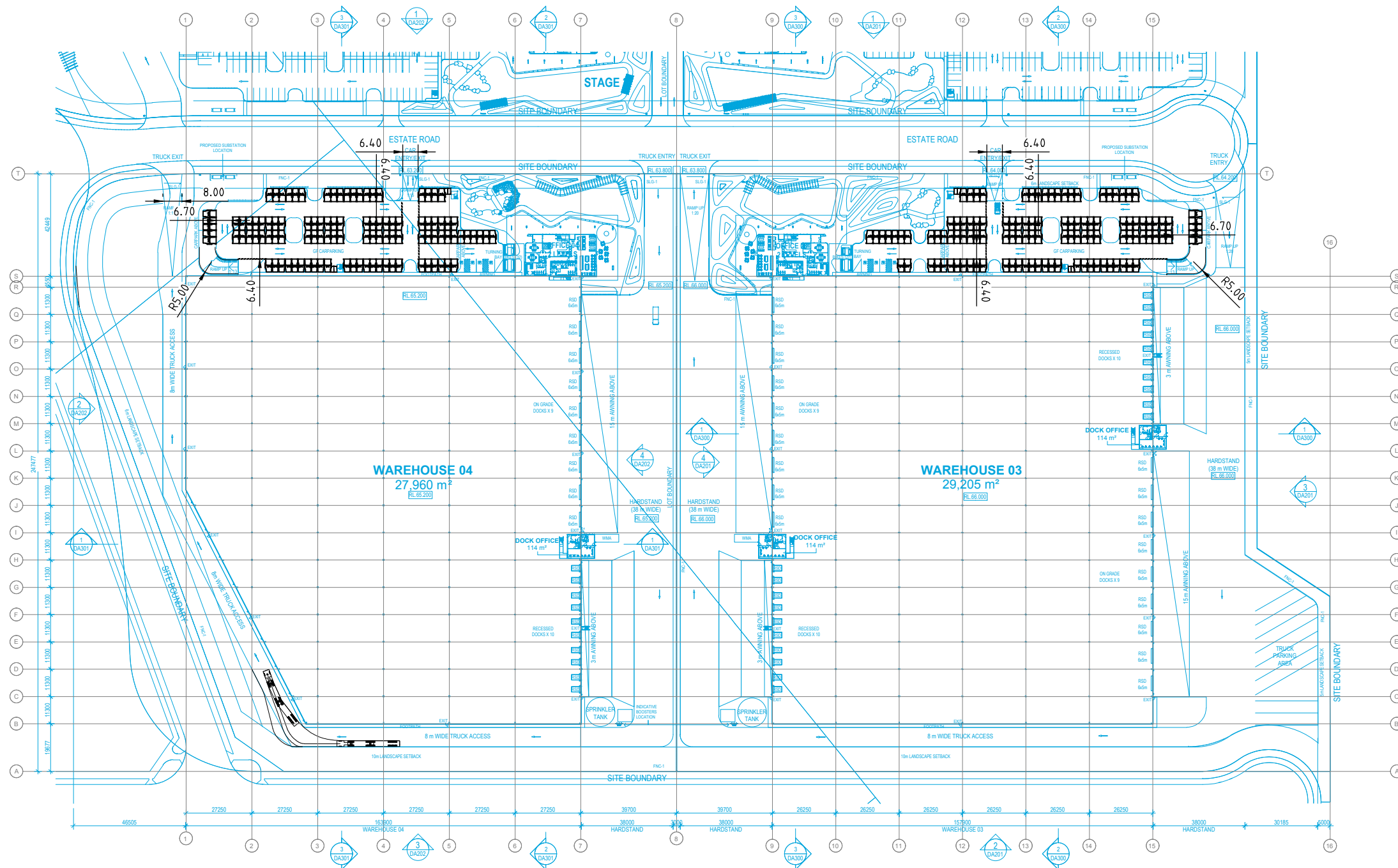
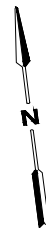


APPENDICES



Appendix A Swept Path Assessment





AREA SCHEDULE - STAGE 1

SITE AREA:	128159 m²
ESTATE ROAD AREA:	12134 m²
TOTAL DEVELOPABLE AREA:	116025 m²

WAREHOUSE 03 AREA:	
WAREHOUSE 04 AREA:	

OFFICE 03 AREA:	
OFFICE 04 AREA:	
DOCK OFFICES AREA (x3):	

TOTAL BUILDING AREA:	59784 m²
PROPOSED FSR:	0.52:1

PROPOSED LANDSCAPE AREA:	15% (17404 m²)
--------------------------	----------------

CARPARKING PROVIDED:	
WAREHOUSE 03 =	225
WAREHOUSE 04 =	216
TOTAL PROVIDED (STAGE 1)=	441

ARCHITECTURAL BASE IN BLUE
DRAWING DA 101
REVISION 7
BY SBA ARCHITECTS
DATED 30.09.2024



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W.XIE

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S.HONG

APPROVED BY
B.MAYNARD

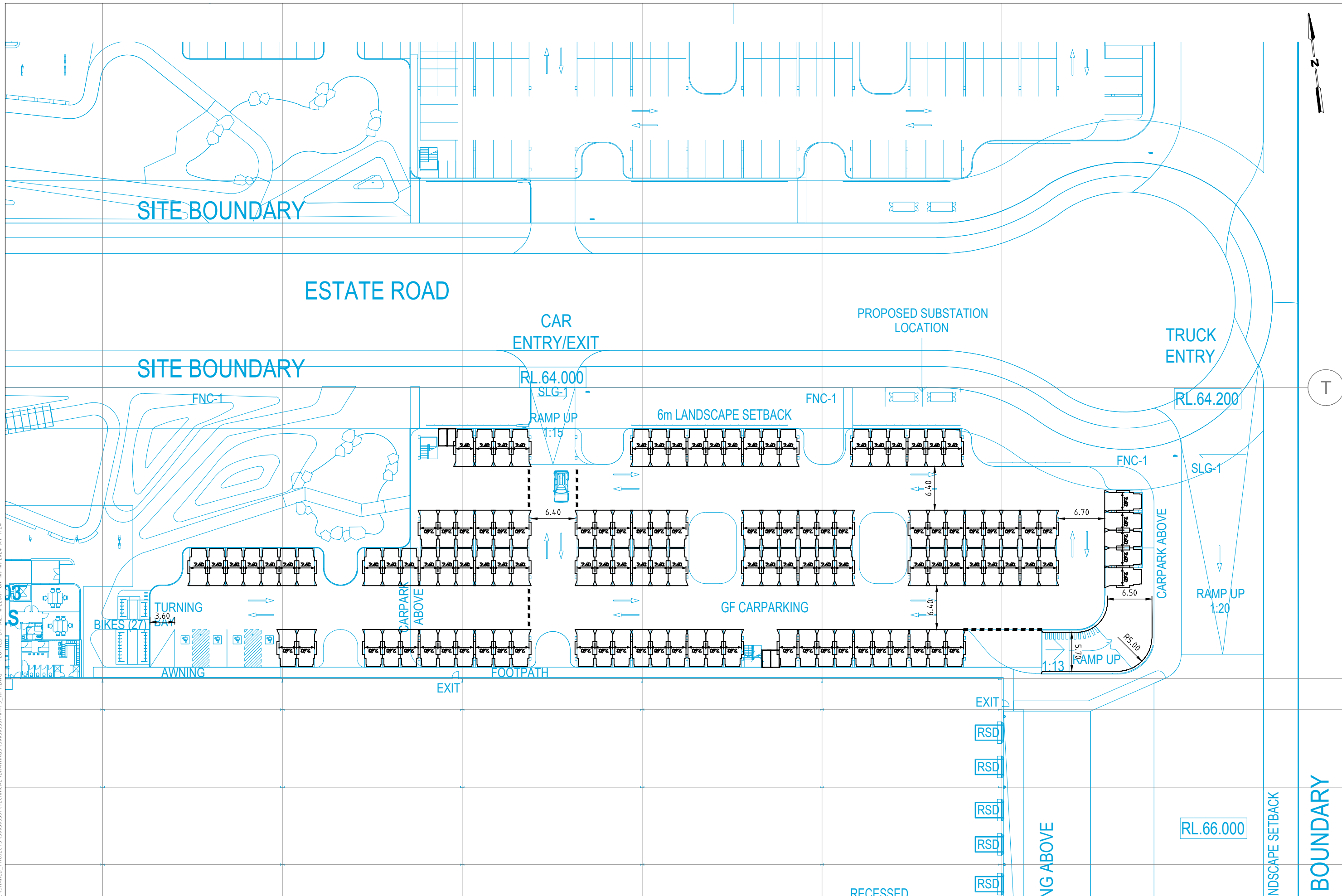
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DHL BADGERYS CREEK
GROUND FLOOR
WAREHOUSE 3 & 4
COMPLIANCE REVIEW COMMENTS - OVERALL LAYOUT
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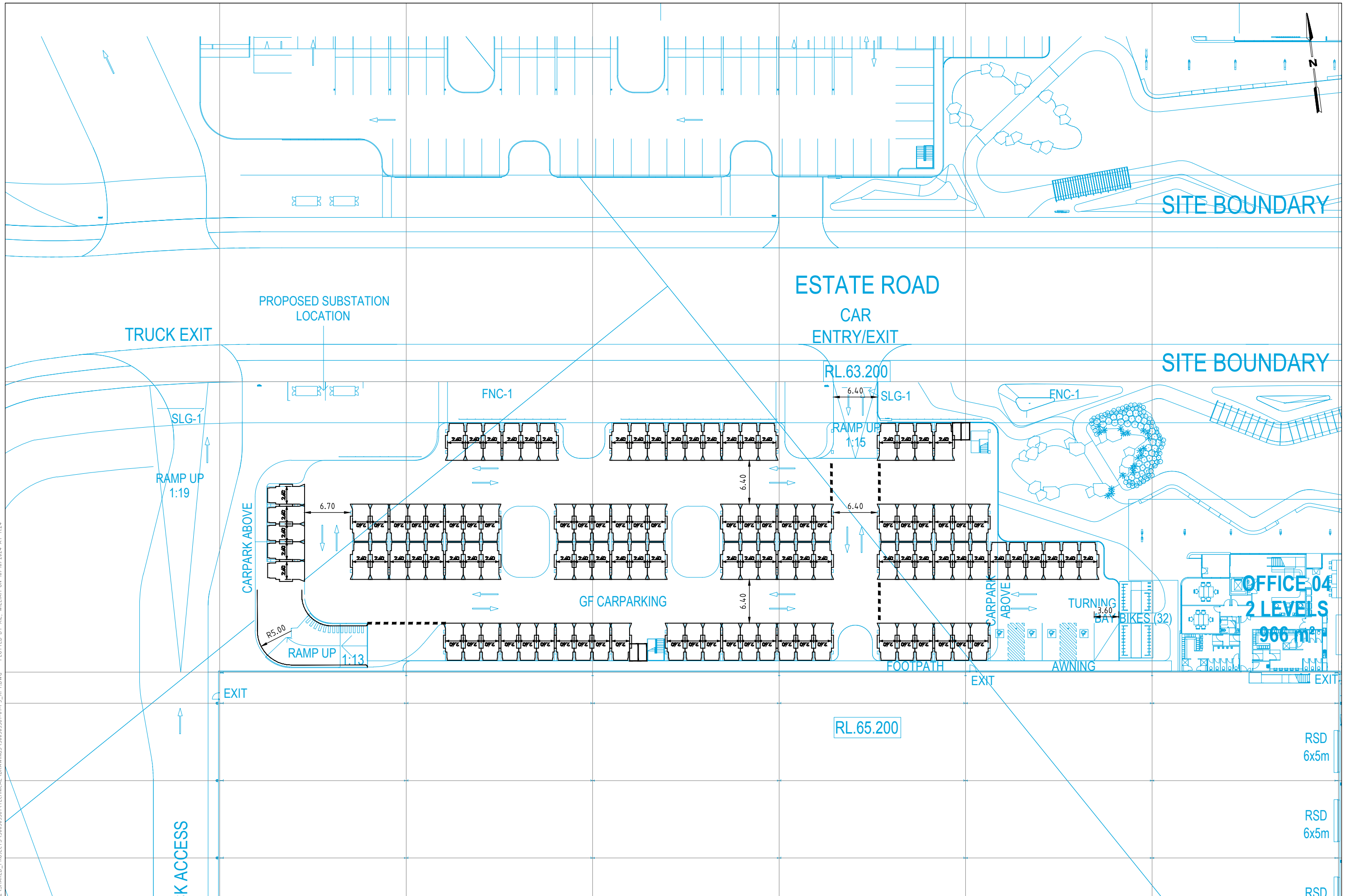
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GROUND FLOOR
WAREHOUSE 3
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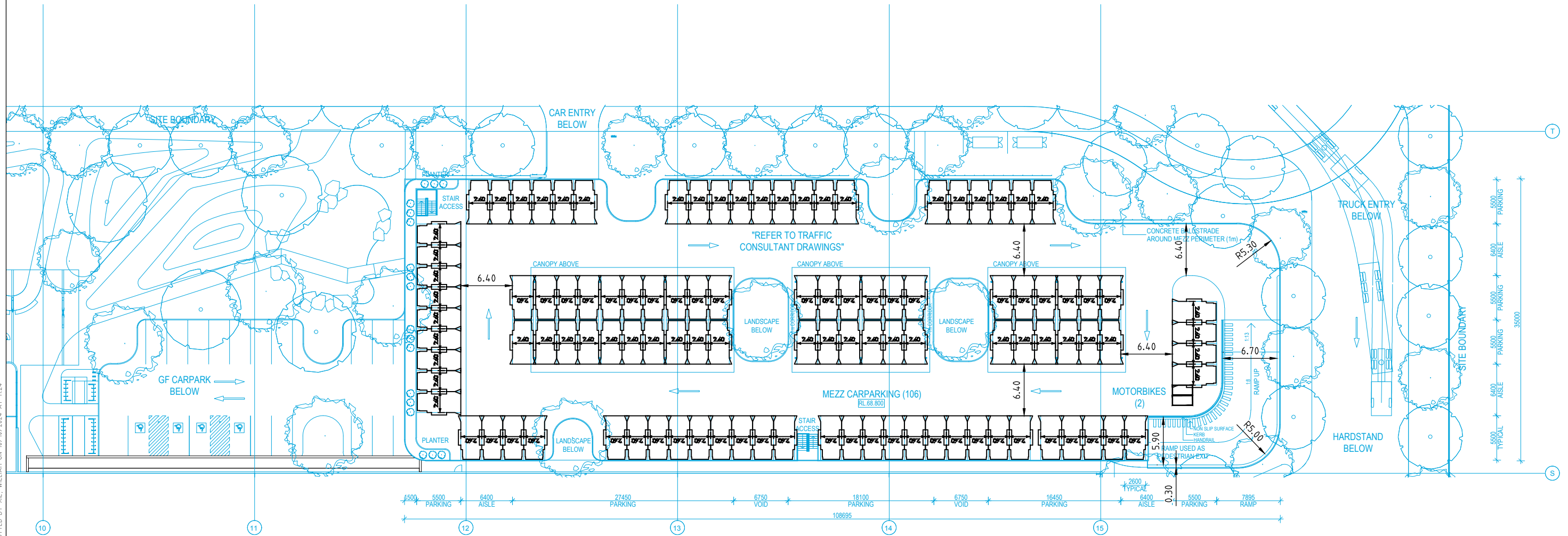
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GROUND FLOOR
WAREHOUSE 4
CAR PARK COMPLIANCE REVIEW
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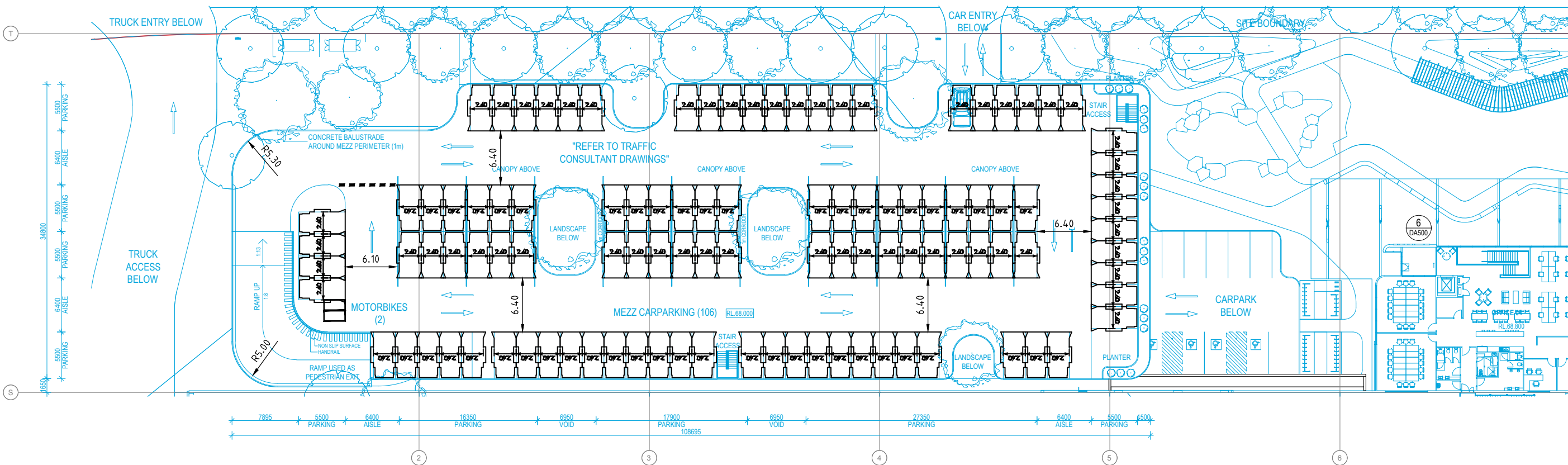
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MEZZENINE LEVEL
WAREHOUSE 3
CAR PARK COMPLIANCE REVIEW
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WAREHOUSE 4
CAR PARK COMPLIANCE REVIEW

