Revised Traffic & Parking Assessment Report

DA2023/00419

Newcastle East End Stage 3 & Stage 4

Proposed Mixed Use Development

Ref 22064

8th November 2024

CJP CONSULTING ENGINEERS

info@cjpconsultingengineers.com.au | +61 415 256 233 | PO Box 1184 Hunters Hill NSW 2110

Document Control

Project Number	22064			
Project Address	Newcastle East End Stage 3 & Stage 4			
Revision	**Date**	**Details**	**Author**	**Approved By**
Draft	07.12.22	First draft	C. Palmer	C. Palmer
Draft V2	17.04.23	Second draft	C. Palmer	C. Palmer
Draft V3	27.04.23	Third draft	C. Palmer	C. Palmer
Draft V4	03.05.23	Fourth draft	C. Palmer	C. Palmer
Final	10.05.23	Final for submission	C. Palmer	C. Palmer
Final V2	08.11.24	Updated final for resubmission	C. Palmer	C. Palmer

Table of Contents

Appendix A: Proposed Stages 3 & 4 architectural plans
Appendix B: City of Newcastle's 50% public domain plans
Appendix C: Proposed Road Concept Plan
Appendix D: Swept turn paths

1. Introduction

1.1 Project Background

CJP has been engaged by Iris Capital to prepare a Revised Traffic & Parking Assessment Report (TPAR) in support of an amended Development Application (DA2023/00419) to Newcastle City Council, for a mixed use development to be located at 105-137 Hunter Street, 3 Morgan Street, 22 Newcomen Street and 66-74 King Street, Newcastle, referred to as East End Stages 3 & 4.

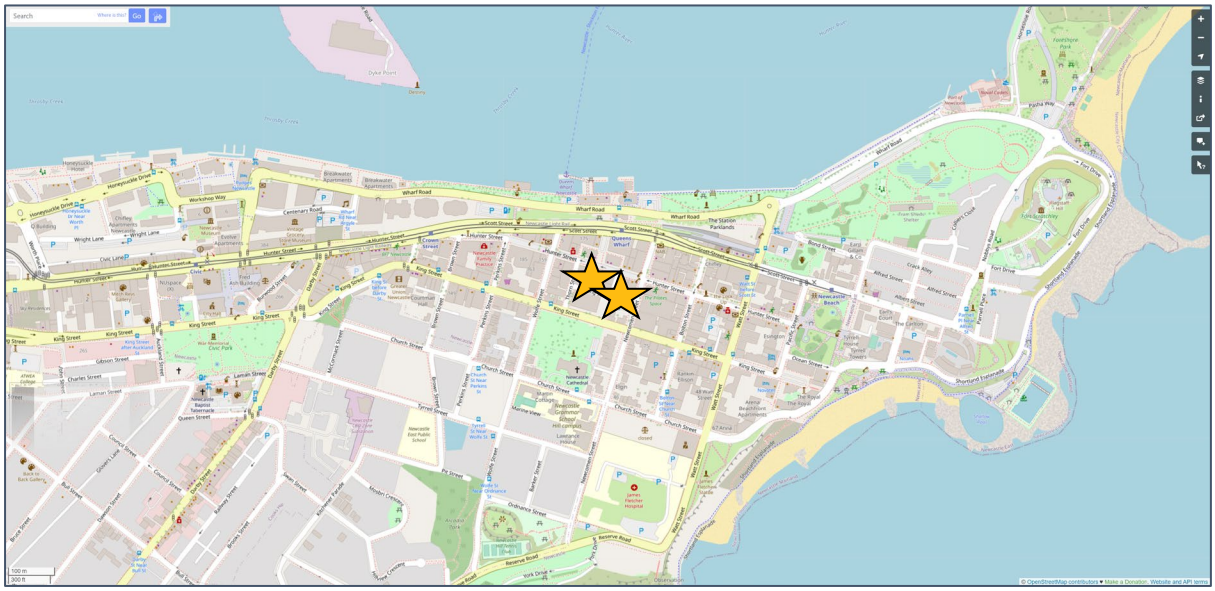


Figure 1.1 – Site Location (Source: Open Street Map)

This TPAR has been revised at the direction of Newcastle City Council (CN) post the determination of the concurrent modification. DA2023/00419 was lodged on 24 May 2023; and placed on public exhibition between 31 May 2023 to 7 July 2023, and renotified in early 2024.

DA2023/00419 has been subject to numerous Requests for Additional Information (RFIs) since lodgement. This Revised TPAR captures the information provided in response to the various RFIs which are summarised below.

1.1.1 12 October 2023 RFI

The partial RFI letter issued by CN primarily related to traffic engineering, environmental issues, heritage, gross floor area, city greening and external agency referrals. The proponent, SJB, DBJ and Curious Practice as well as the consultant team met with Council Officers on several occasions throughout 2022 to 2023 to discuss the proposed works. Additional documentation was then submitted to CN on 10 November 2023 in response to the RFI, including a letter from CJP, dated 9 November 2023, with the relevant issues summarised below:

- Safety matters in relation to the intersection of Morgan Street & Laing Street
- Accessibility for 12.5m long heavy rigid trucks (HRV)
- Traffic flow in Morgan Street, Laing Street & Thorn Street
- Driver sight lines for vehicles exiting Stage 4 car park
- Public footway widths within Morgan Street, Laing Street & Thorn Streets

- Driver sight lines at the intersections of Morgan & Laing as well as Laing & Thorn
- Car park layout, site access and servicing
- Road Concept Plan
- Green Travel Plan

1.1.2 13 November 2023 RFI

The RFI received on 13 November from CN, states *Please be advised that the detailed assessment of the application has now been completed and this RFI supersedes the RFI dated 12 October 2023*, however, the project town planners, Urbis, note that most of the information requested by CN in the 12 October 2023 RFI remains relevant to the 13 November 2023 RFI and has been responded to. Considering this, the 13 November 2023 RFI only responded to the 'new' matters and did not recap on the matter already responded to. Additional documentation was then submitted to CN on 8 December 2023 in response to the RFI, including a Parking Breakdown prepared by Urbis and Iris.

This RFI response, pursuant to clause 113 of the *Environmental Planning and Assessment Regulation 2021*, sought to amend DA2023/00419 for Stage 3 and 4 of East End, to include stratum subdivision. The stratum lots will be further subdivided into strata lots for sale.

1.1.3 23 December 2023 RFI

The RFI letter issued by CN related to traffic engineering, parking and public domain and heritage matters. The proponent, SJB, DBJ and Curious Practice as well as the consultant team met with Council Officers on 18 January 2023 to discuss the 23 December 2023 RFI in further detail. Additional documentation was then submitted to CN on 24 January 2024 in response to the RFI, including a letter from CJP, dated 25 January 2024, with the relevant issues summarised below:

- Parking allocation
- Public domain matters
- Road Concept Plan
- Traffic flow in Morgan Street, Laing Street & Thorn Street
- Site servicing and accessibility for HRVs

1.1.4 27 September 2024 RFI

The RFI letter issued by CN related to consistency of documentation, including the architectural plans, landscape plans and Statement of Environmental Effects. All matters raised to date by CN have been comprehensively addressed by the Applicant. This additional relevant information has been reflected in this Revised TPAR.

1.1.5 Concept Development Application DA2017/00701

By way of background, Concept Development Application DA2017/00701 ('Concept DA') was approved on 2 January 2018 by the Joint Regional Planning Panel ('JRPP') (now known as the Hunter and Central Coast Regional Planning Panel ('HCCRPP')) for a staged concept approval for the East End development. This included a four-stage concept approval which set the floor space ratio ('FSR'), building height and envelope, and land use parameters for each stage of development.

The detailed designs for Stage 1 and Stage 2 were approved pursuant to DA2017/00700 and DA2018/00354, on 2 January 2018 and 15 March 2019, respectively. Construction is complete for Stage 1 and nearing completion for Stage 2.

1.1.6 Stages 3 & 4 Design Competition

An Architectural Design Competition was undertaken for the detailed design of Stages 3 and 4. On 6 July 2022, following three-months of engagement with CN, the Government Architects Office NSW ('GANSW'), and the Applicant, the Design Competition Brief was endorsed by GANSW and CN. A key criterion within the Brief was the delivery of the 'Harbour to Christ Church Cathedral' view corridor.

1.1.7 Modification Application MA2023/00175

Following the design competition process, a detailed DA for Stage 3 and Stage 4 (DA2023/00419) was lodged concurrently with the corresponding modification application (MA2023/00175), which relates to the Concept DA.

MA2023/00175 sought to modify the building heights and envelopes approved under the Concept DA2017/00701 as well as associated administrative changes to the conditions of consent. The changes are proposed to enable the winning architectural scheme from the Design Competition. In addition, it seeks changes to car parking requirements.

On 15 May 2024, development consent was refused for modification application MA2023/00175 by the HCCRPP for the following reasons:

> *1. The consent authority is not satisfied that the modification application is substantially the same development as the concept approval pursuant to Section 4.55(2)(a) of the Environmental Planning and Assessment Act 1979.*
>
> *2. The modification application will have unacceptable cumulative impacts on both the public and private views and is therefore unacceptable pursuant to Section 4.15(1)(b) Environmental Planning and Assessment Act 1979.*
>
> *3. The development will create unacceptable impacts given the deficiency in car parking and is therefore unacceptable pursuant to Section 4.15(1)(b) Environmental Planning and Assessment Act 1979.*
>
> *4. The development is not in the public interest having regard to impacts on views and the deficiency of car parking spaces pursuant to Section 4.15(1)(e) Environmental Planning and Assessment Act 1979*

Following this determination, the Applicant requested a review of the decision under Division 8.2 of the EP&A Act 1979 (RE2024/00002). No changes were made to the proposal however additional information was provided. In support of the review application and also in response to information requests from Council officers and the Panel. CN engaged external planning and visual impact consultants to undertake an independent assessment of the modification application. It is pertinent to note however that CN did not engage an external traffic consultant for an independent assessment as they were satisfied with the additional material provided by CJP.

On 28 October 2024, the HCCRPP voted unanimously to approve MA2023/00175 (RE2024/00002), following consideration of the Consultant Planner's assessment report and their recommendation for approval, together with the previous Panel's reasons for refusal. In relation to car parking, the following comments were made in the determination:

"The Panel notes that the proposal as modified contains a deficit of 76 residential visitor spaces across Stages 1-4 (26 residential visitor parking spaces for Stages 3 & 4) when assessed against the requirements of (Newcastle) DCP 2012, and that the shortfall of 26 residential visitor spaces for Stages 3 & 4 will be offset by a new condition requiring an additional 26 bicycle parking spaces to be provided within the Stage 3-4 precinct. The proposal is fully compliant in terms of providing resident parking for every proposed apartment and the shortfall in commercial parking is attributable to Stages 1 & 2 which are either constructed or under construction. The Panel further notes that (Newcastle) DCP 2023 adopts a new approach to parking in the Newcastle CBD, moving from prescribing minimum parking rates to a merits-based assessment approach with maximum parking rates, to promote sustainable transport choices and increased use of public transport. The parking to be provided Stages 3 & 4complies with DCP 2023 requirements and the Panel considers the shortfall of 26 residential visitor parking spaces for Stages 3 & 4, when assessed against the requirements of DCP 2012 and the new approach adopted under DCP 2023, to be acceptable. In forming this view, the Panel has the benefit of reviewing the information contained in the Council Supplementary Report, dated 24 October 2024, which discussed the various Council policies aimed at encouraging active transport and the advantages of a less car-oriented city. Having regard to the policy position Council has not adopted, the Panel considers that the proposed parking arrangements are satisfactory".

1.2 Proposed Development Application DA2023/00419 Summary

As noted in the foregoing, DA2023/00419 was lodged on 24 May 2023 and has undergone a range of modifications since the original TPAR, dated 10 May 2023, was prepared. In this regard, DA2023/00419 remains under consideration by CN, noting a determination depends on the outcome of the subject 8.2(1) review application of MA2023/00175 (RE2024/00002), which has now been received. It is worth noting that the HCCRPP is also the determining authority for the subject application DA2023/00419.

The proposed DA for Stages 3 & 4 to which this relates involves the construction of 195 residential apartments above 1,590m^2 of ground floor commercial/retail space.

Off-street parking in the Stages 3 & 4 DA scheme is proposed for a total of 304 car spaces across respective three-level car parks, all in accordance with Council's current DCP 2023 requirements and "legacy" requirements from Stages 1 & 2.

Consistent with the design competition scheme, the proposed development on Stages 3 & 4 will be serviced by a variety of commercial vehicles up to and including 12.5m long heavy rigid vehicles (HRV), including delivery vans/trucks, removalist trucks and garbage trucks. Stage 3's service area has been reconfigured and now proposes a drive-through design, with vehicles entering via Morgan Street and exiting via Laing Street. The Stage 4 service area however includes a large commercial-grade mechanical turntable, thereby allowing service vehicles to be able to enter and exit the site in a forward direction at all times.

Vehicular access to the Stage 3 basement access driveway is proposed to be located off the Thorn Street site frontage, whilst the Stage 3 service driveway is proposed to be located off the Laing Street site frontage. All driveways are serviced from existing road reserves. The Stage 4 access driveway is proposed to be located off the Morgan Street (Lower) site frontage, which accesses both the car parking area and the loading bay.

The proposed amended DA2023/00419 scheme allows all vehicles to enter and exit the site in a forward direction at all times. No vehicular access is proposed off the King Street, Newcomen Street, Morgan Street or Hunter Street site frontages.

Architectural plans of the proposed Stages 3 & 4 DA scheme are provided in Appendix A.

1.3 Assessment Tasks

The purpose of this Revised TPAR is to assess the traffic, parking, access, transport, pedestrian and servicing characteristics of the amended Stage 3 and Stage 4 DA, and the associated outcomes of the proposal on the surrounding road network, parking and transport environment. This can be briefly summarised below:

- Description of the existing site and its location
- Existing traffic & parking conditions
- Public and active transport infrastructure
- Description of the development proposal
- Traffic generation potential of the proposal and its impacts on the surrounding road network
- Off-street parking/loading/access requirements and provisions
- Design of access driveway, parking and service area layout
- Design of public domain and laneway network

1.4 Relevant Planning Controls

The site lies within the Newcastle City Council (Council) Local Government Area (LGA), such that the relevant Council planning controls and strategies referenced in this Revised TPAR include:

- Newcastle Local Environmental Plan 2012 (NLEP 2012)
- Newcastle Development Control Plan 2012 (NDCP 2012)
- Newcastle Development Control Plan 2023 (NDCP 2023)
- Newcastle Council Local Strategic Planning Statement – Planning Newcastle 2040 (LSPS)

Of importance, the NDCP 2023 was developed through a comprehensive review of the NDCP 2012, updating development controls to reflect best practices, land use strategies, and CN priorities. Notably, the NDCP 2023 aims to reduce car dependency and increase walking, cycling, and public transport use to align with CN's Parking Plan 2021-2030.

The key shift from DCP 2012, is the introduction of maximum parking rates for residential development in dense urban areas (e.g., city centre, renewal corridors) and removal of minimum parking requirements, including for residential visitors. Parking is now more flexible and market-driven, benefiting sustainability and housing affordability.

1.5 Traffic, Transport & Parking Guidelines & Standards

In preparing this Revised TPAR, references are also made to the following site access, traffic and parking guidelines and documents:

- Roads & Maritime Service's Guide to Traffic Generating Developments 2002 (RMS Guide)
- Roads & Maritime Service's Technical Direction Updated Traffic Surveys 2013 (TDT)
- State Environmental Planning Policy (Transport & Infrastructure) 2021
- State Environmental Planning Policy (Housing) 2021
- Australian Standards 2890.1:2004 – Off-Street Car Parking (AS2890.1)
- Australian Standards 2890.2:2018 – Off-Street Commercial Vehicle Facilities (AS2890.2)
- Australian Standards 2890.3:2015 – Bicycle Parking (AS2890.3)
- Australian Standards 2890.5:2020 – On-Street Car Parking (AS2890.5)
- Australian Standards 2890.6:2022 – Off-Street Parking for People with Disabilities (AS2890.6)
- Australian Standards 4299:1995 – Adaptable Housing (AS4299)
- NSW Government's Greater Newcastle Metropolitan Plan 2036
- NSW Government's Planning Guidelines for Walking & Cycling (December 2004)
- Austroads Guide to Traffic Management Part 12 – Traffic Impacts of Development
- Building Code of Australia (BCA)
- National Construction Code (NCC)

Furthermore, references are also made to the following traffic and parking studies associated with the Concept DA Masterplan:

- Transport Impact Assessment, prepared by GTA Consultants, Issue D, dated 13.06.17
- s4.55 Traffic Addendum, prepared by GTA Consultants, dated 22 May 2018
- Transport Impact Assessment Advice, prepared by TTM, dated 18 October 2019
- Transport Impact Assessment Stage 2, prepared by GTA Consultants, Issue D, dated 13.06.17

2. Existing Conditions

2.1 Site Location & Description

The Stage 3 site encompasses the entire block surrounded by Hunter Street to the north, Laing Street to the south, Morgan Street to the east and Thorn Street to the west. The Stage 3 site comprises northern and southern street frontage lengths of 81m, eastern and western boundary lengths of 42m, and occupies an area of 3,393m^2.