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ISSUE P5

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SWEPT PATH KEY

VEHICLE CENTRE LINE

VEHICLE TYRE PATH

VEHICLE BODY PATH

300mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h

5.20



0.95 3.05

B99

Width : 1.94

Track : 1.84

Lock to Lock Time : 6.0

Steering Angle : 33.9

STANDARD 2004 (AU_32)

STANDARD 2004 (AU_32)

SITE BOUNDARY

ESTATE ROAD

SITE BOUNDARY

CAR ENTRY/EXIT

PROPOSED SUBSTATION LOCATION

TRUCK ENTRY

T

FNC-1

RL.64.000
SLG-1

RAMP UP 1:5

6m LANDSCAPE SETBACK

FNC-1

RL.64.200

FNC-1

SLG-1

RAMP UP 1:20

CARPARK ABOVE

RAMP UP 1:13

GF CARPARKING

TURNING BAY

AWNING

EXIT

FOOTPATH

EXIT

RSD

RSD

RSD

RSD

RSD

RSD

NG ABOVE

RL.66.000

LANDSCAPE SETBACK

BOUNDARY

RECESSED

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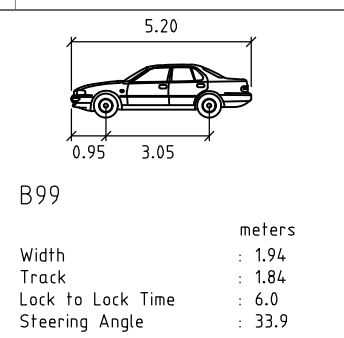
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DHL BADGERYS CREEK
GROUND FLOOR
WAREHOUSE 3
VEHICLE SWEEP PATH ASSESSMENT

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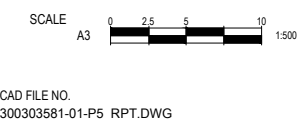


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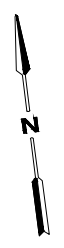


RSD
6x5m

RSD
6x5m

RSD

FIGURE P5



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SWEPT PATH KEY

VEHICLE CENTRE LINE

VEHICLE TYRE PATH

VEHICLE BODY PATH

300mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h

5.20



0.953.05

B99

Width: 1.94meters

Track: 1.84

Lock to Lock Time: 6.0

Steering Angle: 33.9

The diagram is a detailed site plan for the DHL Badgerys Creek Warehouse 4 Mezzanine Level. It shows the layout of the warehouse building, which is a long rectangular structure with multiple bays. The plan includes various parking areas, including a large 'MEZZ CARPARKING (106)' area in the center. Swept paths for vehicles are shown in blue and red, indicating the movement of trucks and cars. Key features include 'TRUCK ENTRY BELOW' and 'CAR ENTRY BELOW' at the top, 'TRUCK ACCESS BELOW' on the left, and 'CARPARK BELOW' on the right. The plan also shows 'LANDSCAPE BELOW' areas, 'STAIR ACCESS' points, and 'PLANTER' areas. Dimensions are provided for various sections, such as 7895, 5500, 6400, 16350, 6950, 17900, 6950, 27350, 6400, and 5500. A north arrow is located in the top right corner. A scale bar at the bottom right indicates a scale of 1:500. The plan is labeled with 'REFER TO TRAFFIC CONSULTANT DRAWINGS' and 'CONCRETE BALUSTRADE AROUND MEZZ PERIMETER (1m)'.

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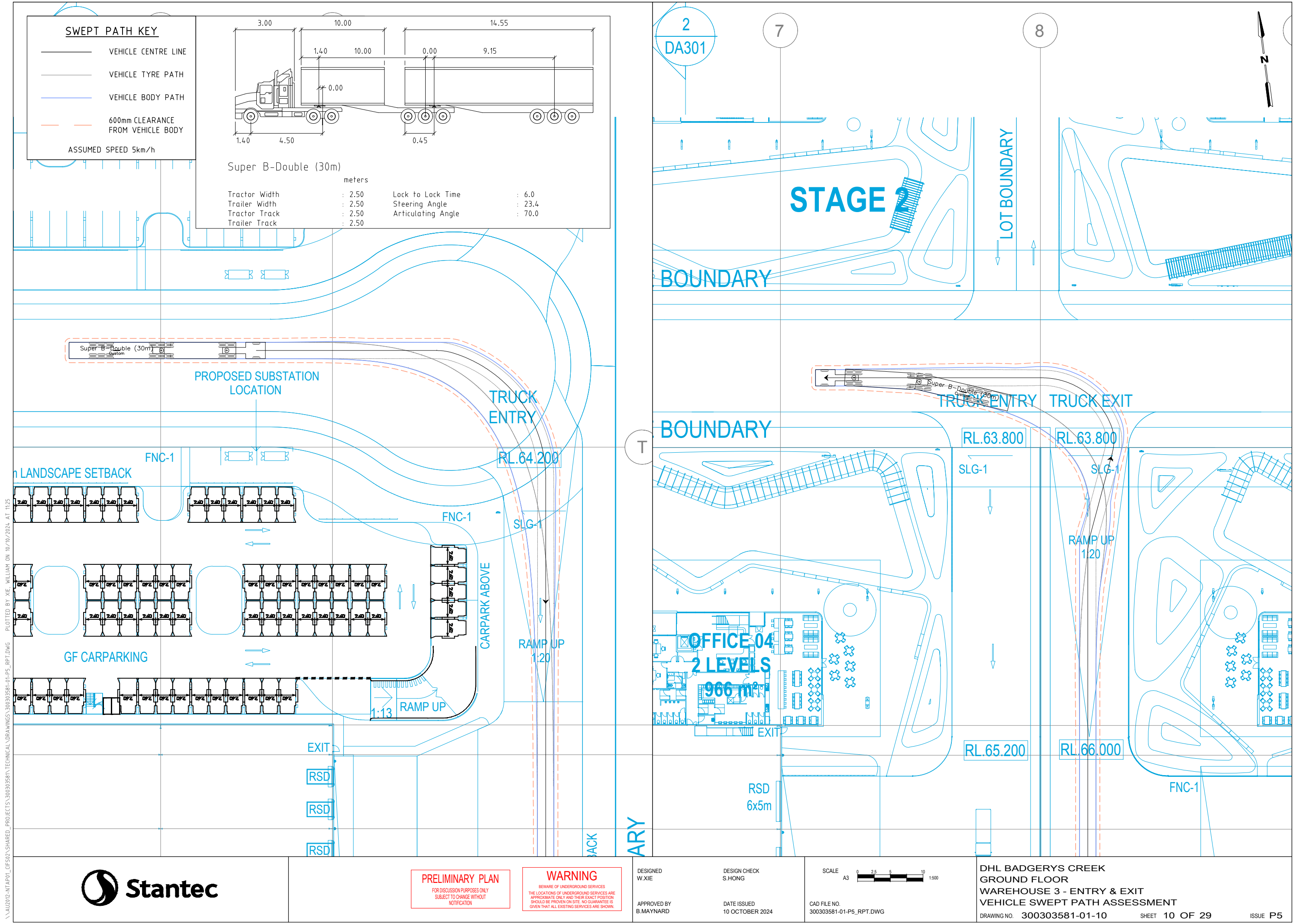
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WAREHOUSE 4
VEHICLE SWEEP PATH ASSESSMENT

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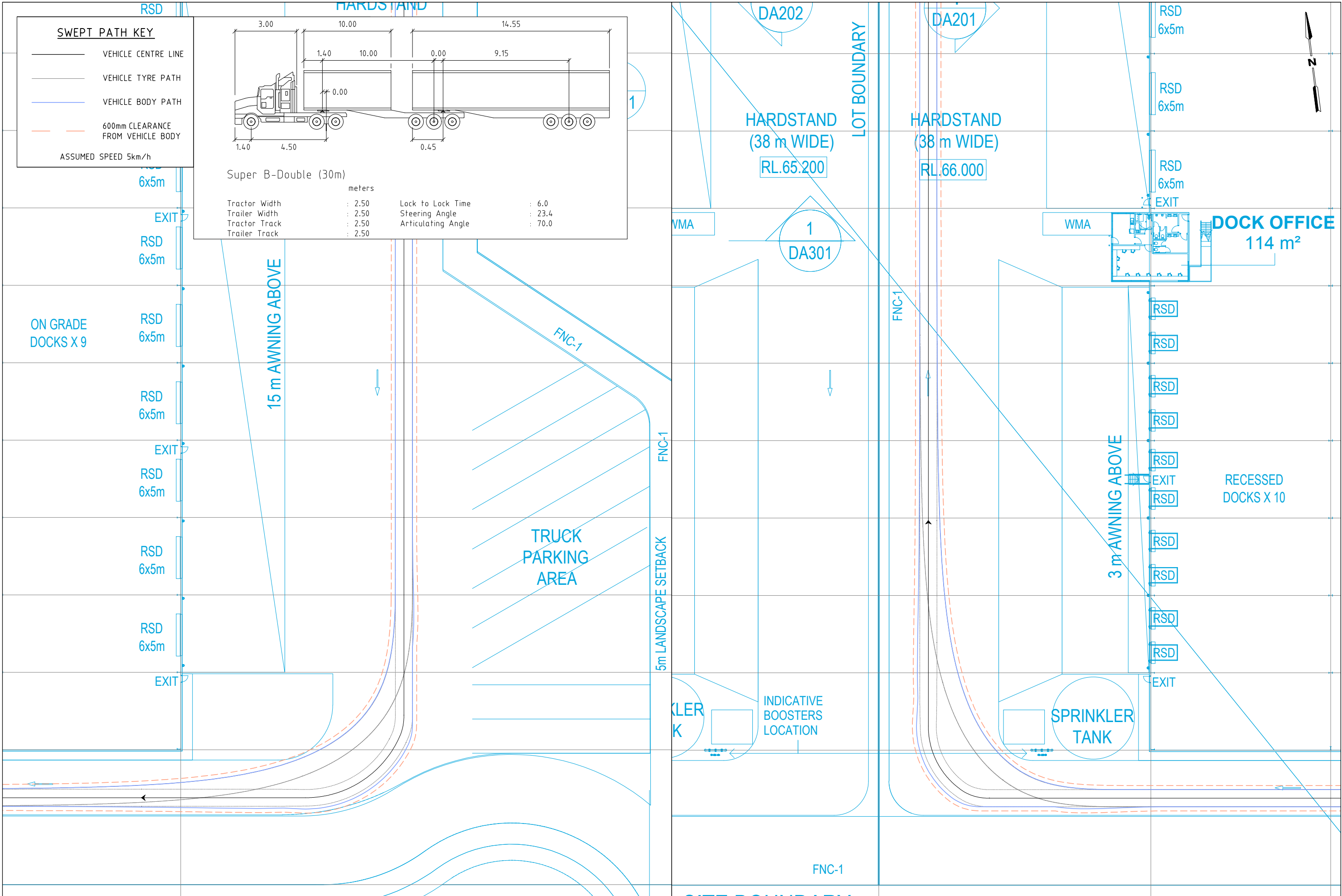
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WAREHOUSE 3 - ENTRY & EXIT
VEHICLE SWEEP PATH ASSESSMENT
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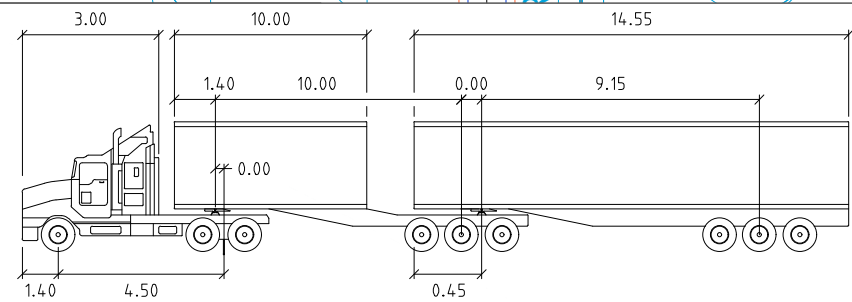
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GROUND FLOOR
WAREHOUSE 3 - CIRCULATION
VEHICLE SWEEP PATH ASSESSMENT
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SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 600mm CLEARANCE FROM VEHICLE BODY
- ASSUMED SPEED 5km/h



Super B-Double (30m)

Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 23.4
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