Stage 3 currently contains a heritage item, however, the former older style two-storey commercial building has been demolished. No off-street parking or loading was or is currently provided.

The Stage 4 site encompasses the block surrounded by Hunter Street to the north, King Street to the south, Newcomen Street to the east and Morgan Street to the west, *excluding* 101-103 Hunter Street and 16-20 Newcomen Street. The Stage 4 site comprises street frontage lengths of 30m, 40m, 55m and 42m to the north, south, east and west, respectively, and occupies an area of 3,056m^2.

Similarly, Stage 4 also contains a heritage item, however, the multiple former mixed use buildings have been demolished. Off-street parking was previously provided at several locations throughout the site, with vehicular access provided via the Morgan Street and Newcomen Street frontages only.

An extract of the survey plan, prepared by Monteath & Powys Ptd Ltd, is reproduced below, with the Stage 3 and Stage 4 subject sites highlighted in blue. For context, Stage 1 and Stage 2 are highlighted in green, whilst Council's former car park site is highlighted in orange.

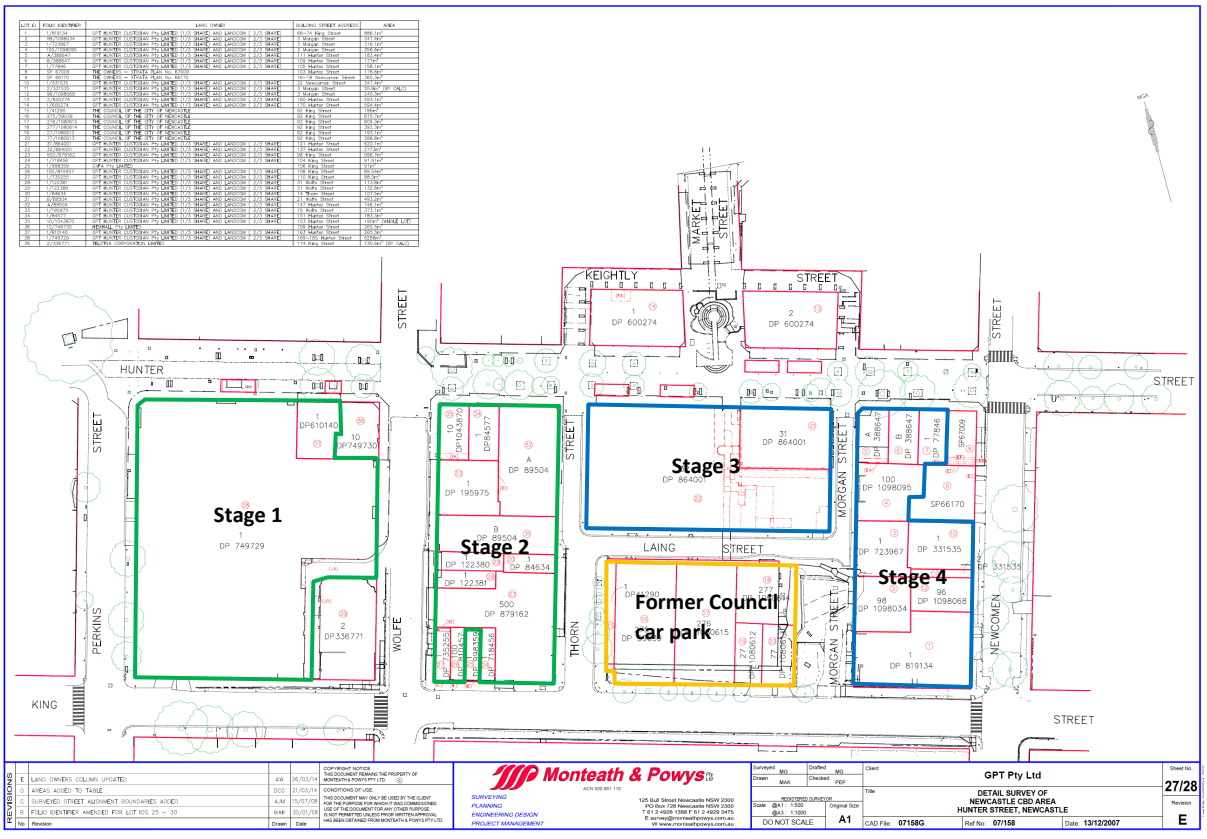


Figure 2.1 – Survey plan (Source: Monteath & Powys Ptd Ltd)

An aerial image of the site and its surroundings (taken 31 August 2024) is reproduced on the following page, along with a series of photographs from CJP's site inspection on 2 September 2024.

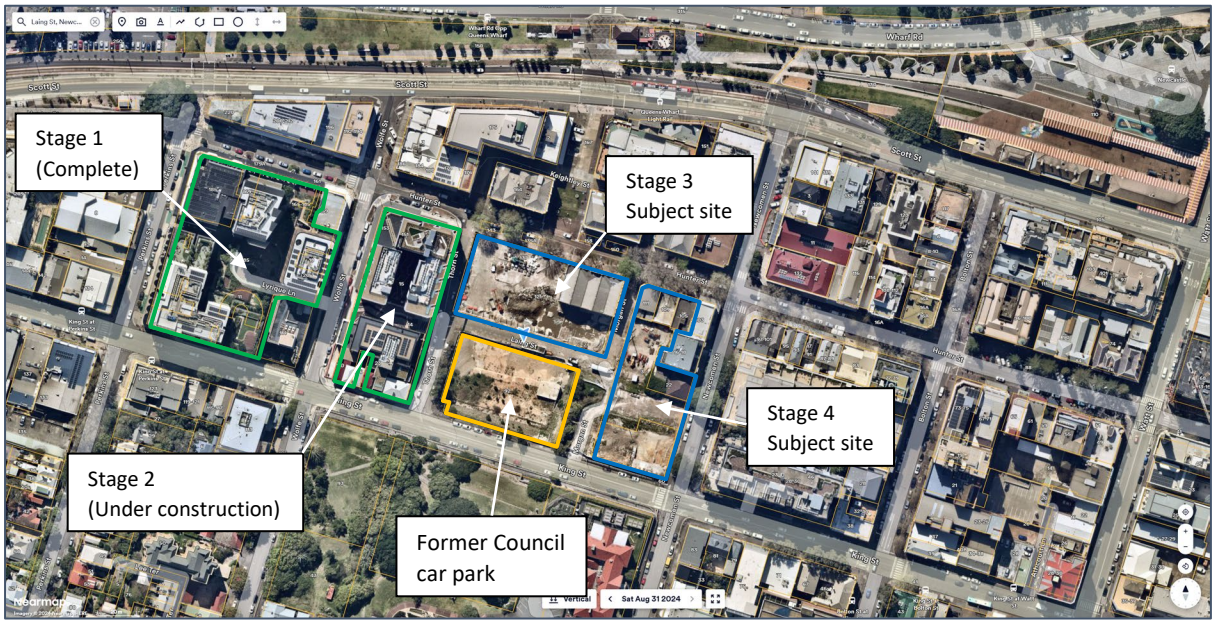


Figure 2.2 – Aerial map (Source: Nearmap)

Figure 2.3 – Stage 3, looking south from Hunter Street (Source: CJP site inspection 02.09.24)

Figure 2.4 – Stage 3, looking south-east from Hunter Street & Thorn St intersection (Source: CJP site inspection 02.09.24)

Figure 2.5 – King St & Thorn St intersection, looking north (Source: CJP site inspection 02.09.24)

Figure 2.6 – Stage 4, looking north-west from King St & Newcomen St intersection (Source: CJP site inspection 02.09.24)

Figure 2.7 – Stages 3 & 4, looking south from Hunter Street & Morgan St intersection (Source: CJP site inspection 02.09.24)

2.2 Planning Context

The site (Blocks 3 & 4) is zoned B4 Mixed Use under NLEP 2012 whilst the maximum height of building varies between RL 20m and RL 42m, as indicated in the maps below. Furthermore, the FSR control is 4:1. The proposed mixed use development is permissible in the zone, subject to development consent.

Notwithstanding, subject to achieving design excellence, Clause 7.5(6) of the NLEP 2012 provides for an additional 10% bonus in either height or FSR.

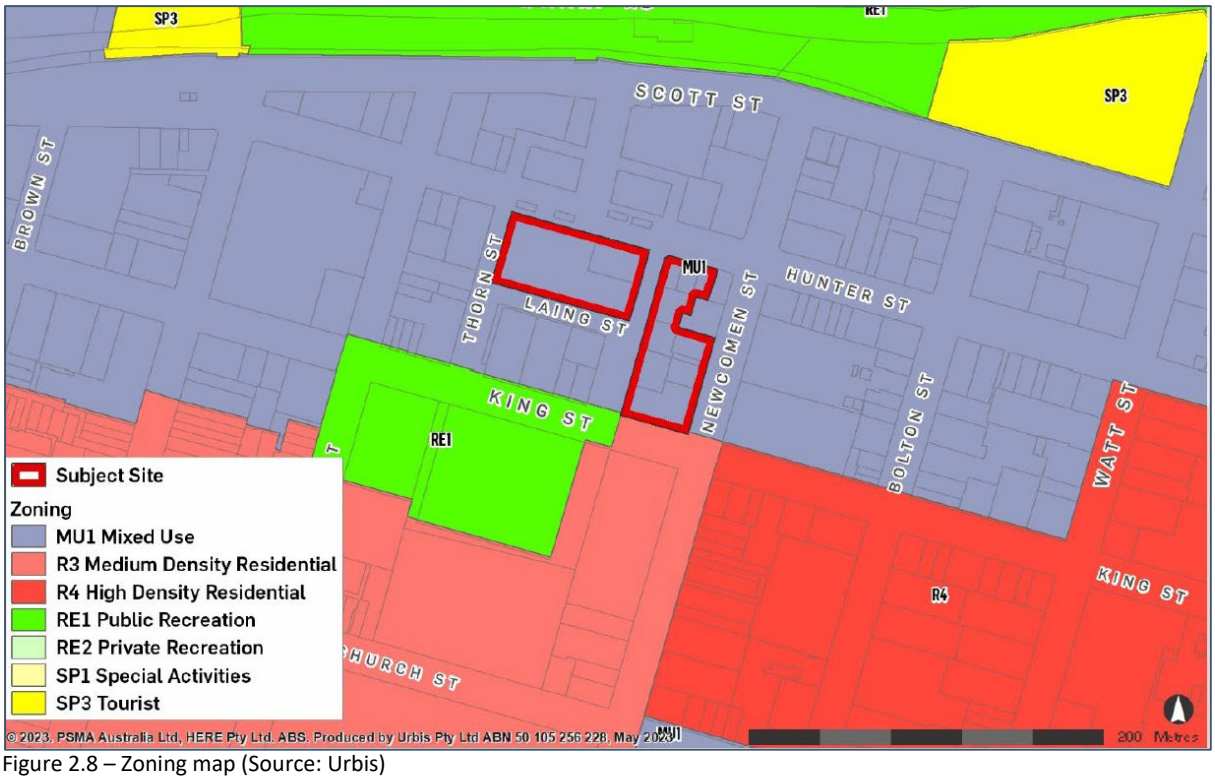


Figure 2.8 – Zoning map (Source: Urbis)

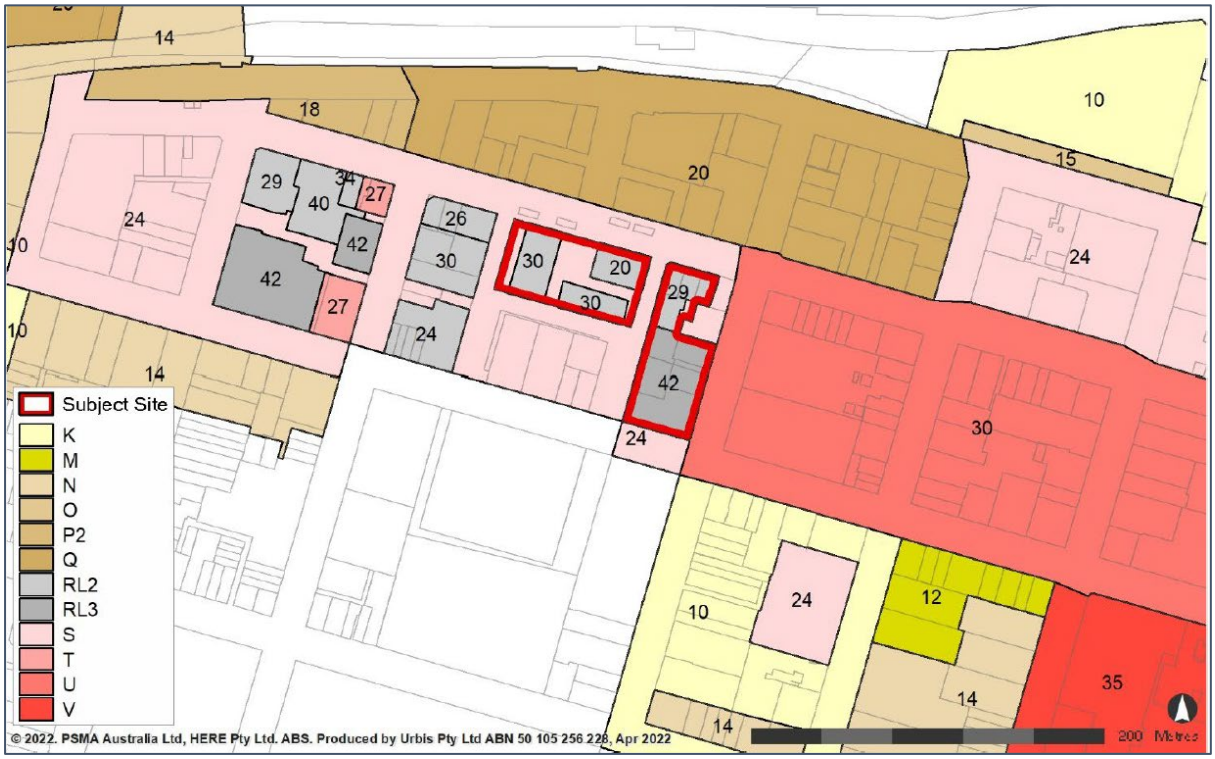


Figure 2.9 – Height of Building map (Source: Urbis)

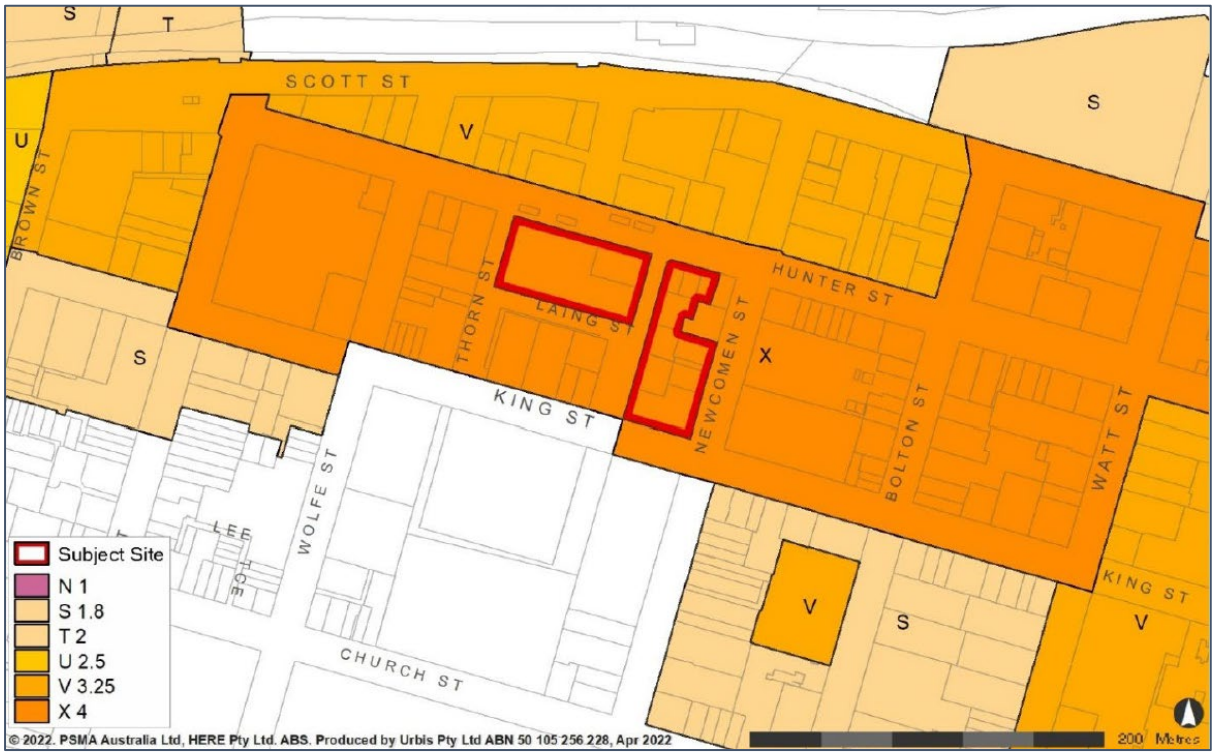


Figure 2.10 – Floor Space Ratio map (Source: Urbis)

2.3 Greater Newcastle Metropolitan Plan 2036

In 2018, the NSW Government released the Greater Newcastle Metropolitan Plan 2036 document (the Plan). As Australia's seventh largest city and global gateway for northern NSW, Greater Newcastle aims to shape its future with investment in aviation, transport, education, health and tourism. The Plan sets out strategies and actions that will drive sustainable growth across Cessnock City, Lake Macquarie City, Maitland City, Newcastle City and Port Stephens communities which together make Greater Newcastle. The Plan also helps to achieve the vision set in the Hunter Regional Plan 2036, for the Hunter to be the leading regional economy in Australia, with a vibrant new metropolitan city at its heart. The document envisages the Newcastle City Centre as becoming a Strategic Centre, as indicated in the map below.