DOCK OFFICE
114 m²

RECESSED
DOCKS X 10

3 m AWNING ABOVE

SPRINKLER
TANK

INDICATIVE
BOOSTERS
LOCATION

FNC-1

SITE BOUNDARY

SITE BOUNDARY

FNC-1

8m-WIDE TRUCK ACCESS

EXIT

EXIT

EXIT



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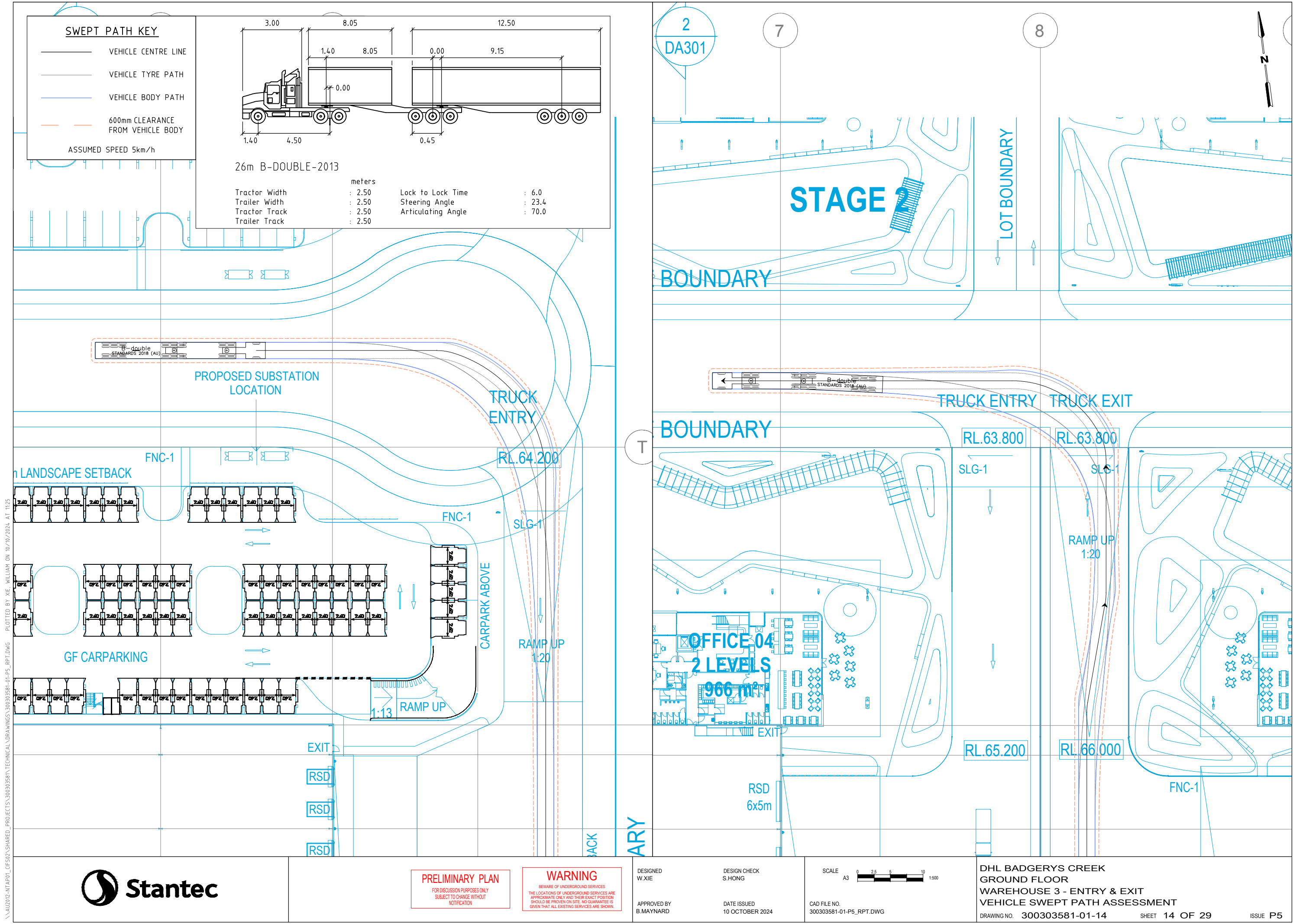
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VEHICLE SWEPT PATH ASSESSMENT
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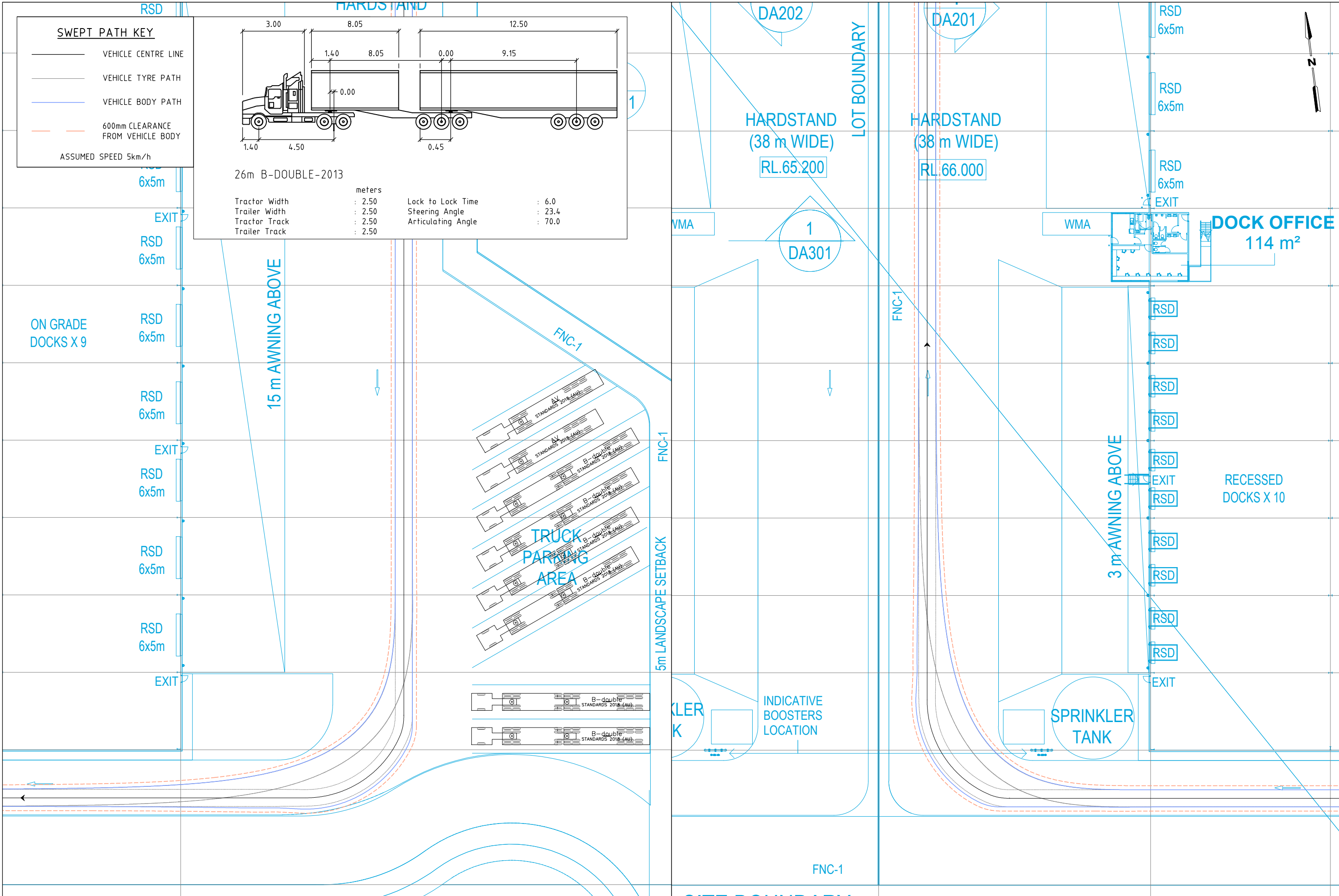
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WAREHOUSE 3 - ENTRY & EXIT
VEHICLE SWEEP PATH ASSESSMENT
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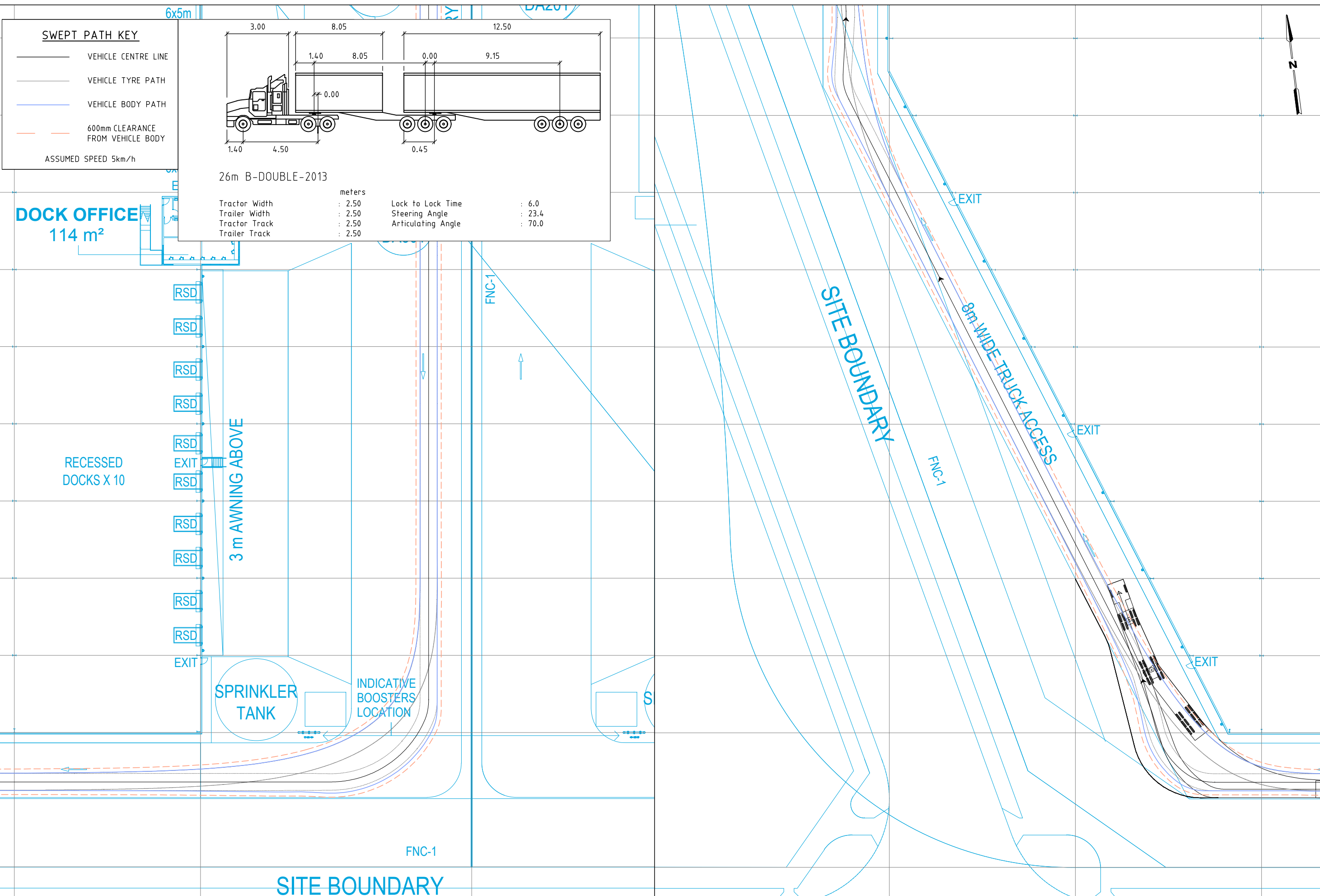
DATE ISSUED
10 OCTOBER 2024

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CAD FILE NO.
300303581-01-P5_RPT.DWG

DHL BADGERYS CREEK
GROUND FLOOR
WAREHOUSE 3 - CIRCULATION
VEHICLE SWEPT PATH ASSESSMENT
DRAWING NO. 300303581-01-15 SHEET 15 OF 29 ISSUE P5

\\AU2012-NTAP01_CIF502_SHARED_PROJECTS\300303581\TECHNICAL\DRAWINGS\300303581-01-P5_RPT.DWG PLOTTED BY XE.WILLIAM ON 10/10/2024 AT 11:25



PRELIMINARY PLAN
FOR DISCUSSION PURPOSES ONLY
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NOTIFICATION

WARNING
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DESIGNED
W.XIE

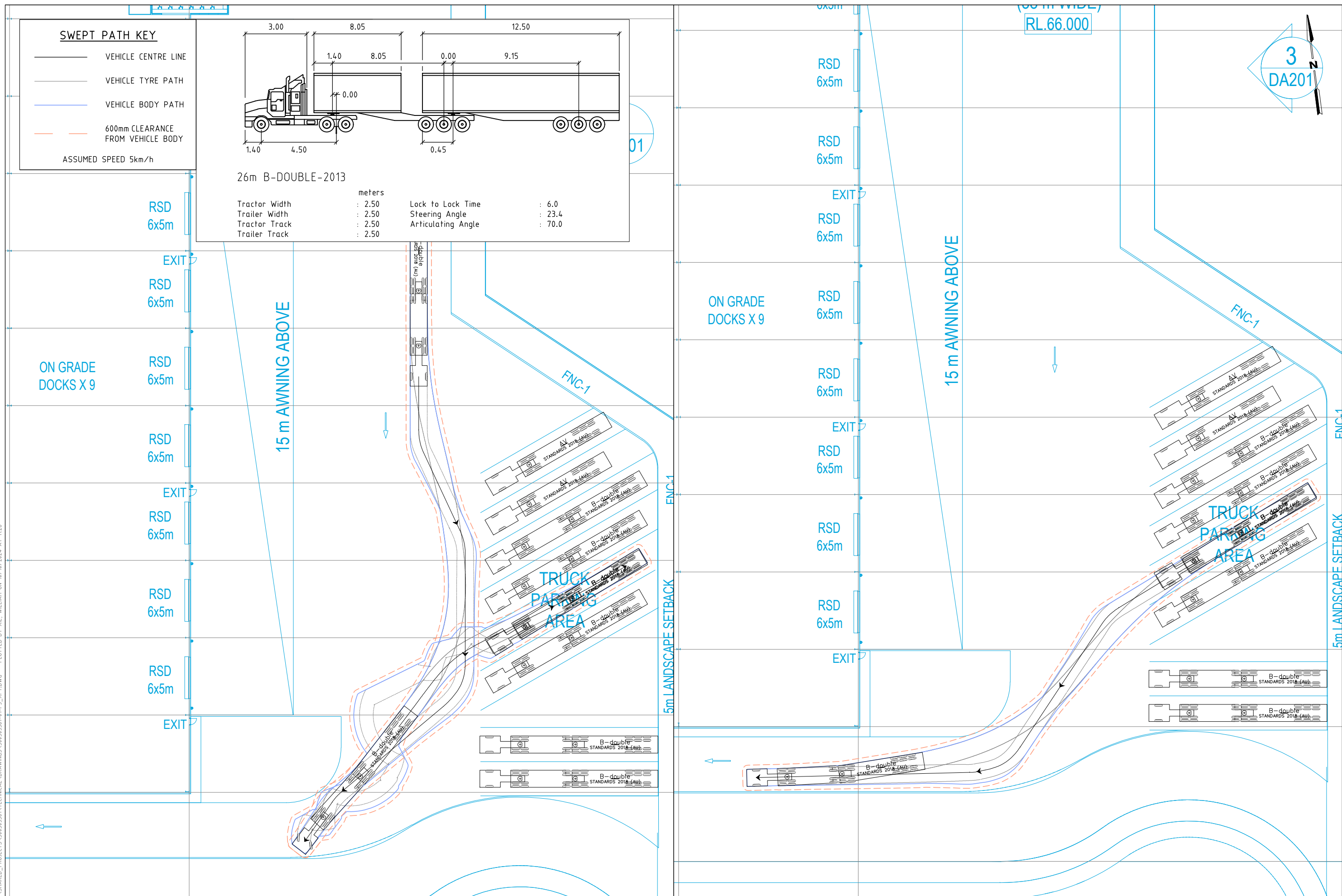
APPROVED BY
B.MAYNARD

DESIGN CHECK
S.HONG

DATE ISSUED
10 OCTOBER 2024

SCALE
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CAD FILE NO.
300303581-01-P5_RPT.DWG

DHL BADGERYS CREEK
GROUND FLOOR
WAREHOUSE 4 - CIRCULATION
VEHICLE SWEEP PATH ASSESSMENT
DRAWING NO. 300303581-01-17 SHEET 17 OF 29 ISSUE P5



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APPROVED BY
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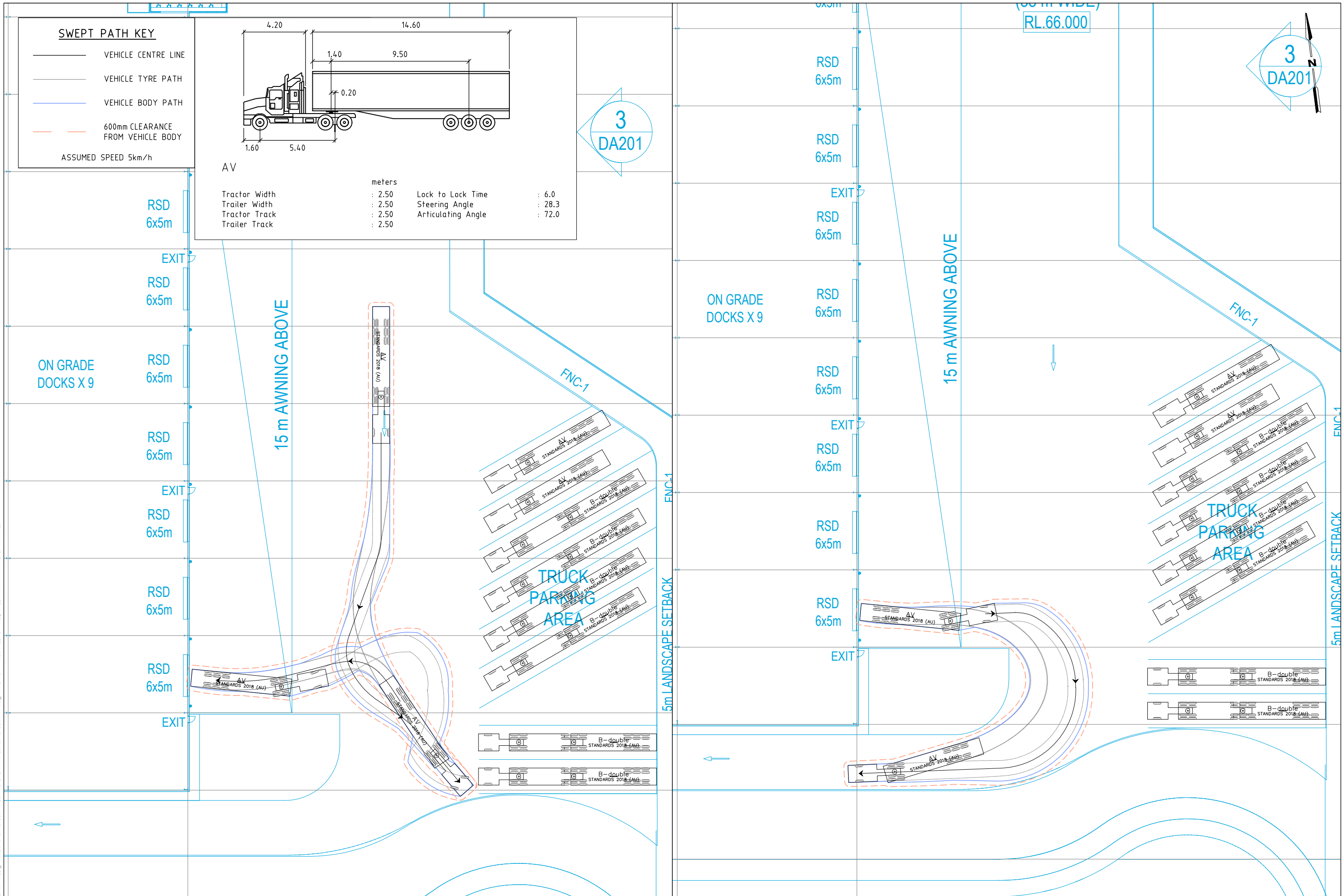
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AD FILE NO.
00303581-01-P5 RPT.DWG

DHL BADGERYS CREEK
GROUND FLOOR
WAREHOUSE 3 - TRUCK PARKING AREA
VEHICLE SWEEP PATH ASSESSMENT

DRAWING NO. 300303581-01-18 SHEET 18 OF 29 ISSUE P5

\\AU2012-NTAP01_CIF502\SHARED_PROJECTS\300303581\TECHNICAL\DRAWINGS\300303581-01-P5_RPT.DWG PLOTTED BY XE.WILLIAM ON 10/10/2024 AT 11:26



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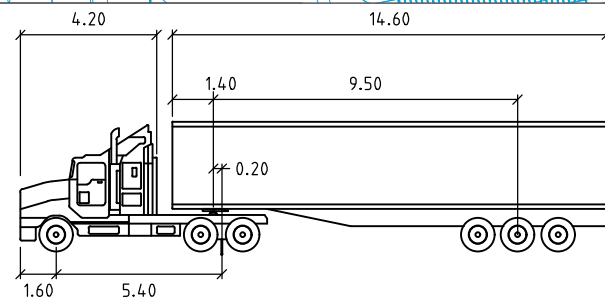
CAD FILE NO.
300303581-01-P5_RPT.DWG

DHL BADGERYS CREEK
GROUND FLOOR
WAREHOUSE 3 - LOADING BAY
VEHICLE SWEEP PATH ASSESSMENT
DRAWING NO. 300303581-01-19 SHEET 19 OF 29 ISSUE P5

\\AU2012-NTAP01_CIF502_SHARED_PROJECTS\300303581\TECHNICAL\DRAWINGS\300303581-01-P5_RPT.DWG PLOTTED BY XE.WILLIAM ON 10/10/2024 AT 11:26

SWEPT PATH KEY

- VEHICLE CENTRE LINE
 - VEHICLE TYRE PATH
 - VEHICLE BODY PATH
 - 600mm CLEARANCE FROM VEHICLE BODY
- ASSUMED SPEED 5km/h



AV

	Tractor Width	Trailer Width	Tractor Track	Trailer Track	Lock to Lock Time	Steering Angle	Articulating Angle
metres	: 2.50	: 2.50	: 2.50	: 2.50	: 6.0	: 28.3	: 72.0

TRUCK ENTRY TRUCK EXIT

RL.63.800

RL.63.800

SLG-1

SLG-1

RAMP UP
1:20

RAMP UP
1:20

OFFICE 03
2 LEVELS
966 m

OFFICE 03
2 LEVELS
966 m

EXIT

EXIT

RL.65.200

RL.66.000

RL.65.200

RL.66.000

FNC-1
AV
STANDARDS 2018 (AU)

FNC-1
AV
STANDARDS 2018 (AU)

RSD
6x5m

RSD
6x5m

RSD
6x5m

RSD
6x5m

RSD
6x5m

RSD
6x5m

RSD
6x5m

RSD
6x5m

RSD
6x5m

RSD
6x5m

ON GRA
DOCKS

ON GRA
DOCKS



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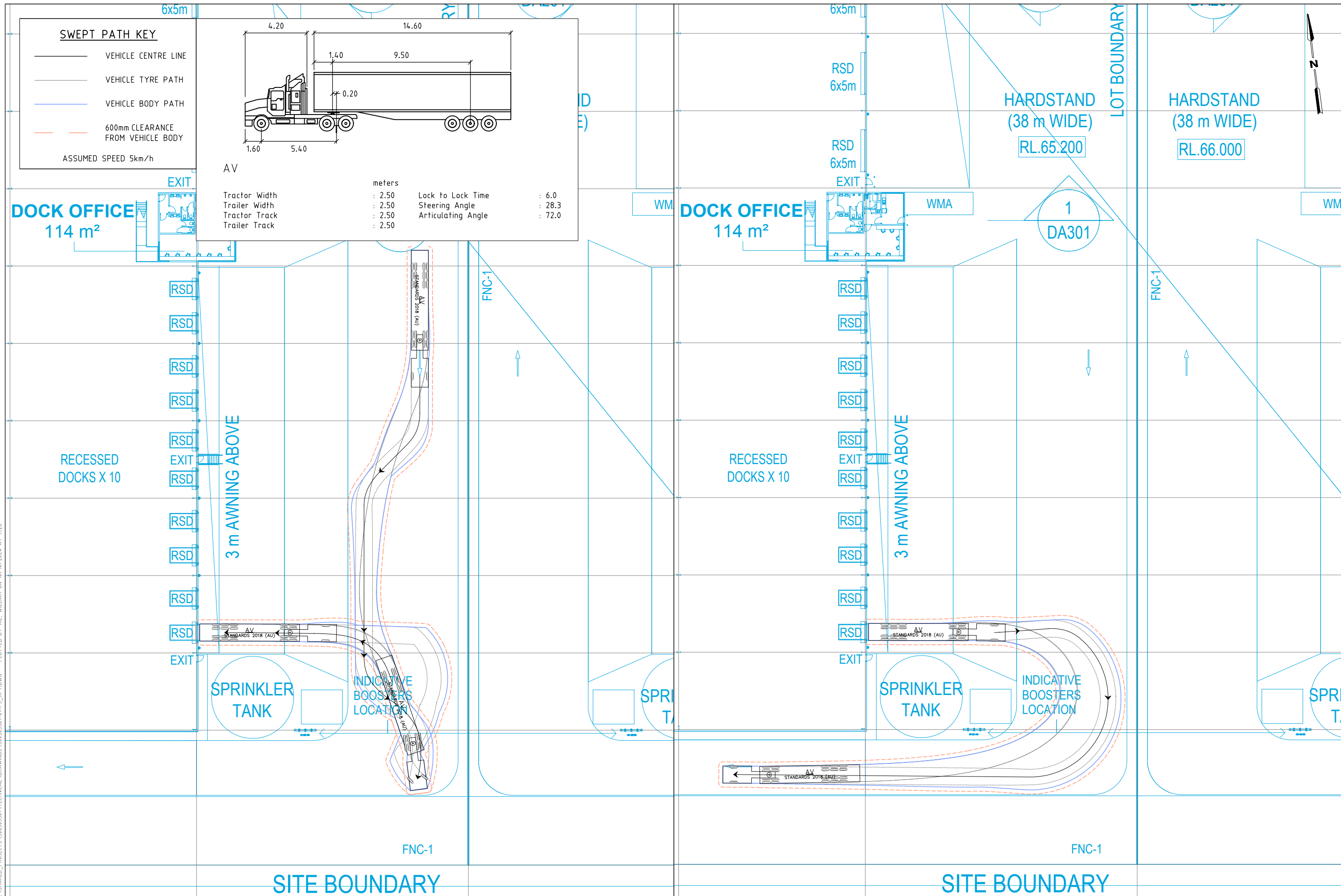
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CAD FILE NO.
300303581-01-P5_RPT.DWG