Figure 2.11 – Greater Newcastle Vision 2036 (Source: Greater Newcastle Metropolitan Plan 2036)

2.4 Planning Newcastle 2040

Newcastle Council's Local Strategic Planning Statement (LSPS) is the community strategic plan for the City. The plan identifies the community's main priorities and aspirations for the future and to plan an approach to achieve these goals.

The LSPS notes that the City is going through a time of unprecedented growth and change, and the transformation in Newcastle is inevitable. The LSPS considers how Council's strategic and local centres and communities can support the population which is expected to reach more than 200,000 people by 2040.

The LSPS envisages an integrated and accessible transport network, making it easy, safe and convenient for the community to access jobs, education, services, recreation and entertainment facilities. The need for private car ownership and use has declined as people choose to:

- walk or cycle on the network of footpaths and separated cycleways;
- use light rail that has been extended to Broadmeadow Sports & Entertainment Precinct, John Hunter Health & Innovation Precinct, and University of Newcastle at Callaghan;
- use rapid bus transit network linking Catalyst Areas and strategic centres across the Greater Newcastle Metropolitan Area, including the Newcastle Airport, and
- use shared electric vehicles, on-demand autonomous buses and ride share services

These networks will allow people to move around Newcastle, or get to jobs or educational facilities across Greater Newcastle. The vision is for residents to live where there is a mix of housing, jobs and transport options, by making areas around strategic centres become places where people can live and work within a short walk of transport, with plenty of nearby shops, cafés, community hubs and well-designed open spaces.

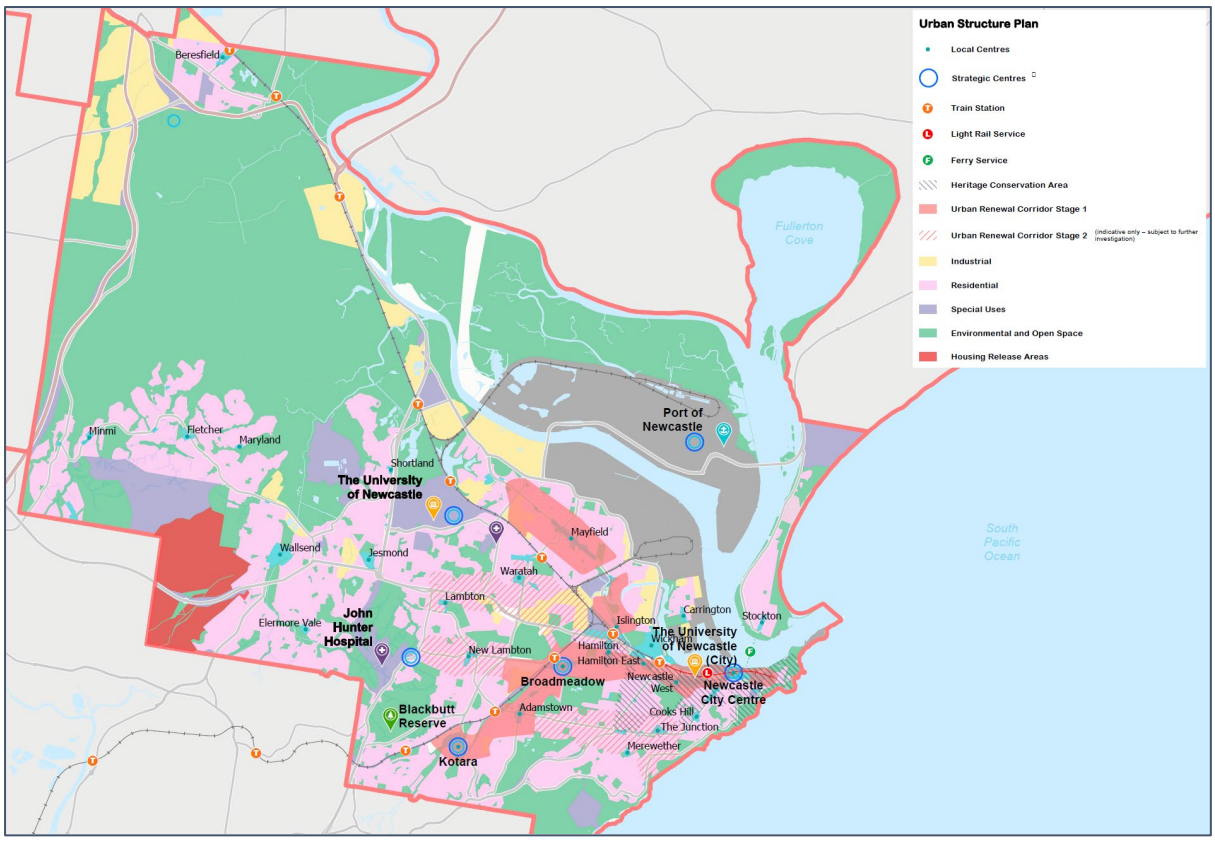


Figure 2.12 – Structure Plan (Source: Newcastle Council Local Strategic Planning Statement 2040)

The Greater Newcastle Metropolitan Plan 2036 identifies "Catalyst Areas" as places of metropolitan significance where substantial growth and change will occur to deliver new jobs and homes. There are seven Catalyst Areas within the boundaries of the Newcastle LGA, including the Newcastle City Centre.

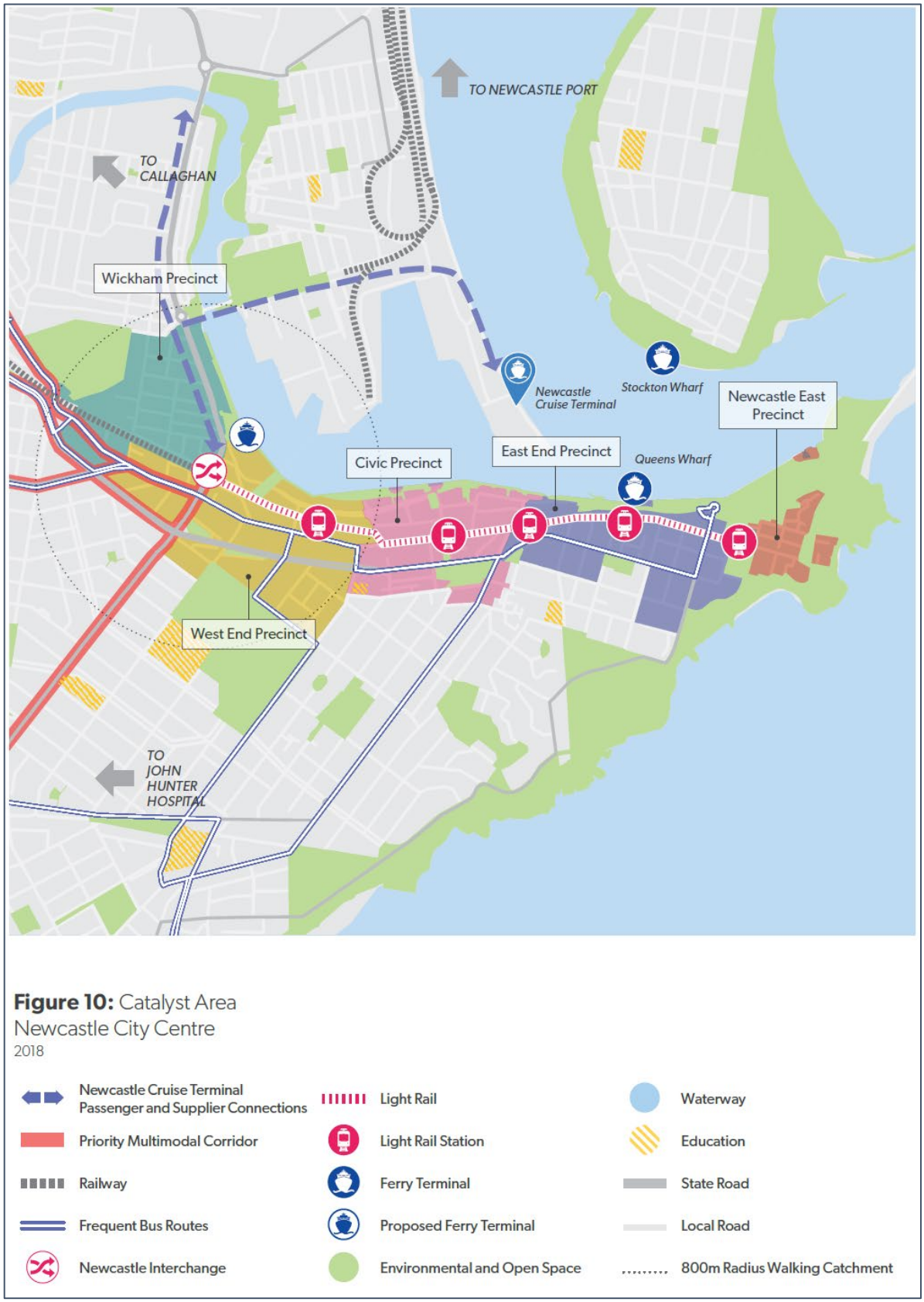


Figure 2.13 – Newcastle City Centre Catalyst Area (Source: Newcastle Council LSPS 2040)

2.5 Hunter Street Mall Precinct

The site lies within the Hunter Street Mall Precinct, as defined in Council's NDCP 2012, Section 6.01, Newcastle City Centre, and indicated in the plan extract below.

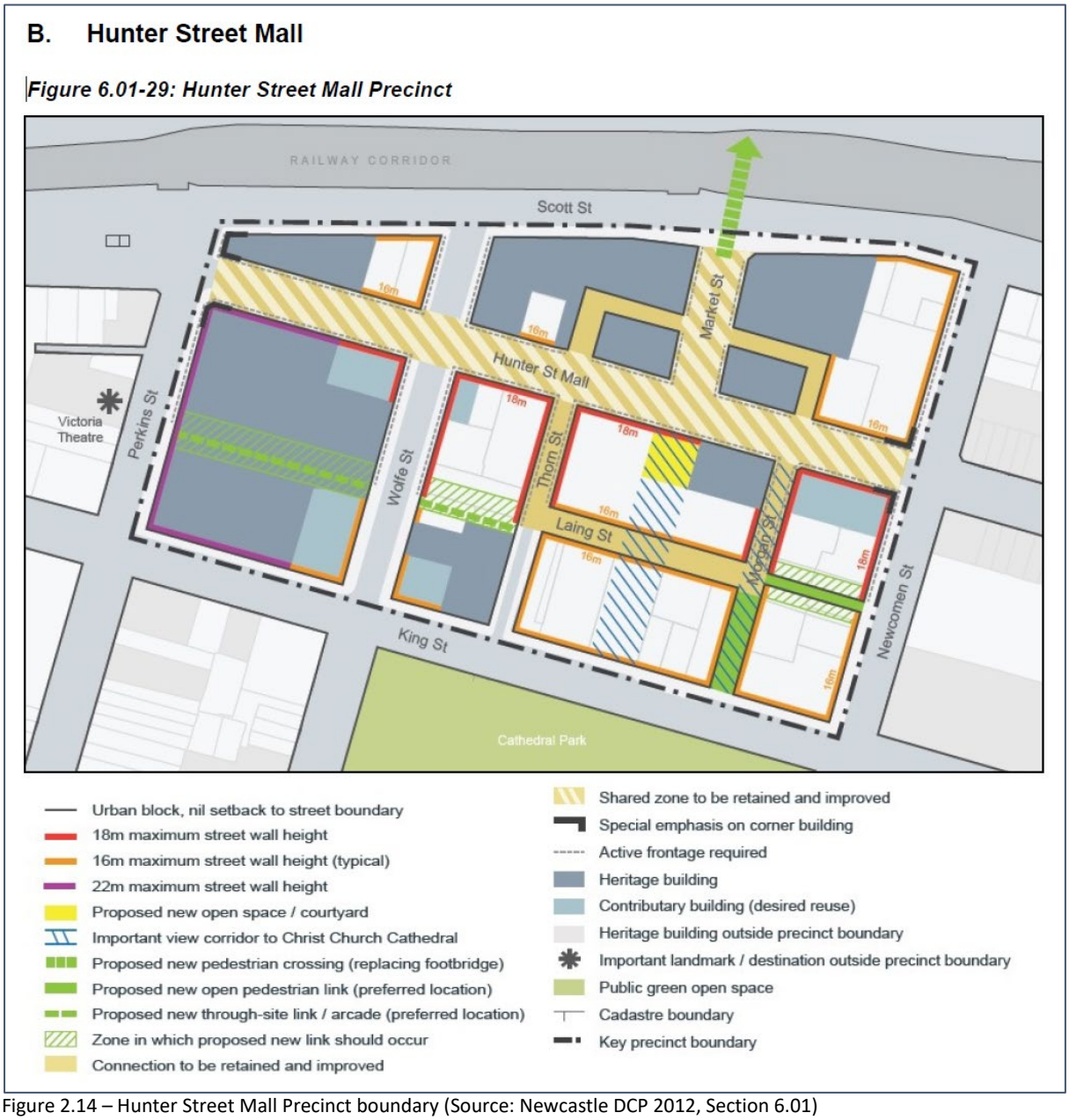


Figure 2.14 – Hunter Street Mall Precinct boundary (Source: Newcastle DCP 2012, Section 6.01)

The existing Hunter Street Mall precinct contains a mix of uses and building types. In its centre is the Iris Capital city rejuvenation development (between Perkins and Newcomen Streets), a shared street for pedestrians and vehicles and is a popular destination for a variety of activities including specialty retail, dining, entertainment, nightlife and events. The precinct is rich in cultural heritage with views of Christ Church Cathedral. Access to the foreshore has improved significantly in recent years.

This precinct is developing as a boutique pedestrian-scaled main street shopping, leisure, retail and residential destination. Infill development is encouraged that promotes activity on the street and which responds to heritage items and contributory buildings. Views to and from Christ Church Cathedral and the foreshore are retained and enhanced.

The desired future of the Hunter Street public domain is provided in the East End Stage One Streetscape Plan, prepared by Aspect Studios on behalf of Newcastle City Council (5 March 2018). Extracts from the plan have been reproduced below.