DHL BADGERYS CREEK
GROUND FLOOR
WAREHOUSE 3 - LOADING BAY
VEHICLE SWEEP PATH ASSESSMENT

DRAWING NO. 300303581-01-20 SHEET 20 OF 29 ISSUE P5

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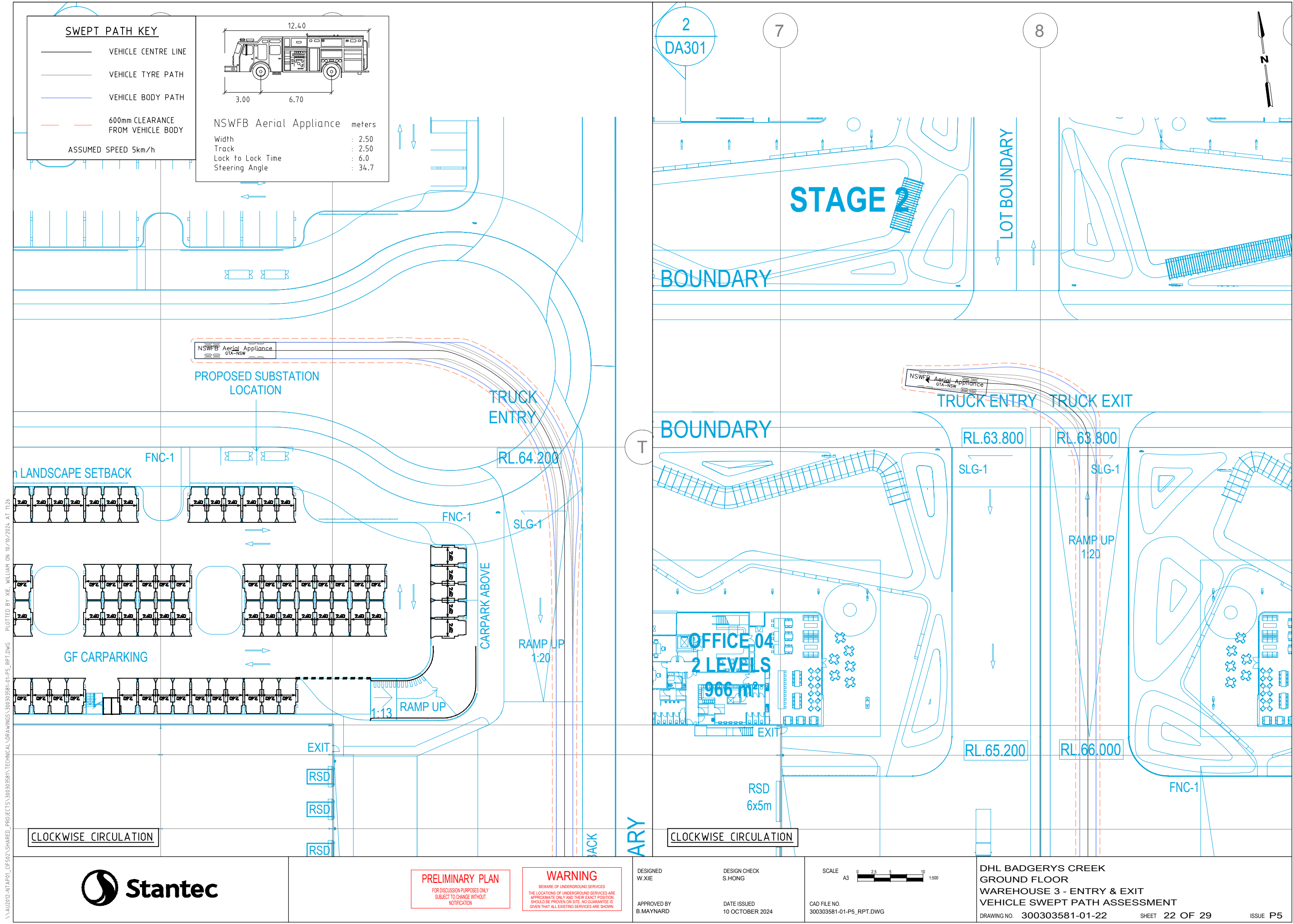
DATE ISSUED
10 OCTOBER 2024

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CAD FILE NO.
300303581-01-P5_RPT.DWG

DHL BADGERYS CREEK
GROUND FLOOR
WAREHOUSE 4 - LOADING BAY
VEHICLE SWEPT PATH ASSESSMENT

DRAWING NO. 300303581-01-21 SHEET 21 OF 29 ISSUE P5



\\AU2012-NTAP01_CIF502_SHARED_PROJECTS\300303581\TECHNICAL\DRAWINGS\300303581-01-P5_RPT.DWG PLOTTED BY XE.WILLIAM ON 10/10/2024 AT 11:26



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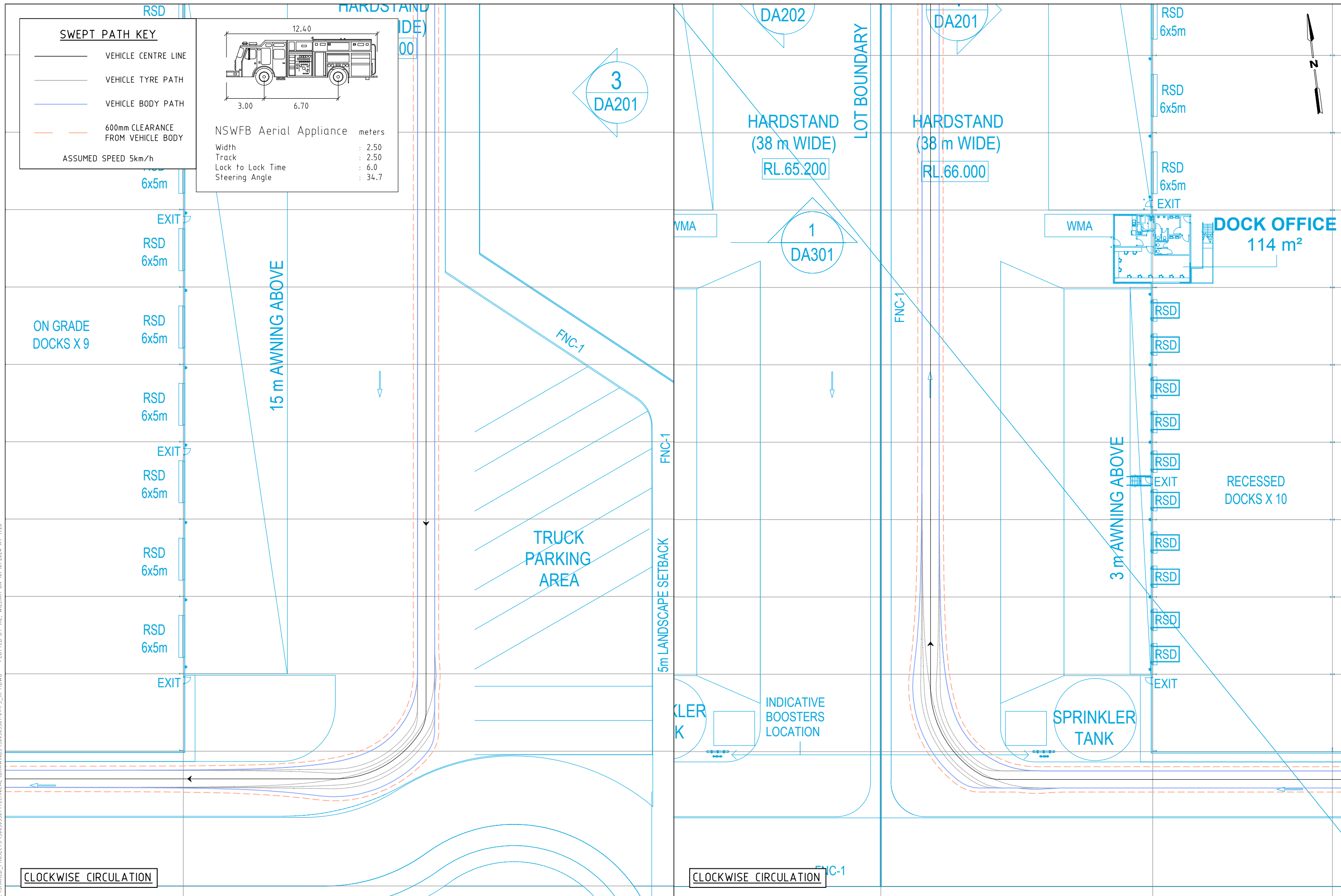
DATE ISSUED
10 OCTOBER 2024

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CAD FILE NO.
300303581-01-P5_RPT.DWG

DHL BADGERYS CREEK
GROUND FLOOR
WAREHOUSE 3 - ENTRY & EXIT
VEHICLE SWEEP PATH ASSESSMENT
DRAWING NO. 300303581-01-22 SHEET 22 OF 29 ISSUE P5

\\AU2012-NTAP01_CIF502\\SHARED_PROJECTS\\300303581\\TECHNICAL\\DRAWINGS\\300303581-01-P5_RPT.DWG PLOTTED BY XE.WILLIAM ON 10/10/2024 AT 11:26



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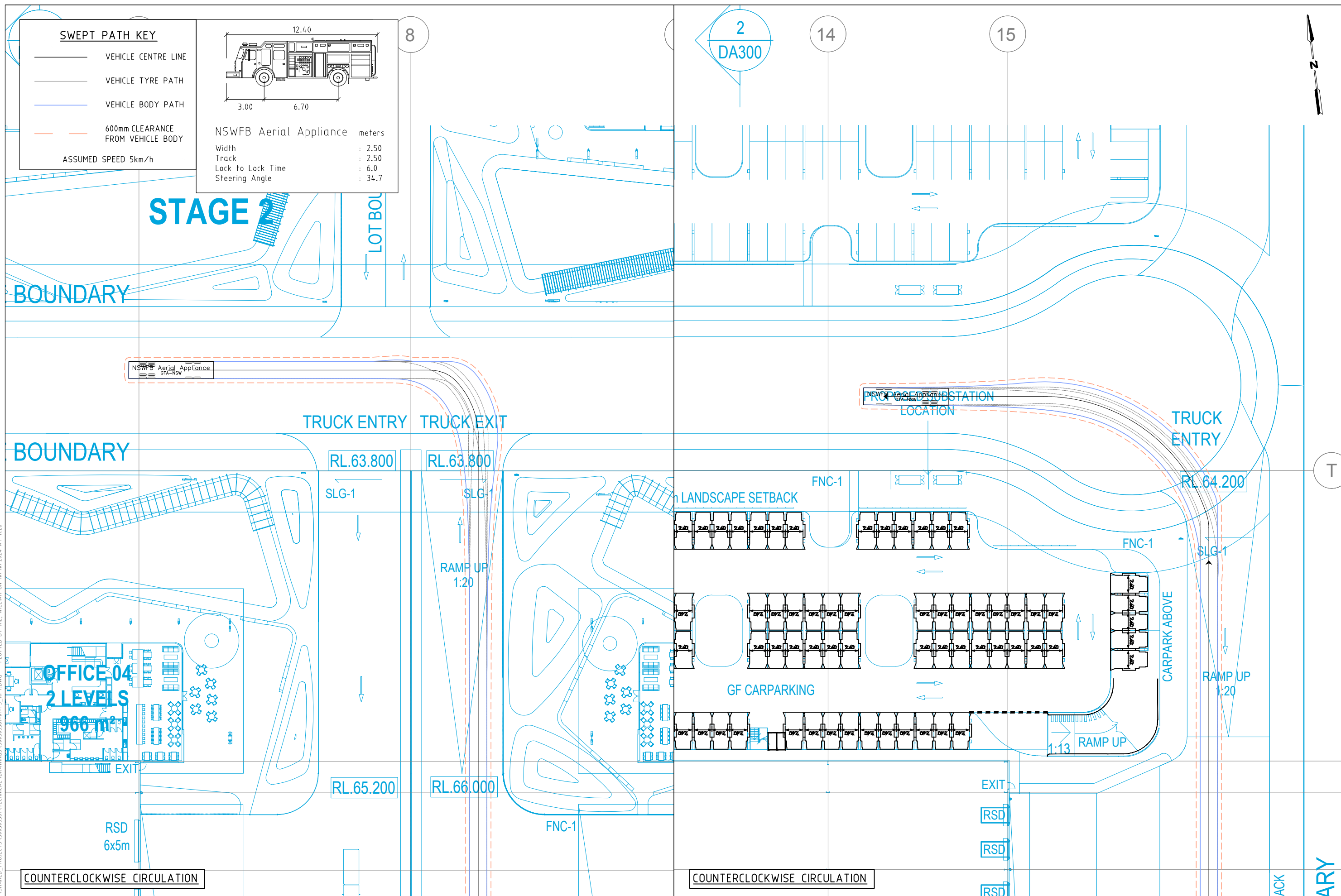
DESIGN CHECK
S.HONG