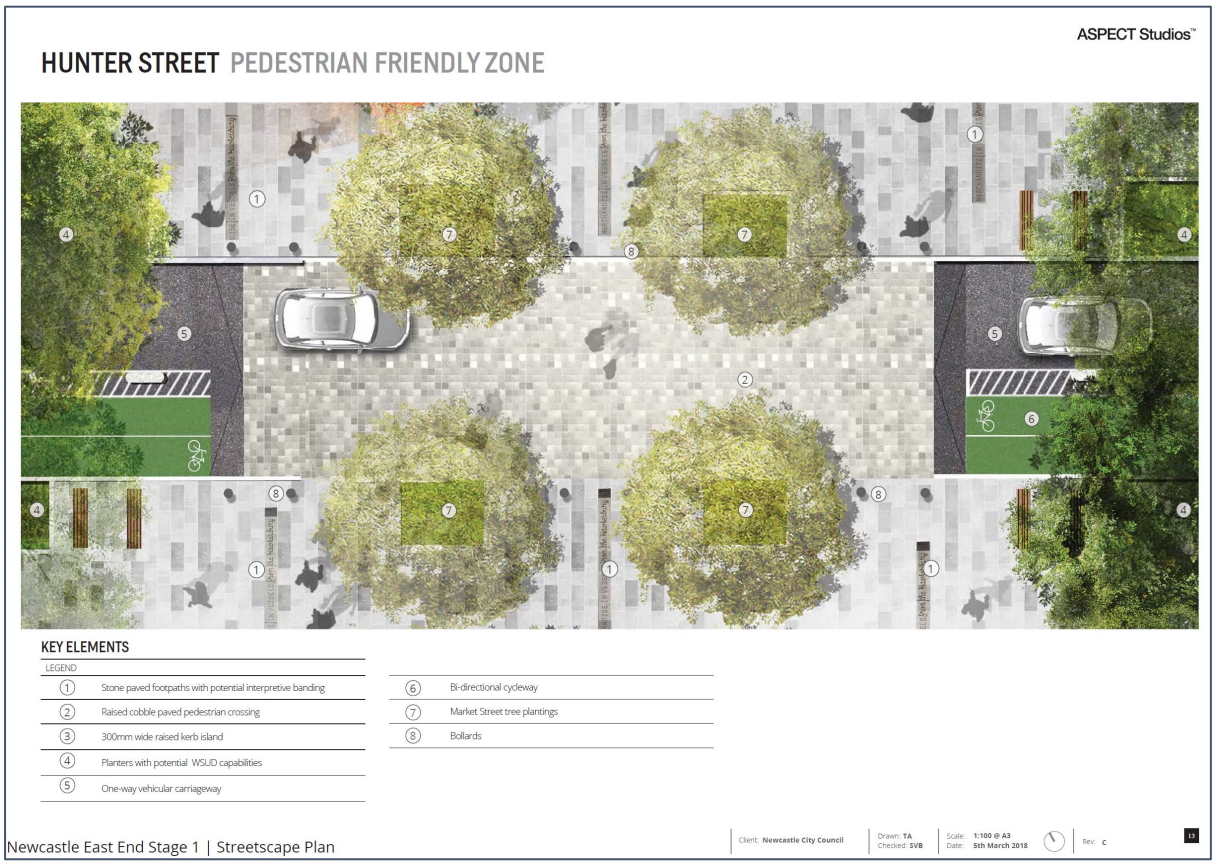


Figure 2.15 – Hunter Street East End streetscape plan (Source: Aspect Studios)

Figure 2.16 – Hunter Street East End streetscape plan (Source: Aspect Studios)

2.6 Road Network

The Transport for NSW (TfNSW) road hierarchy comprises the following road classifications:

- State Roads: Freeways, Motorways and Primary Arterial Roads (TfNSW managed)
- Regional Roads: Secondary or Sub-Arterial (Council managed, partly funded by the State)
- Local Roads: Collector and Local Access Roads (Council managed)

Figure 2.17 – Road Hierarchy (Source: Transport for NSW)

The road hierarchy in the vicinity of the site is shown in the figure above, whilst the key roads are summarised as follows:

- Scott Street and Hunter Street (between Telford Street and Worth Place) are classified as State Roads which provide the key east-west road link through the City Centre. It carries one traffic lane in each direction, along with the Light Rail corridor. Kerbside parking is permitted at selected locations, with turning lanes provided at key intersections.

- Stewart Avenue and Hannell Street form part of the Pacific Highway, which is also classified as a State Road, providing the key north-south road link in the area. It carries two traffic lanes in each direction in the vicinity of the site, with turning lanes provided at key intersections.

- Watt Street, Reserve Road, High Street and Memorial Drive are classified as Regional Roads which provide a key road link along the coast between Merewether, Bar Beach, The Hill and Newcastle East. They typically carry one traffic lane in each direction, with kerbside parking generally permitted.

- Hunter Street is a local road which runs along an east-west alignment through the City Centre, between Pacific Park and Crown Street. It is restricted to one-way westbound traffic flow only, and is highly pedestrianised. It is also subject to Shared Zone restrictions between Newcomen Street and Perkins Street. Kerbside parking is permitted at selected locations, subject to signposted restrictions.

- King Street is a local road which performs the function of an east-west collector route through the City Centre, linking Newcastle Beach to the Pacific Highway. It carries one traffic lane in each direction, with kerbside parking generally permitted.

- Newcomen Street, Thorn Street, Laing Street and Morgan Street are also local roads which provide vehicular and pedestrian access to frontage properties. Kerbside parking is generally permitted, subject to signposted restrictions.

2.7 Existing Surrounding Traffic Controls

The existing traffic controls in the vicinity of the site comprise:

- Traffic Signals at the Scott Streets & Newcomen Street intersection, with pedestrian crossings on all approaches
- Signalised Pedestrian Crossing on Scott Street, outside the Market Street north/south corridor
- Raised and At-Grade Pedestrian Crossings located at regular intervals throughout the City Centre
- Give Way restrictions in Thorn Street and Newcomen Street, where they intersect with King Street
- a One-Way northbound restriction in Thorn Street, between Laing Street & Hunter Street
- a One-Way southbound restriction in Morgan Street, between Hunter Street & Laing Street
- a 10 km/h Shared Zone Speed Limit along Hunter Street, between Newcomen Street & Perkins Street
- a 40km/h speed limit elsewhere throughout the City Centre.

2.8 Existing Surrounding Parking Restrictions

The existing parking restrictions in the vicinity of the site comprise:

- 2 Hour Ticket Parking restrictions along King Street, Thorn Street and Newcomen Street
- ½ Hour Parking restrictions along Hunter Street
- 1 Hour Ticket Parking restrictions along the eastern side of Morgan Street
- Loading Zones located along Laing Street
- a Loading Zone located along the eastern side of Morgan Street
- Bus Zones located along both sides of King Street

2.9 Parking Occupancy Survey

As noted in the foregoing, DCP 2023 adopts a new approach to parking in the Newcastle CBD, moving from prescribing minimum parking rates for residential visitors to a merits-based assessment approach. To assist with the merits-based assessment, CN requested that a parking occupancy survey should be undertaken to support the proposed parking provision and allocation, as follows:

- *Parking survey to be generally based within a 400m radius of the site and identify both short and long term parking vacancies both on-street and within existing off-street public car parks*
- *Survey to be undertaken on a typical Thursday 8.00am to 8.00 pm and a Saturday 8.00am to 1.00 pm with 1 hour increments*

The scope and terms of the survey were agreed between CJP and CN prior to those works being undertaken at the applicant's cost.

Accordingly, CJP engaged independent survey contractor, Trans Traffic Survey, to undertake parking occupancy surveys on Thursday 27 July and Saturday 29 July, 2023. A map of the surveyed area is reproduced below, with the results indicating there is an extensive amount of public parking remaining available within walking distance of the site, both on-street and within off-street public parking areas.

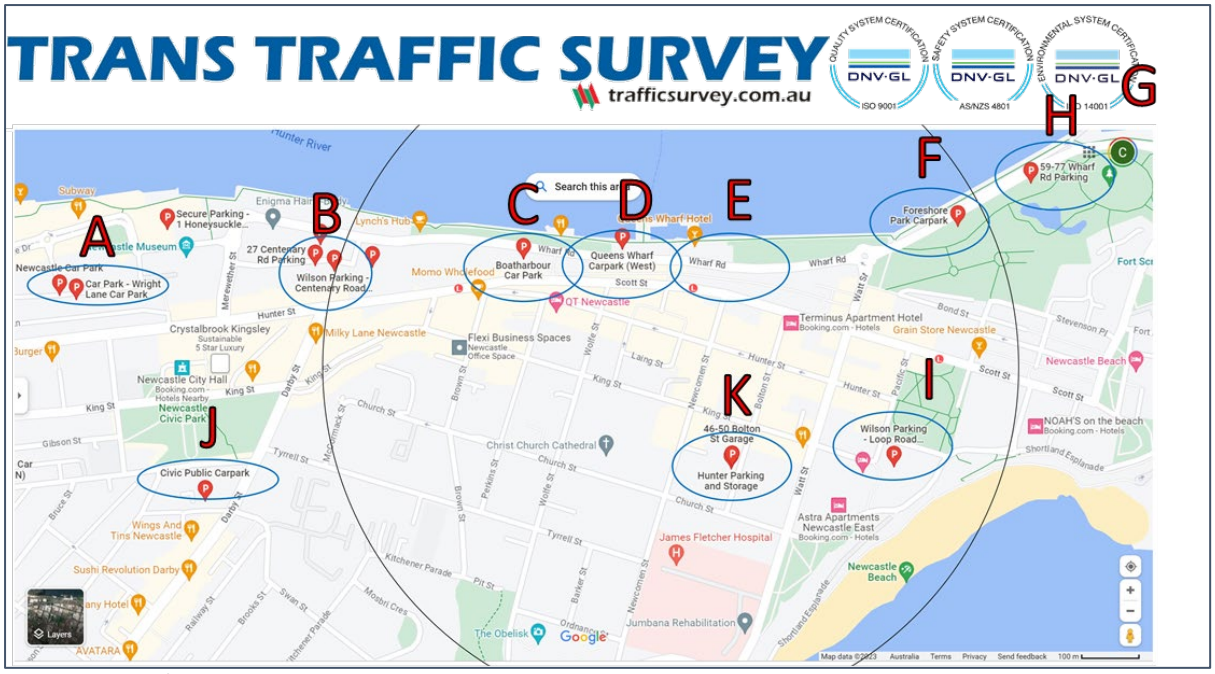
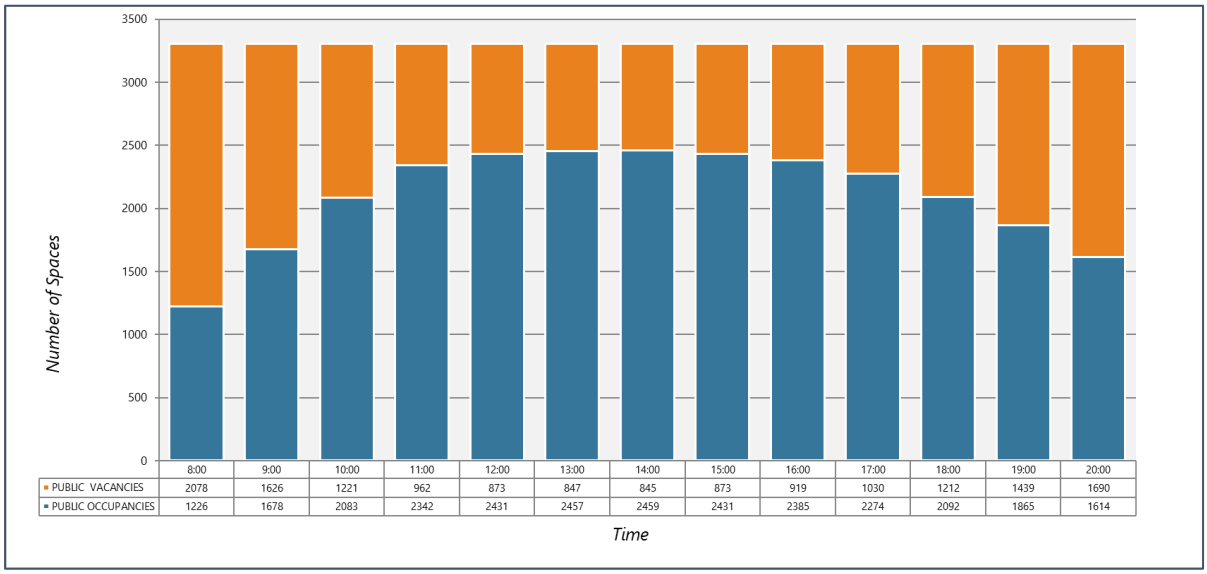


Figure 2.18 – Parking occupancy survey area

In summary, there are approximately 3304 publicly accessible car parking spaces available within the survey area, comprising 2007 on-street spaces and 1297 off-street spaces within parking stations. Assessing the survey area as a whole, the following results are noted and summarised in the graphs on the following page:

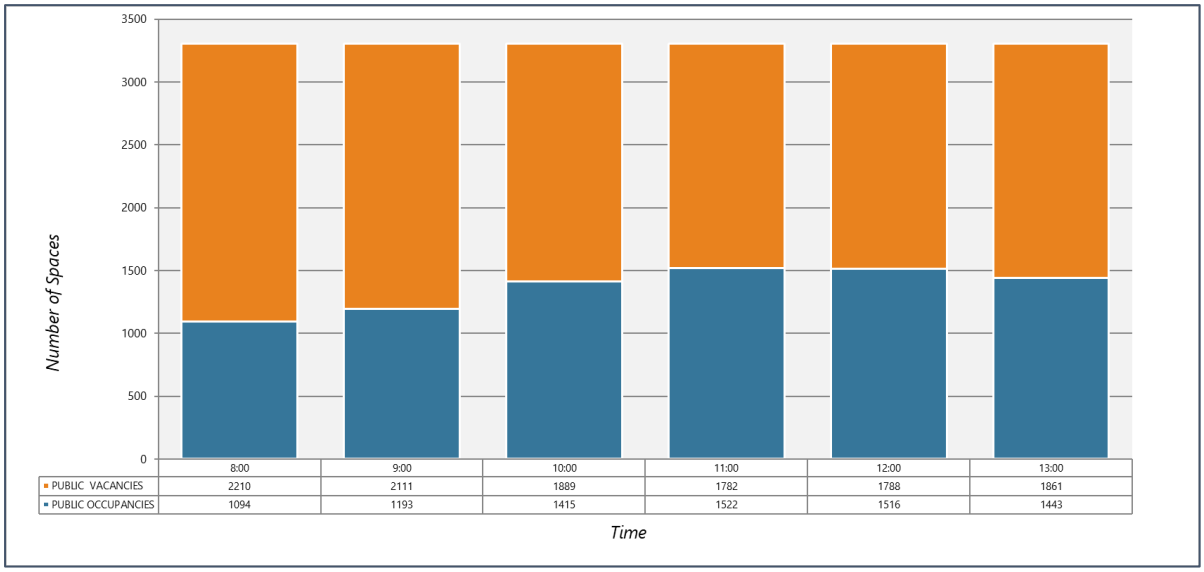
- the Thursday peak period occurred at 2pm (however was fairly consistent between 12 noon and 4pm) when there were 2459 parked cars recorded – i.e. 845 parking spaces remained available

- the Saturday peak period occurred at 11am (however was fairly consistent between 10am and 1pm) when there were 1522 parked cars recorded – i.e. 1782 parking spaces remained available



	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00
PUBLIC VACANCIES	2078	1626	1221	962	873	847	845	873	919	1030	1212	1439	1690
PUBLIC OCCUPANCIES	1226	1678	2083	2342	2431	2457	2459	2431	2385	2274	2092	1865	1614

Figure 2.19 – Parking occupancy survey results across entire survey area – Thursday



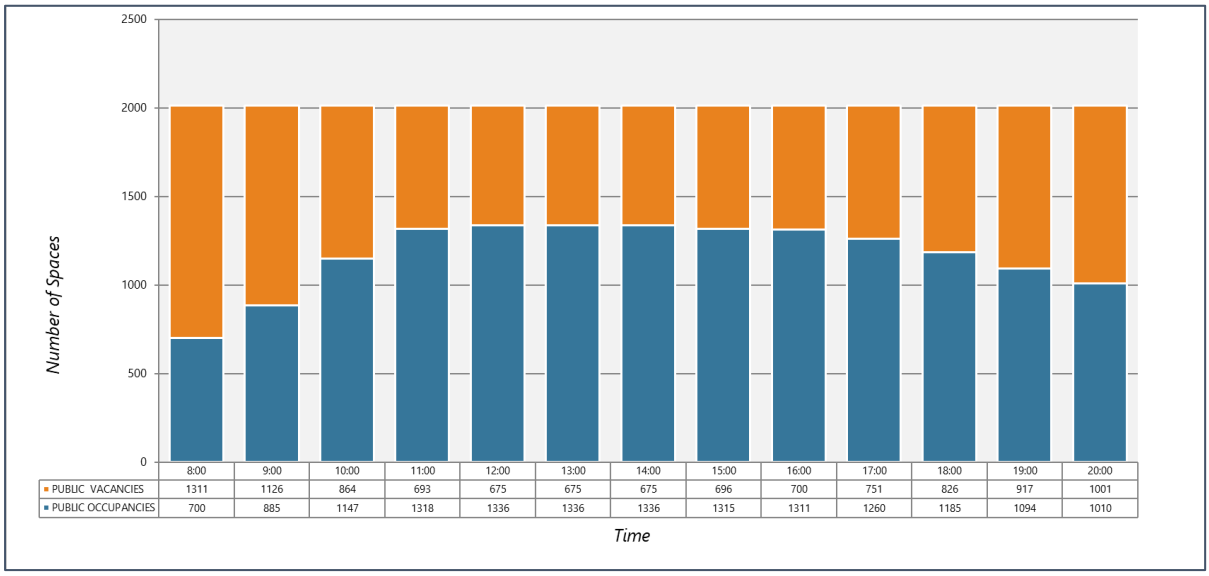
	8:00	9:00	10:00	11:00	12:00	13:00
PUBLIC VACANCIES	2210	2111	1889	1782	1788	1861
PUBLIC OCCUPANCIES	1094	1193	1415	1522	1516	1443

Figure 2.20 – Parking occupancy survey results across entire survey area – Saturday

Notwithstanding, assessing the survey area based on on-street parking areas only, the following results are noted and summarised in the graphs on the following page:

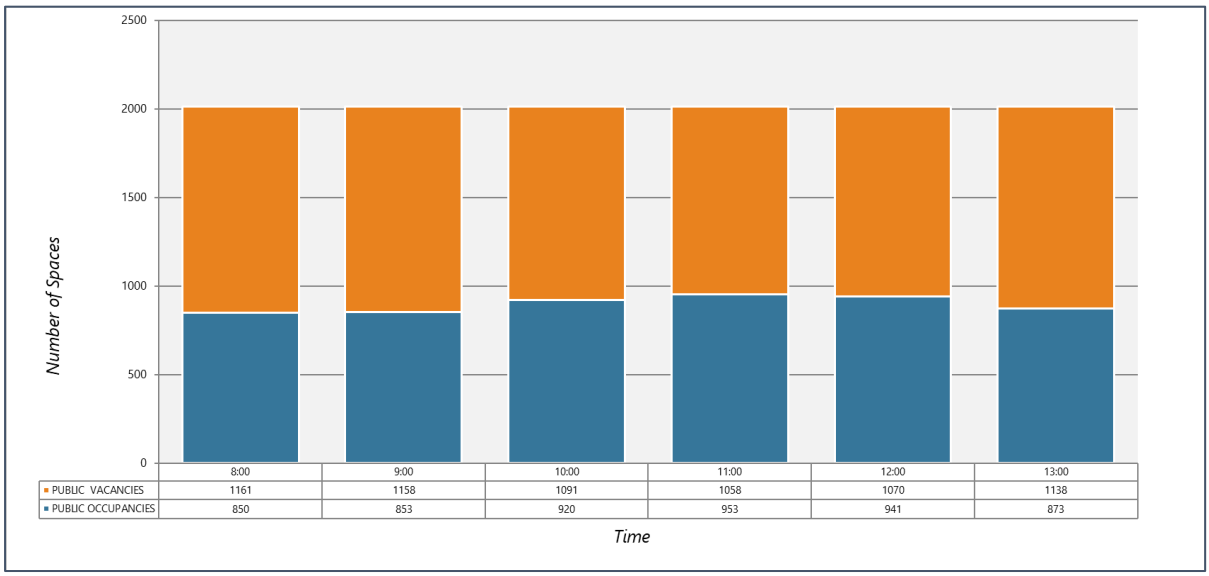
- the Thursday on-street peak period occurred between 12 noon and 2pm (however was again fairly consistent between 11am and 4pm) when there were 1336 parked cars recorded – i.e. 675 on-street parking spaces remained available

- the Saturday on-street peak period occurred at 11am (however was fairly consistent between 10am and 12 noon) when there were 953 parked cars recorded – i.e. 1058 parking spaces remained available



	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00
PUBLIC VACANCIES	1311	1126	864	693	675	675	675	696	700	751	826	917	1001
PUBLIC OCCUPANCIES	700	885	1147	1318	1336	1336	1336	1315	1311	1260	1185	1094	1010

Figure 2.21 – On-Street parking occupancy survey results across entire survey area – Thursday



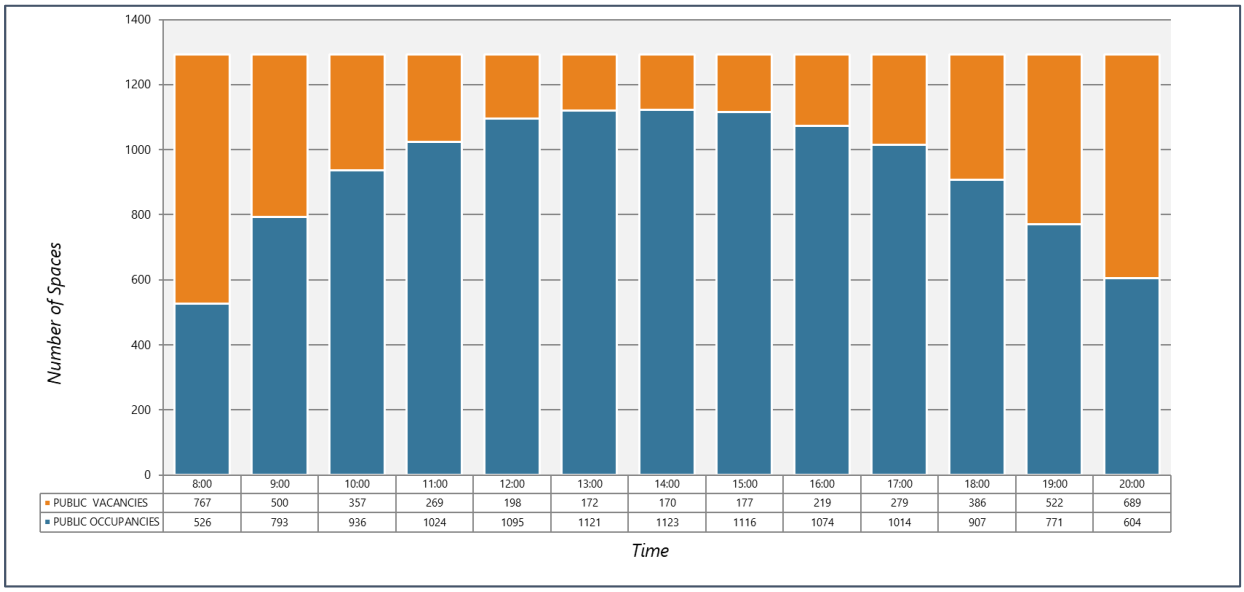
	8:00	9:00	10:00	11:00	12:00	13:00
PUBLIC VACANCIES	1161	1158	1091	1058	1070	1138
PUBLIC OCCUPANCIES	850	853	920	953	941	873

Figure 2.22 – On-Street parking occupancy survey results across entire survey area – Saturday

Furthermore, assessing the survey area based on <u>off-street public parking areas only</u>, the following results are noted and summarised in the graphs on the following page:

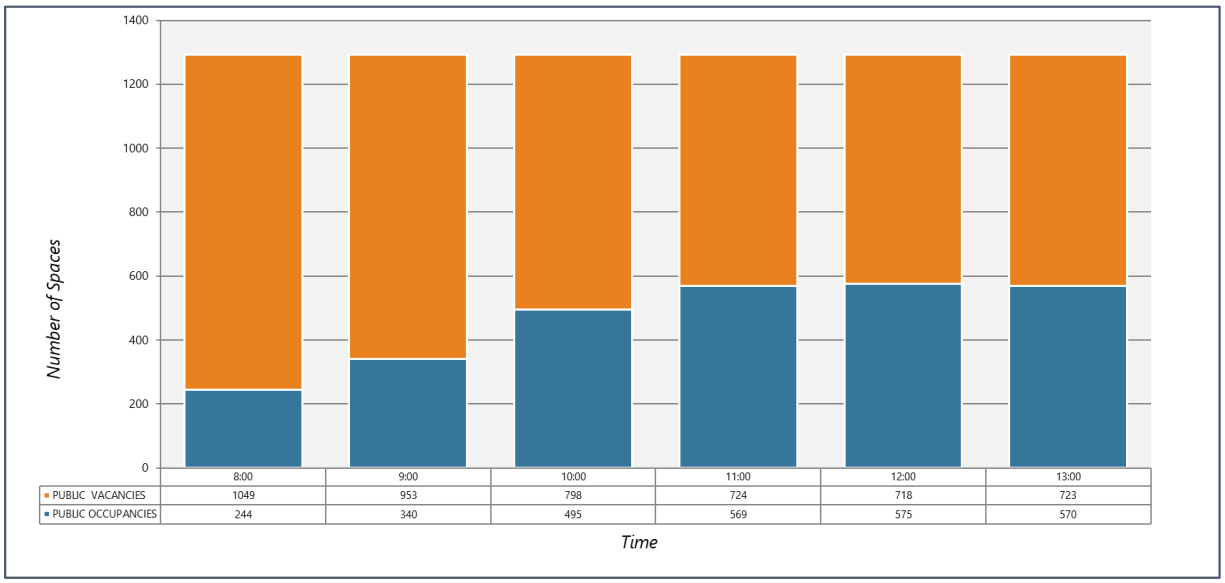
- the Thursday off-street peak period occurred at 2pm (however was again fairly consistent between 12 noon and 4pm) when there were 1123 parked cars recorded – i.e. 170 off-street parking spaces remained available

- the Saturday on-street peak period occurred at 12 noon (however was fairly consistent between 11am and 1pm) when there were 575 parked cars recorded – i.e. 718 off-street parking spaces remained available



	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00
PUBLIC VACANCIES	767	500	357	269	198	172	170	177	219	279	386	522	689
PUBLIC OCCUPANCIES	526	793	936	1024	1095	1121	1123	1116	1074	1014	907	771	604

Figure 2.23 – Off-Street parking occupancy survey results across entire survey area – Thursday



	8:00	9:00	10:00	11:00	12:00	13:00
PUBLIC VACANCIES	1049	953	798	724	718	723
PUBLIC OCCUPANCIES	244	340	495	569	575	570

Figure 2.24 – Off-Street parking occupancy survey results across entire survey area – Saturday

The parking occupancy survey results confirm that there is an extensive amount of parking remaining available for visitors within walking distance of the development, even during peak periods, should they be unable to source an on-site visitor space.

3. Approved Concept DA2017/00701

3.1 Development Description

In January 2018, the Hunter and Central Coast Planning Panel granted consent for a Concept Development Application (DA2017/00701) across the entire site, being Stages 1, 2, 3 & 4, as follows:

> *"Concept Development Application for a major redevelopment of Hunter Street Mall, a mixed use development comprising retail, commercial, public spaces, residential (563 apartments), associated car parking & site works".*

The Concept DA was approved to be delivered across several stages, with new development applications submitted for each respective stage. In this regard, the Stage 1 DA was approved concurrently with the Concept DA in January 2018.

There has also been a number of s4.55 modification applications approved for the Concept DA, the Stage 1 DA as well as the Stage 2 DA.

In November 2020, Council approved modification application DA2017/00701.03, as follows:

> *"Development Application for a concept proposal of major redevelopment of Hunter Street Mall, a mixed use development comprising retail, hotel & motel accommodation, serviced apartments and commercial, public spaces, residential (566 apartments), associated car parking & site works".*

A concurrent section 4.55(2) modification has been progressed with CN to amend the Concept DA (D/2017/00701) to align with this Detailed DA. The section 4.55(2) modification was approved by the Hunter and Central Coast Planning Panel (the Planning Panel) on the 28 October 2024 via a section 8.2 review process. The Planning Panel's key reasons for the decision are summarised as (referenced from the Final Determination and Statement of Reasons, dated 28 October 2024):

"The Review Panel is satisfied that the modified Concept Approval is substantially the same development as the originally approved Concept Approval.

While the proposed building envelopes for Building 3 (West), 3 (South) and 4 (South) exceed NLEP 2012 height controls the Panel is satisfied that the proposed increased heights area reasonable and can be supported.

The modification facilitates the delivery of a significantly enhanced public domain outcome including opening the visual link between Newcastle Harbour and the Cathedral as envisaged by Newcastle DCP 2012, as well as reconfigured Market Square.

The Panel considers the additional impacts on the identified public and private views are reasonable when balanced against the considerable public benefits arising from the new built form envelope massing across Stage 3 and 4 of the development site.

The proposal is fully compliant in terms of providing resident parking for every proposed apartment and the shortfall in commercial parking is attributable to Stages 1 and 3 which are either constructed or under construction. The panel further notes that DCP 2023 adopts a new approach to parking in the Newcastle CBD, moving from prescribing minimum parking rates to a merits-based assessment approach with maximum parking rates to promote sustainable transport choices and increased use of public transport.

The proposed concept development as modified remains consistent with the objectives for the Newcastle City Centre in clause 7.1 of the NLEP 2012 and relevant provisions of DCP 2012 as it will facilitate the revitalisation of the East End Precinct and the Newcastle City Centre more generally, contributing to employment, other economic growth opportunities and much needed housing stock. The Panel therefore considers that approval of the review application is consistent with the objectives of the Environmental Planning and Assessment Act 1979, and in the public interest.

In summary, the Review Panel formed the view that the modification was in the public interest and worthy of support. This Detailed DA is aligned with the approved Concept Plan (as modified)".

3.2 Parking Arrangements

Consent condition 18 of RE2024/00002 (reviewing MA2023/00175 to modify DA2017/00701) specifies that on-site car parking is to be provided for a minimum of 735 vehicles across the four stages of the development. Furthermore, consent condition 19 specifies that the number of car parking spaces shall be provided within each stage in accordance with the requirements of section 7.03 of Newcastle DCP 2012 or the applicable standard at the date of DA lodgement for each stage. This includes:

a) 100% of car spaces required for residents are to be provided on site

b) a minimum of 25% of the required number of residential visitor parking spaces shall be provided for residential visitor parking. These spaces are not to be subdivided, leased or controlled by or on behalf of particular unit owners or residents. Spaces cannot be allocated or deferred to different Blocks/stages unless there is a specific condition that allows this and has formed part of a separate development consent. The remaining 75% is to be accommodated both on-street in existing time restricted parking spaces and off-street in publicly available car parking.

c) Stages 1 to 4 of the development shall each provide on-site car parking for commercial and retail staff and their patrons as follows:

Stage 1:	*26 spaces*
Stage 2:	*10 spaces*
Stage 3:	*42 spaces (comprising 10 spaces for Stage 1; 11 spaces for Stage 2; 17 spaces for Stage 3; and 4 spaces for Stage 4)*
Stage 4:	*5 spaces*

The remaining parking being accommodated both on-street in existing time restricted parking spaces and off-street in publicly available car parking.

d) 42 car parking spaces are to be provided for the hotel located within Stage 1 of the development, comprising 34 guest and 8 staff spaces which may otherwise be reduced if justified or approved through a separate development consent or modification after a minimum of two (2) years operations.

e) *An additional 5 hotel parking spaces and 11 residential visitor parking spaces from Stage 1 are to be included in Stage 3, in addition to compliance with Section 7.03 of Newcastle Development Control Plan 2012 (NDCP 2012) or the applicable standard at the date of lodgement of the application for this stage.*

In addition, and as per Condition 20A of the Concept Approval, 26 at-grade visitor bicycle parking spaces will be provided within Stages 3 & 4 near key access points to the development, and in locations with good passive surveillance.

3.3 Loading & Servicing Facilities

Consent condition 26 of RE2024/00002 specifies *"that waste servicing for Blocks 1-4 shall be undertaken on site, where new buildings are proposed, unless it can be demonstrated that on-street arrangements are acceptable to the consent authority and will not conflict with vehicular/pedestrian movements and availability of on-street parking. Details of the location and configuration of waste servicing and storage areas shall accompany a DA for each respective stage".*

3.4 Vehicular Access

The Concept DA included a number of indicative vehicular access points off the existing road network to the service the respective on-site car parking and loading areas.

4. Design Competition

4.1 Development Description

In mid-2022, a design competition was conducted for Stages 3 & 4 involving four entrants, with the winning design completed by a joint venture between architectural firms, SJB, DBJ & Curious Practice. Key characteristics of the winning scheme are provided in the table below.

Table 4.1 – Stages 3 & 4 Design Competition Winning Scheme Development Schedule		
Land Use	**Stage 3**	**Stage 4**
Residential	17 x 1 bedroom apartment 76 x 2 bedroom apartments 2 x 3 bedroom apartments 95 dwellings total	24 x 1 bedroom apartment 95 x 2 bedroom apartments 13 x 3 bedroom apartments 132 dwellings total
Commercial/retail	666m^2	540m^2

The competition took place over a period of 6 weeks, such that all designs were high level and inevitably required further design development. The 6 Design Integrity Panel Meetings that followed worked on the winning competition scheme to advance the design further, which is effectively now the subject of this DA.

4.2 Parking Arrangements

Off-street parking in the winning design competition scheme was provided for 286 car spaces across respective three-level car parks, comprising 157 spaces in Stage 3 and 129 spaces in Stage 4, all in accordance with DCP requirements and the design competition brief.

Table 4.2 – Stages 3 & 4 Design Competition Winning Scheme Parking Provision		
Land Use	**Stage 3**	**Stage 4**
Basement level 3	37 spaces	-
Basement level 2	60 spaces	-
Basement level 1	60 spaces	-
Ground (Hunter St)	-	60 spaces
Level 1	-	31 spaces
Level 2	-	38 spaces
Total	**157 spaces**	**129 spaces**

4.3 Loading & Servicing Facilities

The design competition brief stipulated that waste collection areas were to be accommodated wholly on-site, within dedicated loading bays. Loading bay designs were required to accommodate forward-in/forward-out movements, with the use of mechanical turntables permitted. In particular, vehicle access for collection and loading was required to be designed to accommodate a 12.5m long HRV truck with an overhead clearance requirement of 4.5m. In this regard, the winning Stage 3 design included a dedicated on-site loading bay located in the south-eastern corner of Building 3 East's ground floor level (Hunter Street). The winning Stage 4 design included a dedicated on-site loading bay located in the north-eastern corner of Building 4 South's ground floor level (Hunter Street).