DATE ISSUED
10 OCTOBER 2024

SCALE
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CAD FILE NO.
300303581-01-P5_RPT.DWG

DHL BADGERYS CREEK
GROUND FLOOR
WAREHOUSE 3 - CIRCULATION
VEHICLE SWEEP PATH ASSESSMENT
DRAWING NO. 300303581-01-23 SHEET 23 OF 29 ISSUE P5



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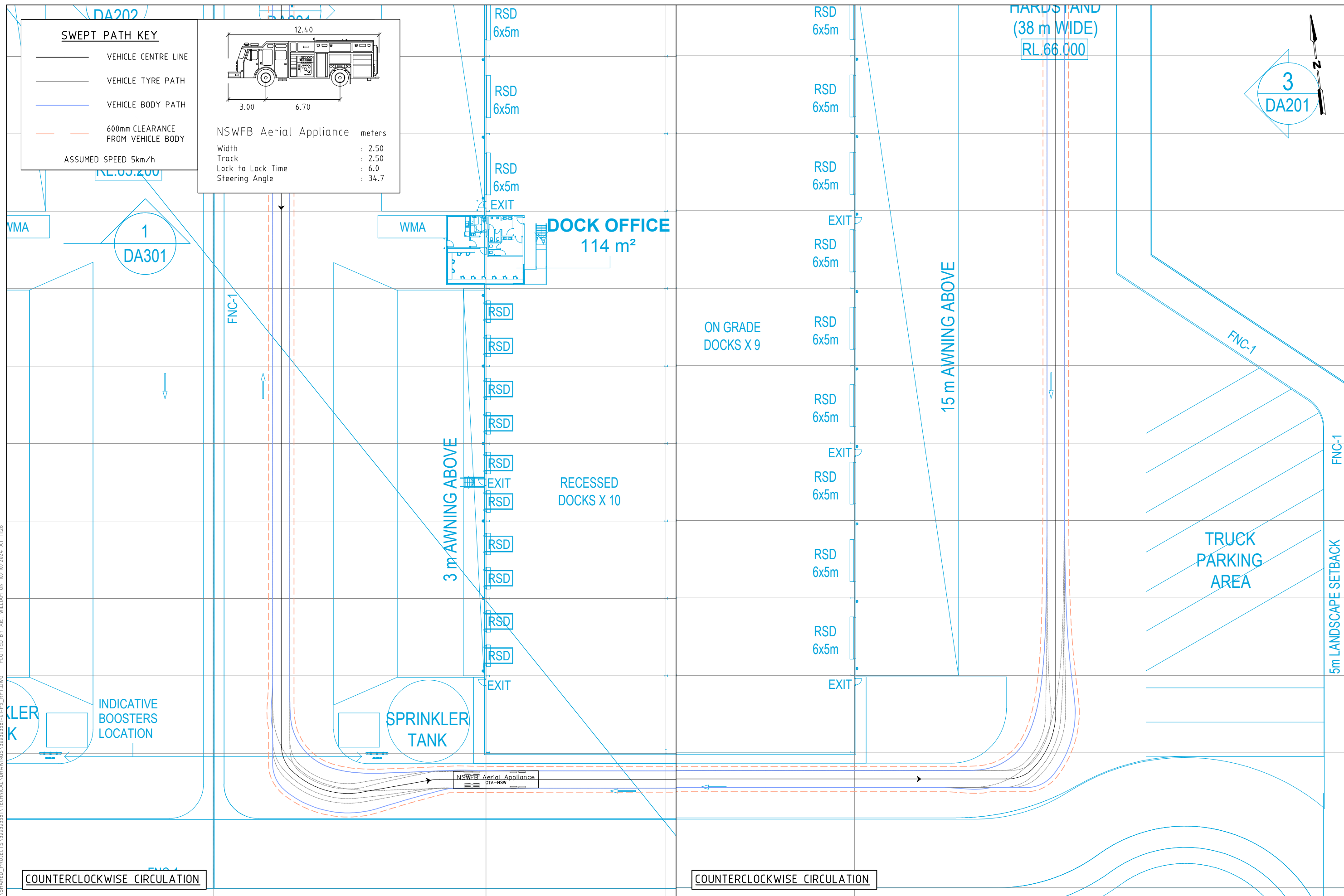
DESIGN CHECK
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DATE ISSUED
10 OCTOBER 2024

SCALE 0 2.5 5 10 1:500

DHL BADGERYS CREEK
GROUND FLOOR
WAREHOUSE 3 - ENTRY & EXIT
VEHICLE SWEPT PATH ASSESSMENT

DRAWING NO. 300303581-01-24 SHEET 24 OF 24



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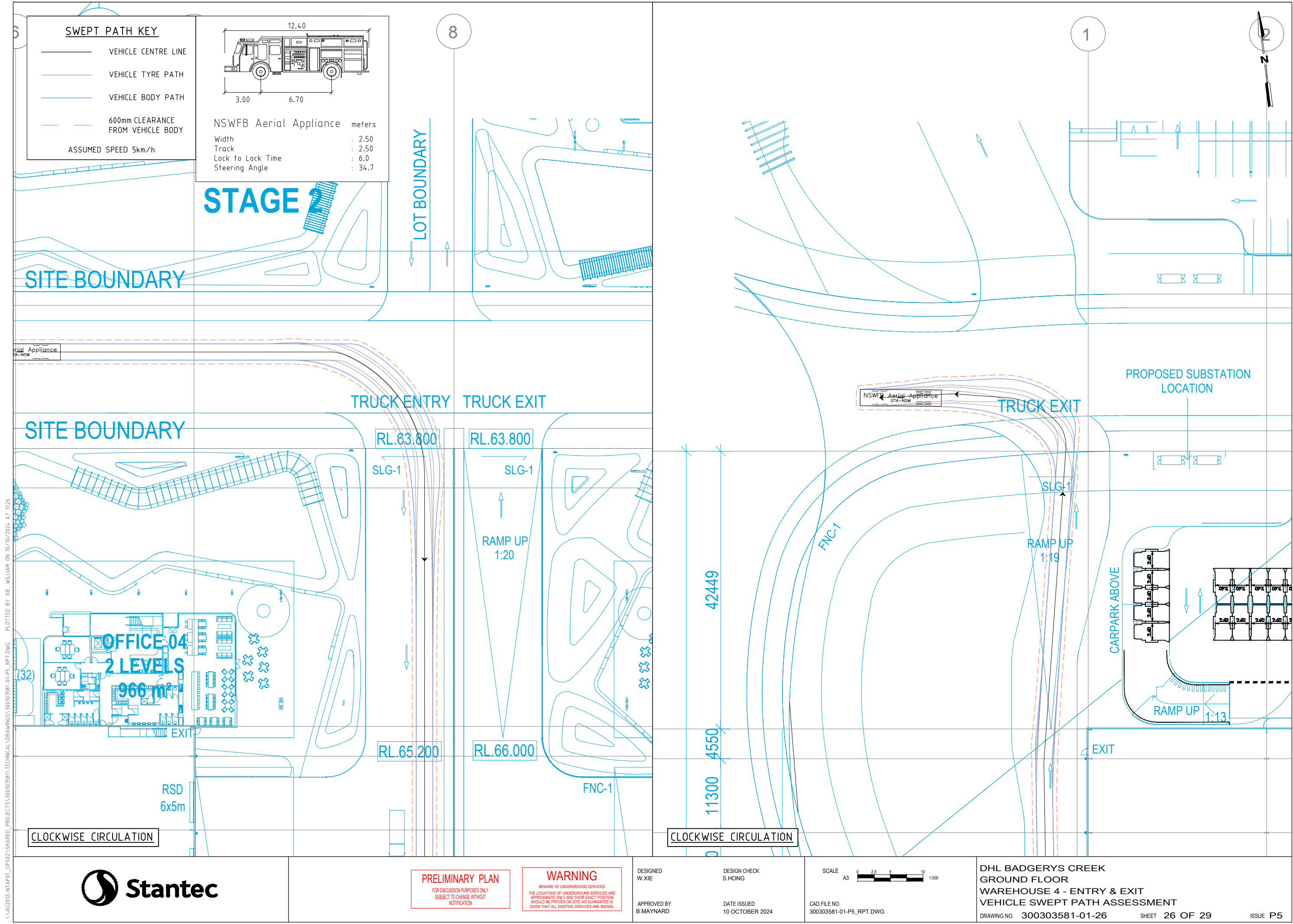
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DATE ISSUED
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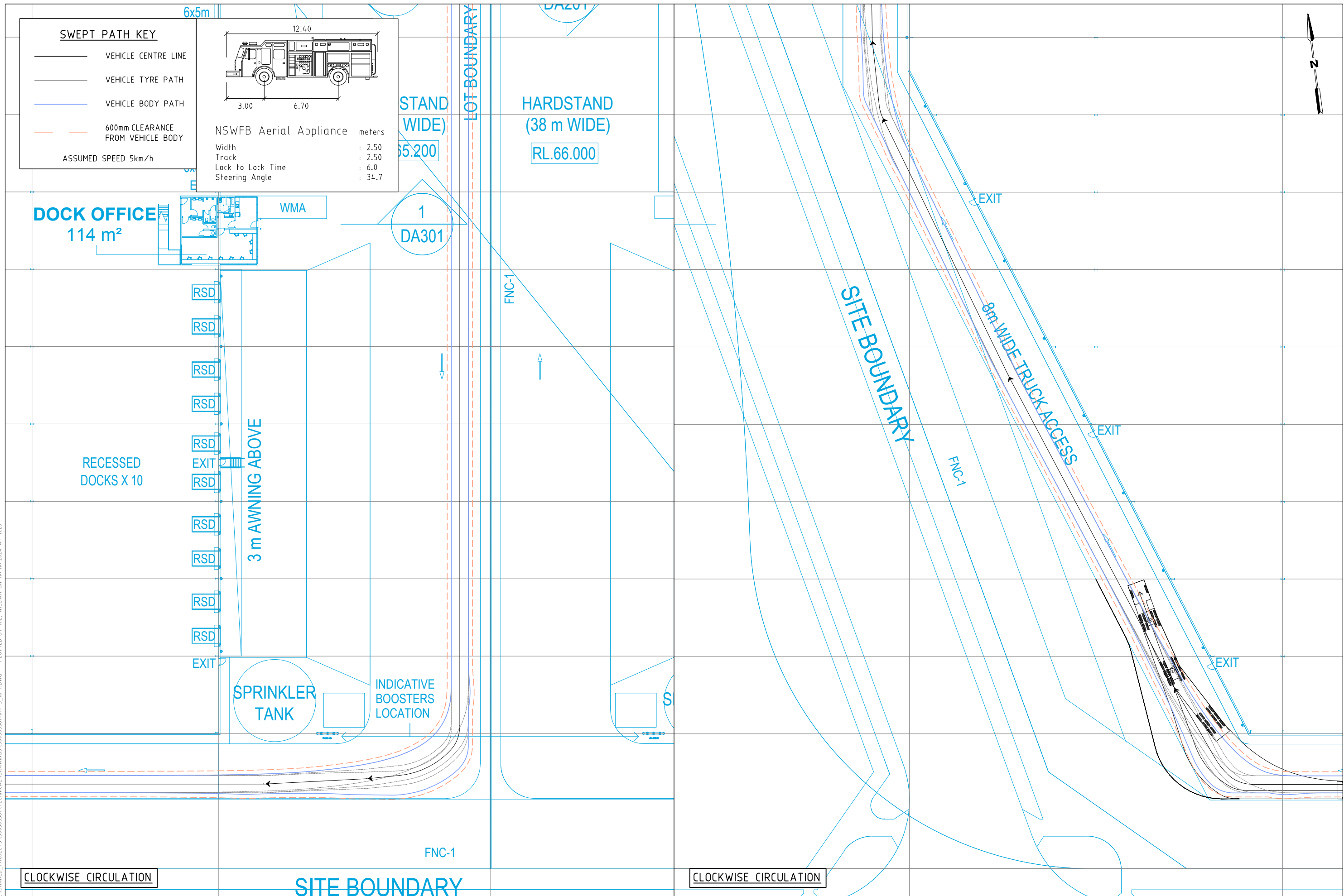
CAD FILE NO.
300303581-01-P5 RPT.DWG