4.4 Vehicular Access

Vehicular access to the site in the design competition scheme was provided via three separate driveways. These consisted of a two-way driveway located towards the southern end of the Thorn Street site frontage which accessed the Stage 3 basement car park, a service driveway located at the eastern end of the Laing Street site frontage which accessed the Stage 3 loading bay, and a two-way driveway located at the southern end of the Morgan Street (Lower) site frontage which accessed the Stage 4 car park and loading bay.

No vehicular access was proposed off the King Street, Newcomen Street, Morgan Street or Hunter Street site frontages.

The design competition scheme allowed all vehicles to enter and exit the site in a forward direction at all times.

5. Proposed Development DA2023/00419

5.1 Development Description

Building upon the design competition scheme, including six (6) Design Integrity Panel meetings following selection of the winner, and the recent approval of MA2023/00175 (RE2024/00002), the proposed Stages 3 & 4 DA scheme involves the construction of a new mixed use development across the two sites. Key characteristics of the proposed DA scheme are provided in the table below.

Table 5.1 – Stages 3 & 4 Proposed DA Scheme Development Schedule

Land Use	Stage 3	Stage 4
Residential	15 x 1 bedroom apartments 64 x 2 bedroom apartments 11 x 3 bedroom apartments* 90 dwellings total	9 x 1 bedroom apartment 80 x 2 bedroom apartments 16 x 3 bedroom apartments* 105 dwellings total
Commercial/retail	981m^2	609m^2

* 3 bedroom apartments include penthouse apartments

5.2 Parking Arrangements

Off-street parking across all four stages is proposed to be provided for a total of 735 car spaces, as set out in the table below.

Table 5.2 – Stages 3 & 4 Proposed DA Overall Parking Provision

Stage	Land Use	No. of Parking Spaces
Stage 1	Hotel	42 spaces (38 guest & 8 staff)
	Residential	178 spaces (inc. 18 accessible)
	Comm/Retail	26 spaces
Sub-total		273 spaces
Stage 2	Residential	138 spaces (inc. 14 accessible)
	Comm/Retail	10 spaces
	176 Hunter St	3 spaces
	Visitors	7 spaces
Sub-total		158 spaces
Stage 3	Car wash	1 space
	Residential common property EV	2 spaces
	Residential	101 spaces (inc. 14 accessible & 10 EV)
	Visitors	6 spaces
	Comm/Retail	17 spaces
	Comm/Retail from Stage 1	10 spaces
	Comm/Retail from Stage 2	11 spaces
	Visitors from Stage 1	11 spaces
	Hotel from Stage 1	5 spaces
	Comm/Retail from Stage 4	4 spaces
Sub-total		168 spaces
Stage 4	Car wash	1 space
	Residential common property EV	2 spaces
	Residential	121 spaces (inc. 11 accessible & 10 EV)
	Comm/Retail	5 spaces
	Visitors	7 spaces
Sub-total		136 spaces
Total		**735 spaces (inc. of 21 comm/retail space re-allocation**

Off-street bicycle parking is proposed for 209 spaces, plus private residential storage cages, across all four stages, inclusive of 26 visitor bicycle spaces within Stages 3 & 4. Visitor bicycle parking is required to be provided at-grade near key access points to the development, and in locations with good passive surveillance, as per Condition 20A of the recent Concept Approval.

Off-street motorcycle parking is also proposed for a total of 9 spaces.

5.3 Loading & Servicing Facilities

Consistent with the design competition scheme, the proposed development on Stages 3 & 4 will be serviced by a variety of commercial vehicles up to and including 12.5m long heavy rigid vehicles (HRV), including delivery vans/trucks, removalist trucks and garbage trucks.

The proposed Stage 3 building includes a dedicated on-site loading bay located in the south-eastern corner of Building 3 South's Laing Street ground floor level, whilst the proposed Stage 4 building includes a dedicated on-site loading bay located in the north-eastern corner of Building 4 South's Laing Street ground floor level.

The Stage 3 loading bay has been designed with a drive-through configuration, with service vehicles entering via a new driveway off the Morgan Street site frontage and exiting via a new driveway off the Laing Street site frontage, all in a forward direction. The Stage 3 loading bay has also been designed to allow a 12.5m HRV to stand entirely within the site with the roller doors closed, whilst maintaining sufficient room at the rear of the truck for loading/unloading.

The Stage 4 loading bay, however, includes a large commercial-grade mechanical turntable, thereby allowing the trucks to be able to enter and exit the service area in a forward direction at all times.

A hydrant booster is proposed to be located at the western end of the ground floor level of Stage 3. NSW Fire & Rescue general appliance trucks are approximately 8.8m in length – i.e. a standard MRV. Notwithstanding, specialist appliance trucks – e.g. ladder (aerial) – can be up to 12.5m in length – i.e. a standard HRV. Given the Stage 3 & Stage 4 road network of Morgan, Laing & Thorn Street have been designed to accommodate HRV trucks, there will be no issues with access for emergency vehicles.

5.4 Vehicular Access

Vehicular access to the Stage 3 basement access driveway is proposed to be located towards the southern end of Stage 3's Thorn Street site frontage. Internally, residential and non-residential parking is to be securely separated, whilst penthouse parking is to be further secured in private garages. As noted above, the proposed Stage 3 loading bay is configured with an entry driveway off Morgan Street and an exit driveway off Laing Street.

The Stage 4 access driveway is proposed to be located at the southern end of the Morgan Street (Lower) site frontage, which accesses both the car parking area and the loading bay. Some parking for penthouses will be further serviced in private garages.

The proposed DA scheme allows all vehicles to enter and exit the site in a forward direction at all times.

Again, no vehicular access is proposed off the King Street, Newcomen Street, Morgan Street or Hunter Street site frontages.

5.5 Public Domain – Road Network

Council has provided their 50% public domain plans for the road network surrounding Stages 3 & 4 which are reproduced in Appendix B. They have also mandated the use of a 12.5m long HRV truck to service both Stages 3 & 4. Furthermore, the following is noted with respect to the flow of traffic throughout the Morgan, Laing & Thorn Streets network:

- Morgan Street – one-way southbound between Hunter Street & Laing Street
- Laing Street – one-way westbound between Morgan Street & Thorn Street
- Thorn Street – one-way northbound between Laing Street & Hunter Street, and two-way between King Street & Laing Street

Further, and as requested by CN, CJP has prepared a Road Concept Plan (RCP) which is reproduced in Appendix C and ties in with CN's 50% public domain plans. The RCP, which has been reviewed and is supported by CN, sets out the following:

- Road reserve widths
- Road carriageway widths
- Footpath widths
- Driveway crossover widths
- Kerb radii
- Signage & linemarking
- 12.5m HRV swept turn paths

6. Alternate Transport

6.1 Public Transport

The public transport services available in the Newcastle CBD are shown in the figure below. These include heavy rail, light rail, ferry and buses.

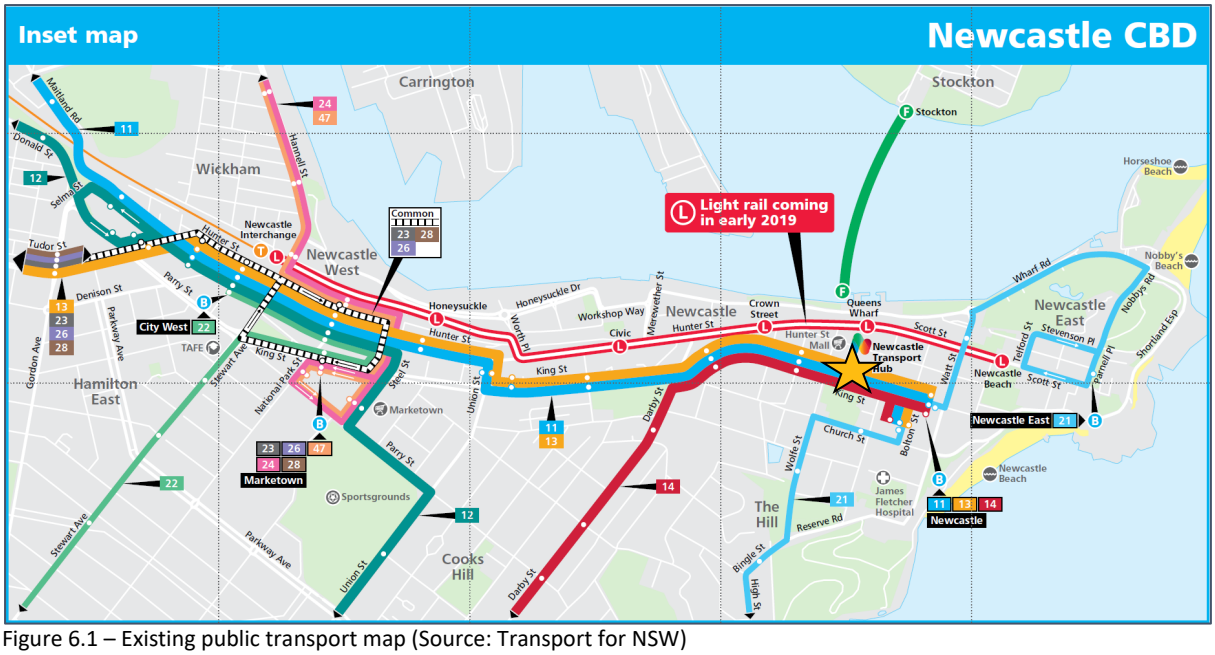


Figure 6.1 – Existing public transport map (Source: Transport for NSW)

The closest bus stops to the site are located on King Street, just east of Perkins Street, a walking distance of approximately 300m west of the site, as indicated in the map below. These bi-directional bus stops are serviced by the 11, 12, 13, 14 & 23 buses, with regular services 7 days per week into and out of the surrounding Newcastle and Hunter area, including Wallsend, Lambton, Swansea Heads, Belmont, Charlestown, Kotara, Glendale, Cardiff and Maryland.

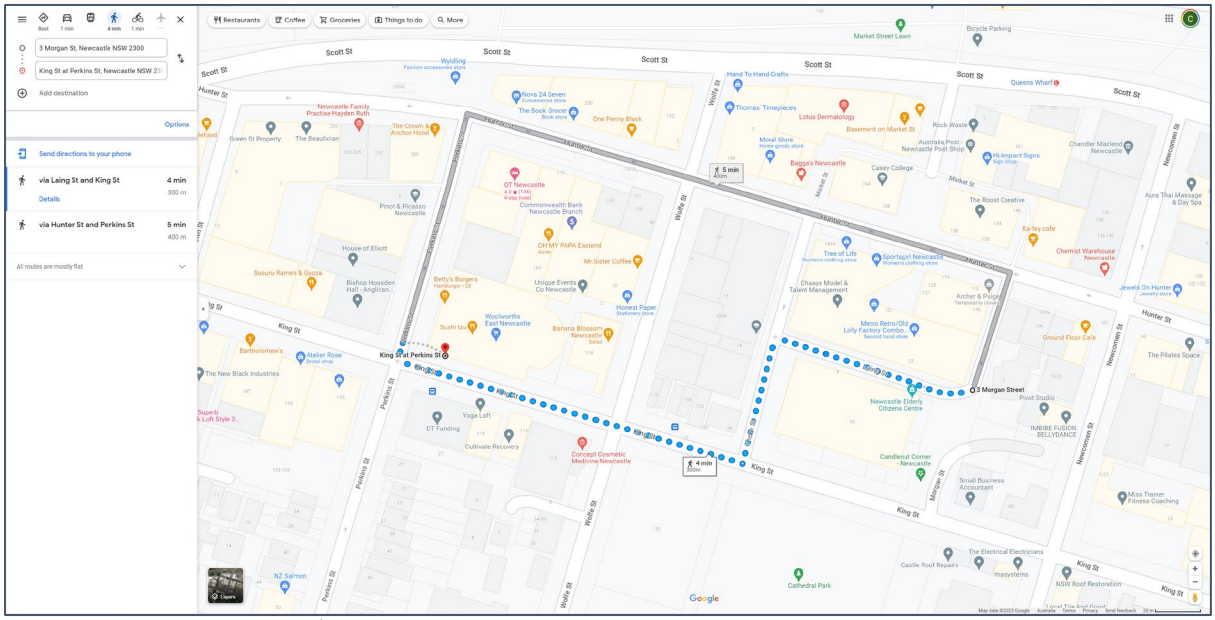


Figure 6.2 – Walking distance to/from nearest bus stop (Source: Google Maps)

Queens Wharf ferry is also located approximately 350m walking distance north of the site, providing regular services to/from Stockton Beach, a short 5 minute trip across the Hunter River. Services operate 7 days per week, every 15 minutes during peak periods and every 20-30 minutes during off-peak periods.

Figure 6.3 – Walking distance to/from Queens Wharf ferry (Source: Google Maps)

Queens Wharf light rail stop is located approximately 220m walking distance north of the site, providing regular services between Newcastle Beach and Newcastle Interchange. Journey time between Queens Wharf and Newcastle Interchange is 9 minutes whilst journey time between Queens Wharf and Newcastle Beach is 3 minutes. Services operate 7 days per week, every 15 minutes during peak periods and every 30 minutes during off-peak periods.

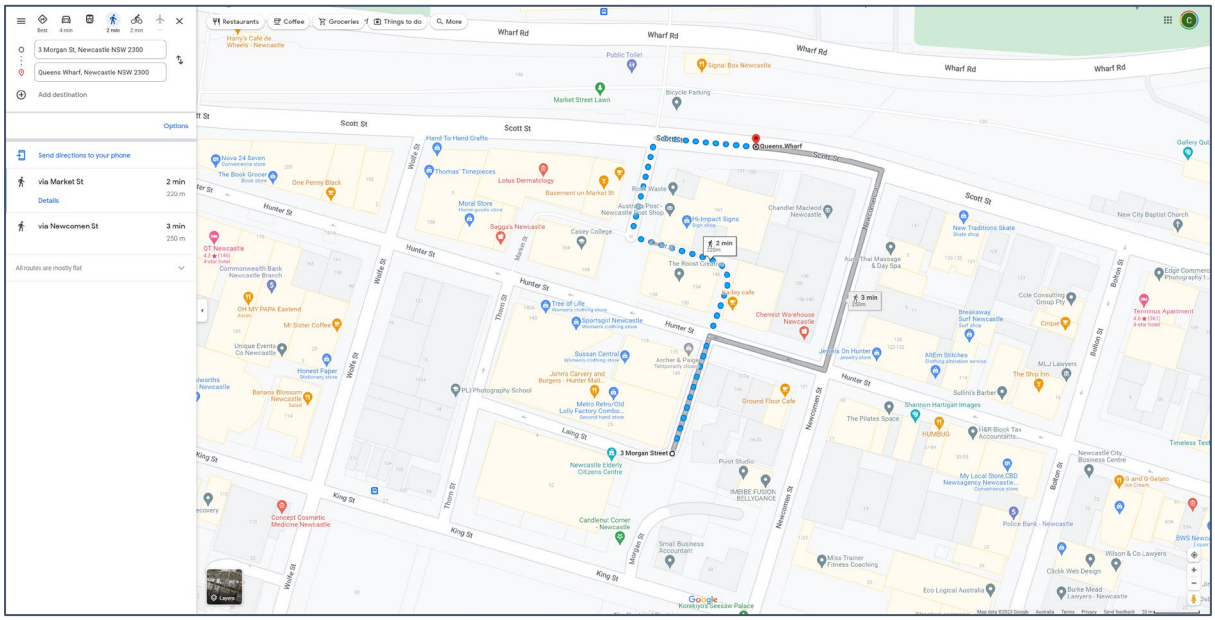


Figure 6.4 – Walking distance to/from Queens Wharf light rail stop (Source: Google Maps)

As noted above, the light rail provides regular services to Newcastle Interchange, which in turn provides hard rail services south into Central as well as north into Scone, Dungong and Mailtland.

Travel time between Newcastle and Gosford is approximately 1hr:14 minutes via express service, whilst between Newcastle and Central is approximately 2hr:37 minutes via express service.

Research suggests that proximity to public transport services influence the travel mode choice for areas within 400m walking distance (approximately 5 minutes) of a bus stop, ferry wharf or light rail stop. As such, the proposed development also has excellent potential for future employees and residents within the development to utilise public transport for their commute to/from work or other key journeys.

6.2 Active Transport

In addition to the public transport services available in the vicinity of the site, there is also a good level of pedestrian connectivity, including safe and convenient footpaths to the abovementioned bus stops, ferry wharf and light rail stop. All existing footpaths in the surrounding area are of good quality, with appropriate widths and pram ramps provided at most intersections.

The existing bicycle network in the vicinity of the site is reproduced in the figure below, which shows there are a number of formal and informal cycle routes throughout the surrounding area, connecting to the greater cycle network. The proposed development also includes end-of-trip facilities.

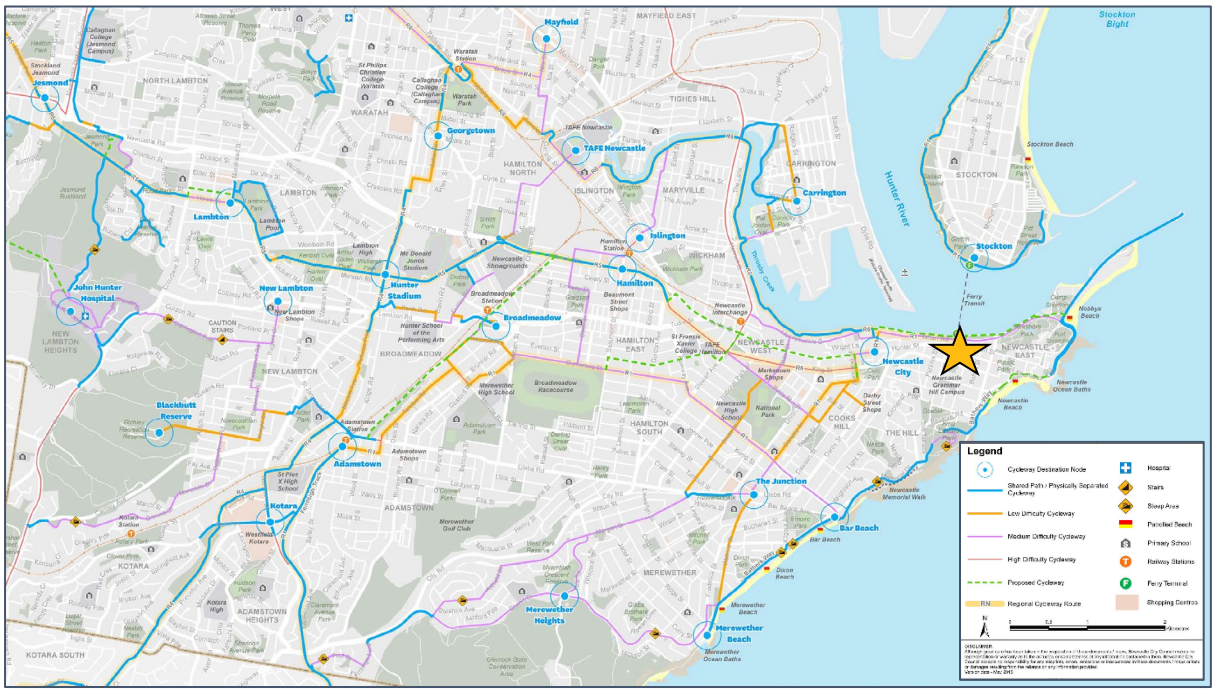


Figure 6.5 – Newcastle cycleway map (Source: Newcastle Council)

The Planning Guidelines for Walking and Cycling identify a number of city-scale design principles that can assist the creation of walkable and cyclable cities and neighbourhoods. These principles emphasise urban renewal and the creation of compact, mixed use, accessible centres around public transport stops. At the neighbourhood scale, design principles can be reinforced through the creation of local and accessible centres and neighbourhoods with connected street patterns and road design which aim to reinforce local walking and cycling networks.

In particular, the Guidelines note that increased population density is an important element in creating a walkable and cyclable city. A compact development brings activities close together, making them more accessible by foot or by bicycle, without the need to use a car. Increased population density also enhances the viability of public transport services.

6.3 Concept Green Travel Plan

As required by Council's consent conditions for the approved Concept DA of the entire East End project, a Green Travel Plan (GTP) is required to be prepared to promote sustainable travel for future residents, visitors, employees and customers of the development. It is pertinent to note in this regard that CN have agreed to providing the GTP prior to the occupation certificates (OC) being issued.

A GTP is a document that provides a package of actions designed to encourage safe, healthy and sustainable travel options. The objectives of a GTP are to remove barriers to active travel for all users of developments, and to maximize the number of people who utilise non-private car modes to and from a development, such as walking, cycling, taxi/ride share and public transport.

A key feature of a GTP includes a Transport Access Guide (TAG), which is a plan/map detailing the location of all public transport services as well as key facilities such as banks, post office, shops and services located within a 5 minute and 10 minute radius (400m & 800m) of the site. A TAG for Stages 3 & 4 is provided below.

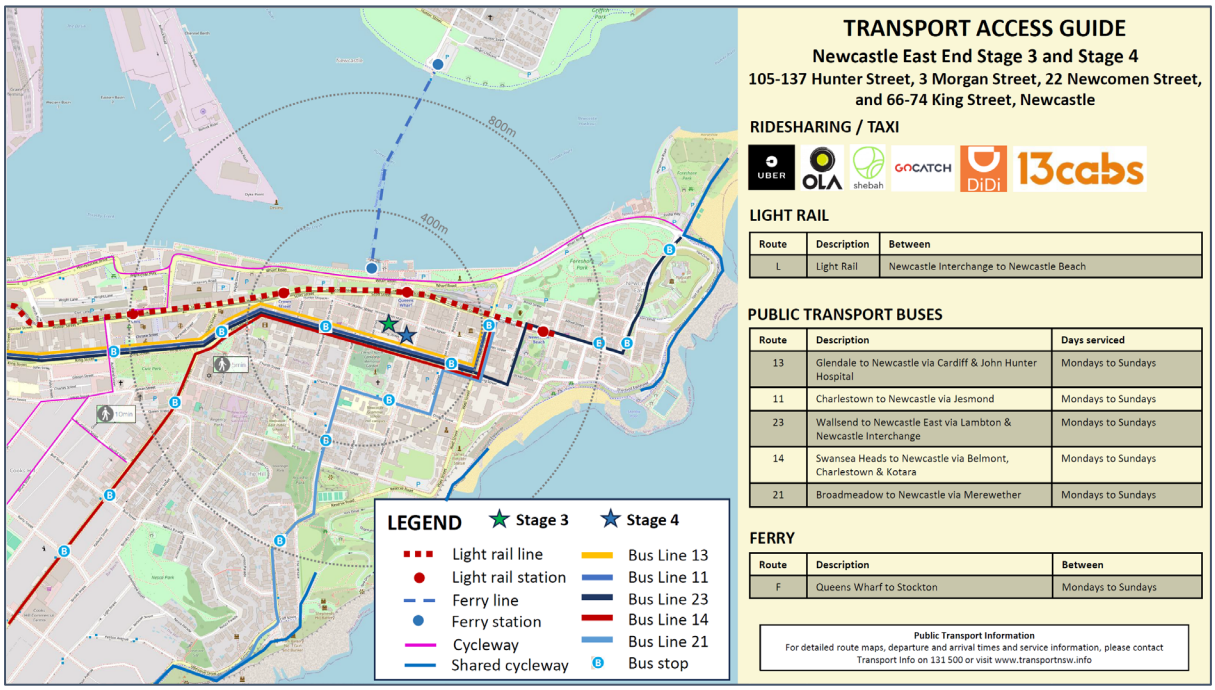


Figure 6.6 – Transport Access Guide (Source: CJP)

As noted in the foregoing, there is an abundance of public transport services available within 400m of the site, including the light rail which provides connections to Newcastle Interchange, all of which a large proportion of future residents, visitors, employees and customers of the development are likely to utilise for their work and/or social trips.

In addition, the City Centre is becoming more and more pedestrian and accessible friendly, which encourages travel by foot/wheelchair. The site is therefore extremely well located to take advantage of these alternate modes of travel.

Furthermore, Newcastle City Centre offers a wide variety of shops, services, restaurants and cafes, including within all four stages of the East End development, which a large proportion of future residents and employees are likely to frequent – e.g. gymnasiums, food & drink premises, pubs, barber shop, bottle shop, McDonalds etc.

Bicycle parking and end-of-trip facilities have also been provided within the development and further shows the commitment of the development to a more sustainable approach to travel.

As per Condition 20A of the Concept Approval, 26 at-grade visitor bicycle parking spaces will be provided within Stages 3 & 4 near key access points to the development, and in locations with good passive surveillance. The indicative locations of the 26 visitor bicycle spaces are provided below.

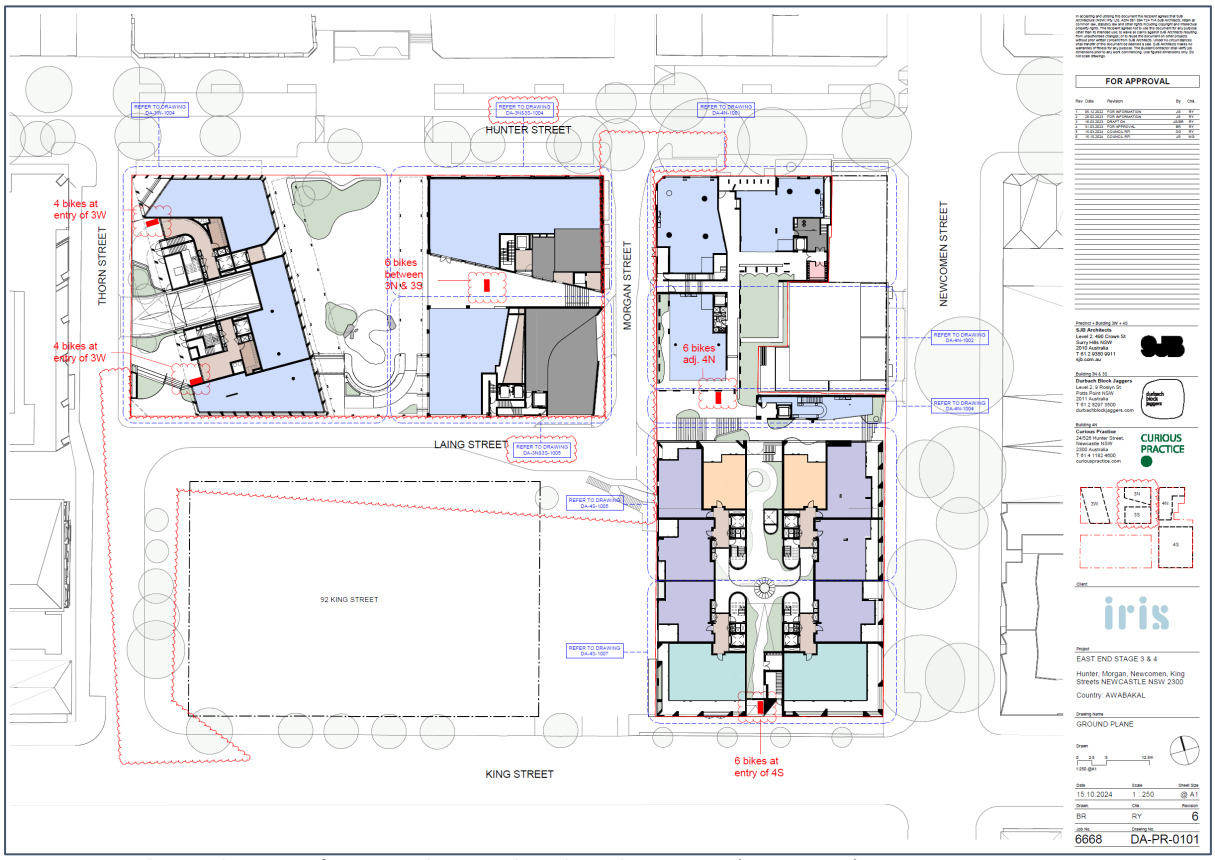


Figure 6.7 – Indicative location of 26 at-grade visitor bicycle parking spaces (Source: SJB)

7. Traffic Impact Assessment

7.1 Traffic Generation Guidelines

The traffic implications of development proposals primarily concern the *nett change* in the traffic generation potential of a site compared to its existing and/or approved uses, and its impact on the operational performance of the surrounding road network, particularly during the road network peak periods.

An indication of the traffic generation potential of the proposed and approved uses on the site is provided by reference to the following documents:

- RMS Guide to Traffic Generating Developments 2002 (RMS Guide)
- RMS Technical Direction 2013/04a (TDT)

7.2 Proposed Development Traffic Generation

In order to compare "apples with apples" with respect to trip generation rates, reference is made to the Transport Impact Assessment (TIA), prepared by GTA Consultants, Issue D, dated 13.06.17.

Based on the trip rates applied in the GTA TIA (which are based on the RMS Guide & TDT trip rates), the proposed development on Stages 3 & 4 within Newcastle East End, has a traffic generation potential of 78 vehicle trips (vph) during the weekday morning peak hour and 98 vph during the weekday afternoon peak hour, as set out in the table below.

Table 7.1 – Proposed Stages 3 & 4 Trip Generation

Land Use	Yield	Weekday AM		Weekday PM	
		Trip Rate	Trips/Hr	Trip Rate	Trips/Hr
Residential	195 apartments	0.29/unit	57	0.29/unit	57
Retail/commercial	1,590m^2	12.9/1,000m^2	21	25.8/1,000m^2	41
Total			**78**		**98**

7.3 Approved Development Traffic Generation

By way of comparison, reference is again made to the GTA TIA, Issue D, the approved Concept DA scheme estimated a traffic generation of 328 vph during the weekday morning peak hour and 465 vph during the weekday afternoon peak hour. SIDRA intersection analysis indicated that the surrounding road network was capable of accommodating the Concept DA scheme's traffic with the following impacts noted:

- *the post development model indicated that intersections would operate with a similar level of service to existing conditions with minor increase to delay and queuing to a few intersections*

- *a 10-year growth scenario was reviewed to post development conditions with forecasted growth of the surrounding areas. The results indicated that the intersection of King Street and Darby Street would operate at a level of service C during the PM peak period, from a level of service B in the existing conditions. This impact was considered to be acceptable. All other modelled intersections would maintain existing levels of operation.*

7.4 Traffic Impact

As noted above, the traffic implications of development proposals primarily concern the *nett change* in the traffic generation potential of a site compared to its existing and/or approved uses.

Reference is therefore made to consent condition 4 of DA2017/00701.03, which permits a maximum of 63,617m^2 GFA across all four stages, of which the approved Concept DA allocated approximately 23,197m^2 across Stages 3 & 4, equating to 36%.

Based on a GFA pro-rata allocation (i.e. 36%) of the approved Concept DA scheme's estimated total traffic generation of 328 vph and 465 vph during the weekday morning and afternoon peak hours, respectively, Stages 3 & 4 of the Concept DA would have collectively generated approximately 118 vph and 167 vph, respectively.

This Detailed DA for Stages 3 & 4 has a cumulative GFA of 24,330m^2, combined, whilst the total GFA for East End will be 64,750m^2, both of which are generally consistent with the approved Concept DA.

Therefore, when compared to the approved Concept DA, the proposed DA for Stages 3 & 4 is significantly less than the equivalent pro-rata allocation, as indicated in the table below.

Table 7.2 – Nett Peak Traffic Generation

Period	Proposed Stages 3 & 4 Peak Trips	Approved Concept DA Peak Trips (Stages 3 & 4)	Nett Peak Trips
AM Peak Hour	78 vph	118 vph	-40 vph
PM Peak Hour	98 vph	167 vph	-69 vph

It is also pertinent to note that in the 6 years since the 2017 GTA TIA for the Concept DA, the Council car park opposite the site has been demolished, whilst the light rail through the city centre has been completed and is now operational. This will have invariably reduced the traffic volumes at the key intersections surrounding the East End development.

This, coupled with the nett reduction in comparable peak trips, indicates the road network operation is expected to be much better than GTA's Concept DA SIDRA model and is therefore supportable on traffic grounds.

8. Access, Parking & Servicing Assessment

8.1 Applicable Car Parking Rates

The off-street car parking rates applicable to the proposed development on Stages 3 & 4 of Newcastle East End are specified in Council's Newcastle DCP 2012, Section 7.03 Traffic, Parking and Access document (as amended at City of Newcastle's Ordinary Council Meeting held on 27 September 2022), as set out below.

Land Use	Car parking
RESIDENTIAL ACCOMMODATION	Newcastle City Centre, Renewal Corridors, The Junction and Hamilton B2 Local Centre zone and Darby Street Mixed Use zone
Attached Dwellings, Dual occupancy, Multi Dwelling Housing, Residential Flat Buildings, Semi-detached dwellings, Shop Top Housing	Small (<75m^2 or 1 bedroom) – maximum average of one space per dwelling
	Medium (75m^2 - 100m^2 or 2 bedrooms) – maximum average of one space per dwelling
	Large (>100m^2 or 3 bedrooms) – maximum average of two spaces per dwelling
	Visitor parking – no minimum or maximum rate

Land Use	Car Parking	Bike Parking	Motorbike Parking
COMMERCIAL (BUSINESS, OFFICE, RETAIL)			
Office premises	1 space per 50m^2 GFA	1 space per 200m^2 GFA (Security Level B)	1 space per 20 car spaces
Retail			
Specialised retail premises	1 space per 60m^2 GFA	1 space per 20 staff (Security Level B)	1 space per 20 car spaces
Shop	1 space per 40m^2 GLFA	1 space per 200m^2 GFA (50% Security Level B, 50% Security Level C)	1 space per 20 car spaces

(Source: Newcastle DCP 2012, Section 7.03 [Amended 27.09.22])

By way of background, DCP 2023 was developed through a comprehensive review of DCP 2012, updating development controls to reflect best practices, land use strategies, and CN priorities. Notably, DCP 2023 aims to reduce car dependency and increase walking, cycling, and public transport use to align with CN's Parking Plan 2021-2030 (On-the-street-Parking-Plan-February-2021.pdf).