DHL BADGERYS CREEK
GROUND FLOOR
WAREHOUSE 3 - CIRCULATION
VEHICLE SWEEP PATH ASSESSMENT

DRAWING NO. 300303581-01-25 SHEET 25 OF 25



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300303581-01-P5_RPT.DWG

DHL BADGERYS CREEK
GROUND FLOOR
WAREHOUSE 4 - CIRCULATION
VEHICLE SWEEP PATH ASSESSMENT

DRAWING NO. 300303581-01-27 SHEET 27 OF 29 ISSUE P5

\\AU2012-NTAP01_CIF502_SHARED_PROJECTS\300303581\TECHNICAL\DRAWINGS\300303581-01-P5_RPT.DWG PLOTTED BY XE.WILLIAM ON 10/10/2024 AT 11:26

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 600mm CLEARANCE FROM VEHICLE BODY

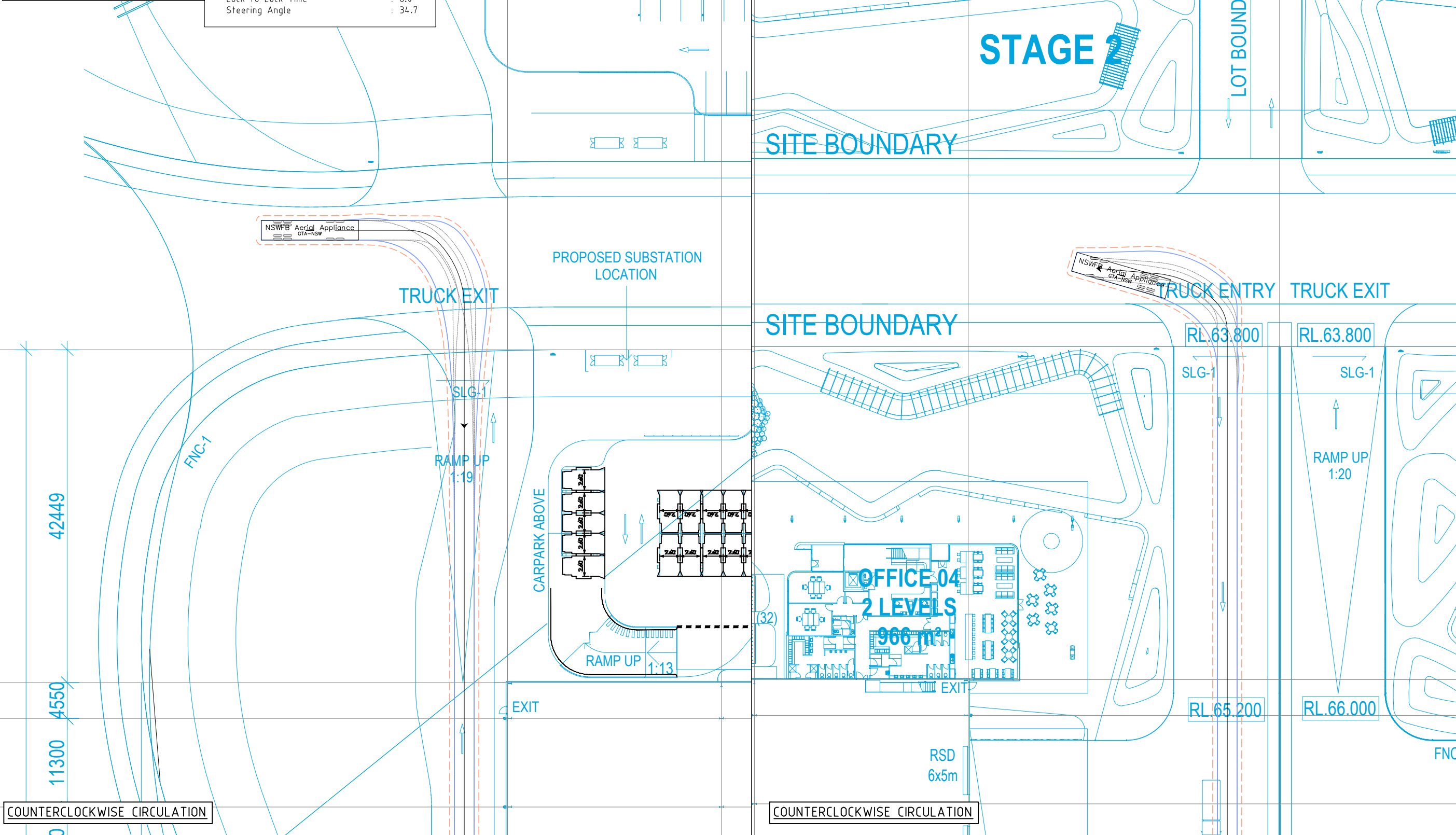
ASSUMED SPEED 5km/h

NSWFB Aerial Appliance

12.40

3.00 6.70

Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 34.7



COUNTERCLOCKWISE CIRCULATION

COUNTERCLOCKWISE CIRCULATION



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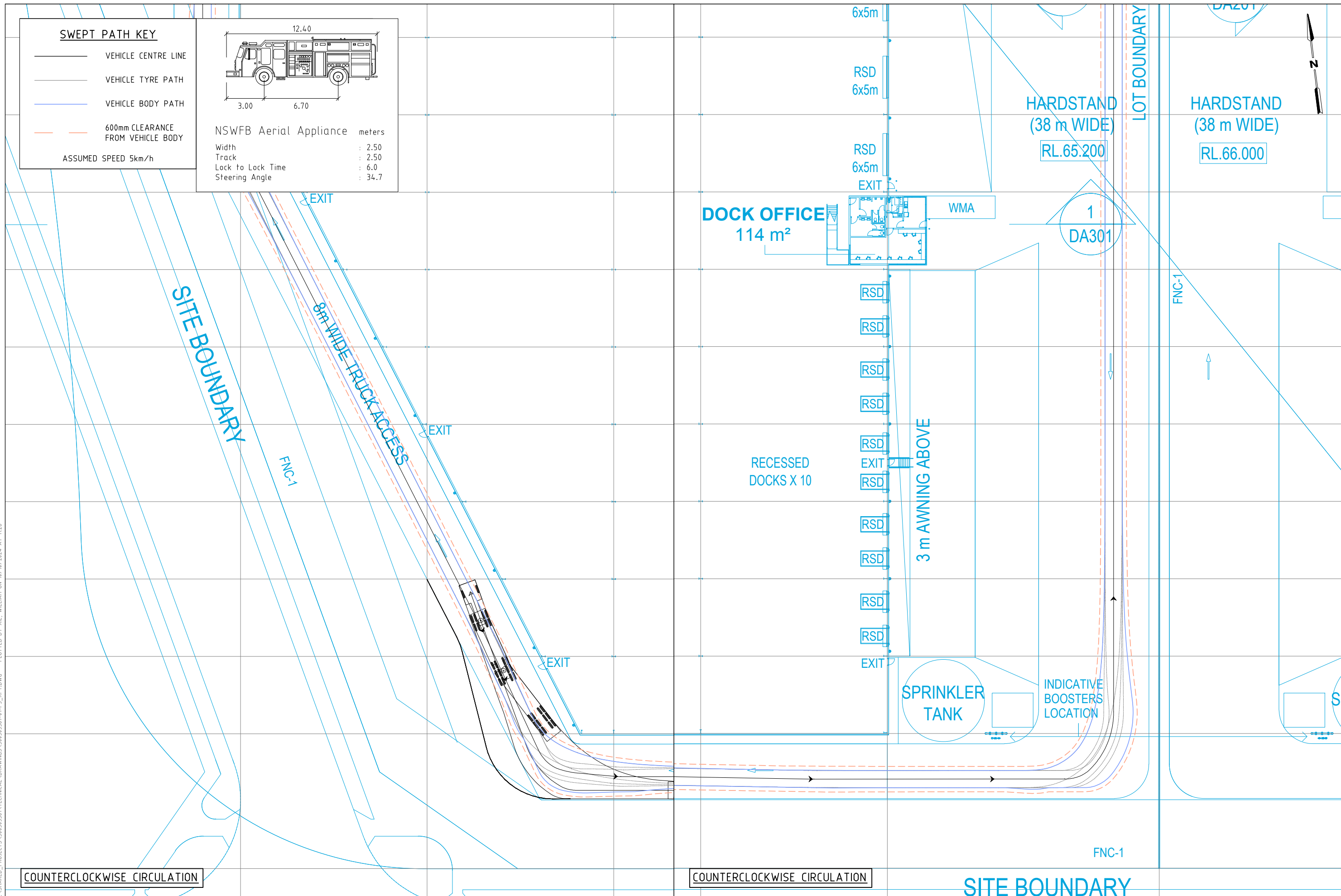
DATE ISSUED
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CAD FILE NO.
300303581-01-P5_RPT.DWG

DHL BADGERYS CREEK
GROUND FLOOR
WAREHOUSE 4 - ENTRY & EXIT
VEHICLE SWEEP PATH ASSESSMENT
DRAWING NO. 300303581-01-28 SHEET 28 OF 29 ISSUE P5

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GROUND FLOOR
WAREHOUSE 4 - CIRCULATION
VEHICLE SWEEP PATH ASSESSMENT
DRAWING NO. 300303581-01-29 SHEET 29 OF 29 ISSUE P5