The key shift from DCP 2012 is the introduction of maximum parking rates for residential development in dense urban areas (e.g., city centre, renewal corridors) and removal of minimum parking requirements, including for residential visitors. Parking is now more flexible and market-driven, benefiting sustainability and housing affordability.

Other amendments within DCP 2023, relating to traffic, parking, and access controls include:

- Bicycle storage: Improved access for people with disabilities
- Car share: Dedicated parking for ride-sharing
- End-of-trip facilities: More showers and storage for non-residential development to encourage cycling

A review by consultants, Stantec, in 2021 informed these amendments. Stantec benchmarked parking rates from cities like Wollongong, Melbourne, and Canberra to update Newcastle's controls. For non-residential developments, parking requirements are now merit-based, providing flexibility for uses like retail and universities, while reducing costs and traffic congestion.

Additionally, unbundling parking, which enables separating parking spaces from approved dwellings, provides flexibility enabling purchases to elect how many spaces to own or rent, improving affordability and reducing street parking pressures.

As noted in the foregoing, consent condition 18 of RE2024/00002 (reviewing MA2023/00175 to modify DA2017/00701) specifies that on-site car parking is to be provided for a minimum of 735 vehicles across the four stages of the development. Furthermore, consent condition 19 specifies that the number of car parking spaces shall be provided within each stage in accordance with the requirements of section 7.03 of Newcastle DCP 2012 or the applicable standard at the date of DA lodgement for each stage. This includes:

a) *100% of car spaces required for residents are to be provided on site*

b) *a minimum of 25% of the required number of residential visitor parking spaces shall be provided for residential visitor parking. These spaces are not to be subdivided, leased or controlled by or on behalf of particular unit owners or residents. Spaces cannot be allocated or deferred to different Blocks/stages unless there is a specific condition that allows this and has formed part of a separate development consent. The remaining 75% is to be accommodated both on-street in existing time restricted parking spaces and off-street in publicly available car parking.*

c) *Stages 1 to 4 of the development shall each provide on-site car parking for commercial and retail staff and their patrons as follows:*

Stage 1:	*26 spaces*
Stage 2:	*10 spaces*
Stage 3:	*42 spaces (comprising 10 spaces for Stage 1; 11 spaces for Stage 2; 17 spaces for Stage 3; and 4 spaces for Stage 4)*
Stage 4:	*5 spaces*

The remaining parking being accommodated both on-street in existing time restricted parking spaces and off-street in publicly available car parking.

d) *42 car parking spaces are to be provided for the hotel located within Stage 1 of the development, comprising 34 guest and 8 staff spaces which may otherwise be reduced if justified or approved through a separate development consent or modification after a minimum of two (2) years operations.*

e) *An additional 5 hotel parking spaces and 11 residential visitor parking spaces from Stage 1 are to be included in Stage 3, in addition to compliance with Section 7.03 of Newcastle Development Control Plan 2012 (NDCP 2012) or the applicable standard at the date of lodgement of the application for this stage.*

Notwithstanding the above, the original concept consent (and subsequent consents issued consistently with the concept discounted rates) provided for parking demand (as prescribed by the now superseded DCP 2012) exceeding the discounted rates through use of both the King Street car park and on-street parking.

CN demolished the King Street car park and in doing so, still leaves on-street parking that was clearly envisaged by CN to cater for any parking that may be required. It is pertinent to note that between the now demolished King St car park and on street parking, there is nothing specified as to the load split the former and latter would share i.e. the King Street car park is only part of the solution to cover the discount that CN accepted as part of the conditions in the concept consent.

Furthermore, as per the design competition brief, due to the shortfall in the approved car parking spaces that form part of Stage 1 and Stage 2, any future development on this site (Stage 3) must (and has) make provision for:

- 11 additional visitor car parking spaces (Stage 1)
- 13 commercial car parking spaces (Stage 2 – movement of these spaces from Stage 2 to Stage 3 is currently the subject of a s4.55 modification of the Stage 2 DA)
- 10 retail spaces (to be located in the Stage 3 car park) (Stage 1)

8.2 Merit-Based Assessment

Control C4 of DCP 2023, Section C1 Traffic Parking & Access, Part 16.0, specifies that *"Car parking is provided in accordance with the rates set out in Table C1.01, except for car parking in the Newcastle City Centre, Renewal Corridors, The Junction and Hamilton B2 Local Centre and Darby Street Mixed Use zone. the rates may be varied within theses areas, subject to a merit assessment of the proposal. The total number of spaces to be provided for each type of parking is rounded up to the nearest whole number".*

Accordingly, and in consultation with CN, a parking survey was conducted by independent survey contractor, Trans Traffic Survey, and accompanying Parking Assessment prepared by CJP, dated 1 September 2023, to understand the existing demand for parking within the Newcastle East End area. The scope, days and times of the parking survey was agreed upon by CN's engineering staff, prior to the surveys being undertaken.

A map of the surveyed area is reproduced below, with the results indicating there is an extensive amount of public parking remaining available within walking distance of the site, both on-street and within off-street public parking areas.

The parking occupancy survey results confirm that there is an extensive amount of parking remaining available for visitors within walking distance of the development, even during peak periods, should they be unable to source an on-site visitor space.

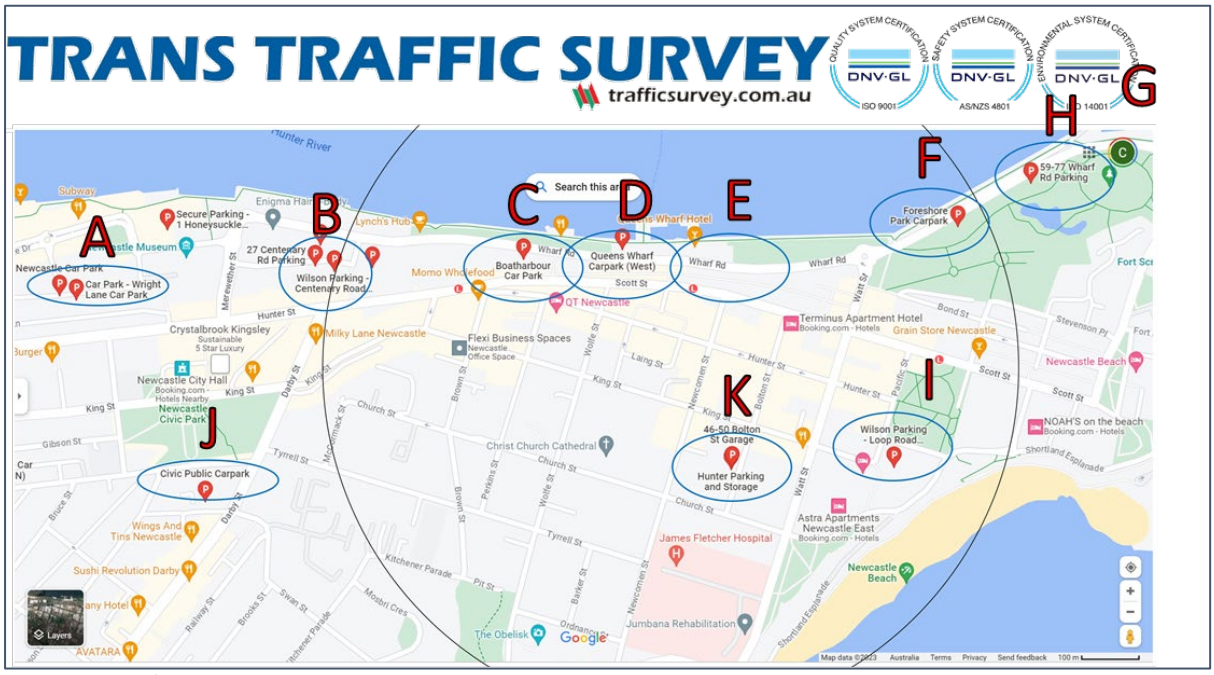


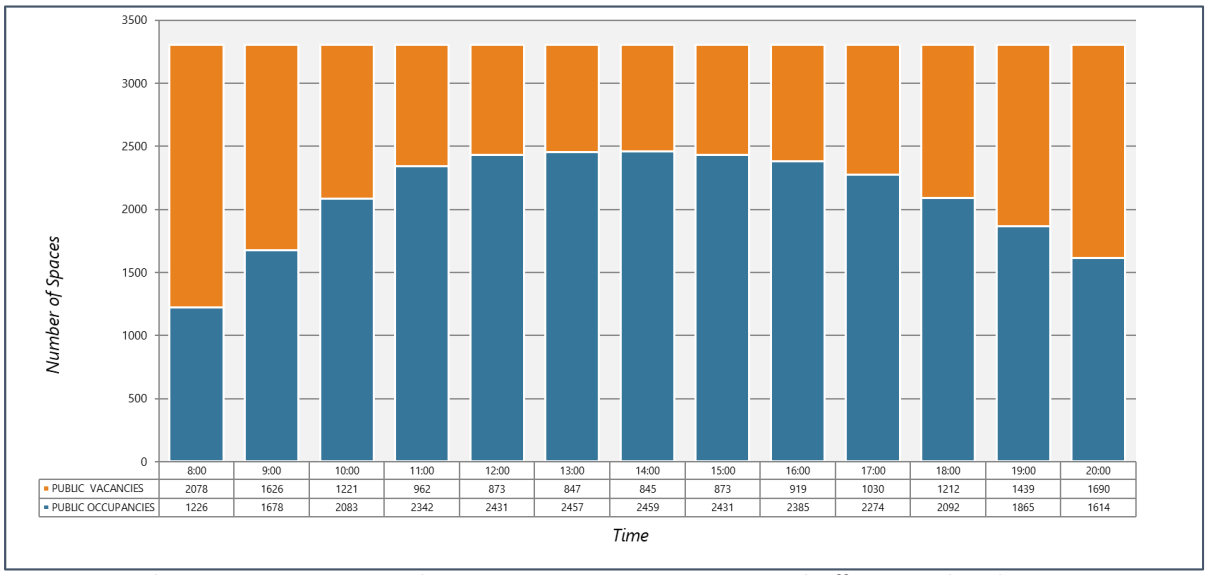
Figure 8.1 – Parking occupancy survey area

Based on the results of the survey, it can be concluded that:

- 31 visitor spaces across 530 apartments is, on merit, acceptable.
- The worst-case weekday (Thursday) analysis/peak period for parking, which occurred at 2pm, shows there was a total of 845 on and off-street parking spaces available
- The worst-case weekend (Saturday) analysis/peak period for parking, which occurred at 11am, shows there was a total of 1782 on and off-street parking spaces available
- Under the old DCP (NDCP 2012), approximately 106 visitor parking spaces would be required based on apartment numbers - under that DCP, CN would conclude, on a strict reading of that planning document, that a shortfall of 75 car spaces results (106 less 31 = 75 spaces).
- The conditions of the concept consent, based on greater certainty of actual and proposed apartments, would have placed the onus on Iris to provide for 27 visitor parking spaces – with the balance 75% DCP requirement to be provided by the King Street car park and on-street parking.
- This report has referenced that the discount provided in the concept consent meant that 75% of visitor car parking would be provided by the now defunct King St car park and on-street parking. It has been demonstrated that:
    - There is ample on and off street parking through the parking survey to cater for the old DCP parking rates for visitor parking, and if the full assessment/peak requirement for visitor parking of 106 spaces (per the rates of the old DCP) were required at the same exact time that general parking demand (on and off-street) was at its peak, CN's claimed shortfall of spaces (net 75) would only consume 8.9% of available on and off-street public parking.
    - CN has a commitment and obligation to honour the conditions of the concept consent, and in terms of its undertaking to the local community (1. CCL on 9/12/20, and, 2. Assessment Report dated 28.04.21), to replace the parking lost as a result of its decision to demolish the community asset that was the King Street car park
    - The CN car park when rebuilt will further reduce pressure on the surrounding infrastructure in terms of parking demand and availability.

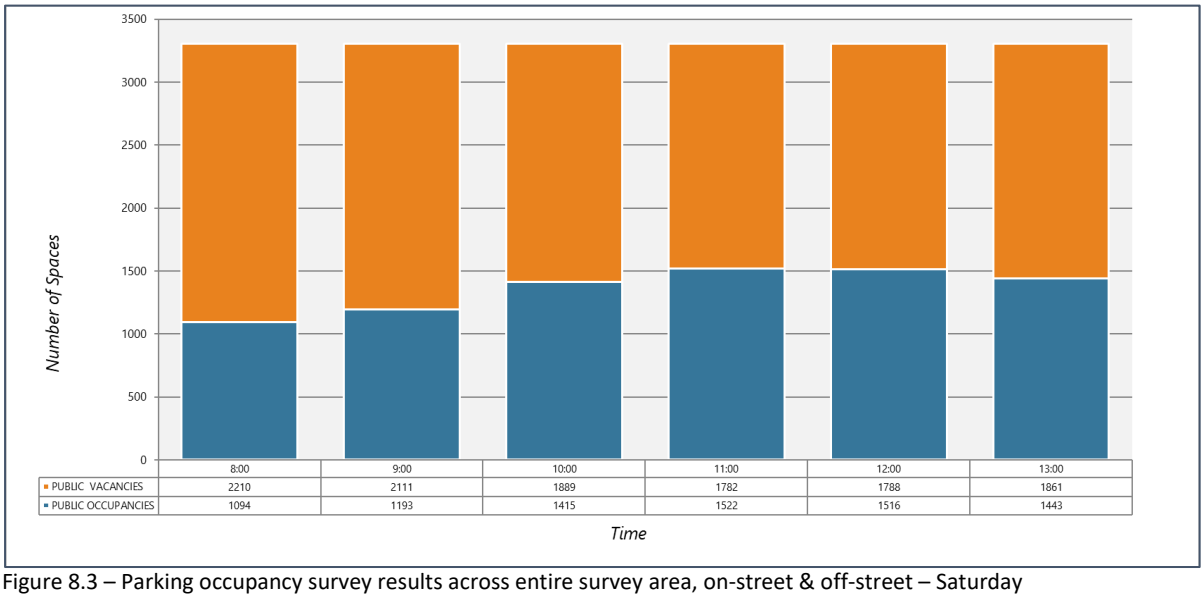
- The CN King St car park did not operate in a manner that would have provided any significant relief for casual visitor parking (or casual any type of parking). It closed at 7pm weekdays, closed at 4.30 on Saturdays and was closed all day Sunday – even if the car park was still standing, the contribution that asset would have made to accommodating the parking arising from the DCP visitor parking discount would have been minimal at best and on-street parking would have provided most, if not all, of the "shortfall" parking would have defaulted to on street in any event.

The parking occupancy survey results confirms that there is an extensive amount of parking remaining available for visitors within walking distance of the development, even during peak periods, as summarised in the graphs below:



	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00
PUBLIC VACANCIES	2078	1626	1221	962	873	847	845	873	919	1030	1212	1439	1690
PUBLIC OCCUPANCIES	1226	1678	2083	2342	2431	2457	2459	2431	2385	2274	2092	1865	1614

Figure 8.2 – Parking occupancy survey results across entire survey area, on-street & off-street – Thursday



	8:00	9:00	10:00	11:00	12:00	13:00
PUBLIC VACANCIES	2210	2111	1889	1782	1788	1861
PUBLIC OCCUPANCIES	1094	1193	1415	1522	1516	1443

Figure 8.3 – Parking occupancy survey results across entire survey area, on-street & off-street – Saturday

8.3 Proposed Car Parking Requirements & Provisions

As the development is now at the final stage where application of DCP principles can be fully resolved, the approach that has been adopted in determining parking across the entire concept consent site is:

- allocate residential parking to 1, 2 and 3 bedroom units based on actual apartments built in Stages 1 and 2, and proposed apartments consistent with the DA across Stages 3 and 4 based on applying rates consistent with the current DCP,

- provide retail/commercial parking consistent with the current DCP requirement of 1 space per 60m^2 of GFA and provides for the minimum number of required spaces – EV charging spaces are provisioned consistent with the current DCP on Stages 3 and 4,

- provide provision for EV charging and parking consistent with the DCP in Stages 3 and 4 – non-exclusive/common EV charging bays, of which there are 4, are in addition to the residential parking,

- The development provides for 31 visitor car parking spaces across the entire development, this includes 11 visitor spaces that were moved from Stage 1 to Stage 3 with the approval of CN – the current DCP requires visitor parking to be provided on merit, which is discussed in this report, and

- A car wash bay is provided in every stage of the development.

In terms of the numbers, the references in the concept DA upon which CN were originally using to determine their "shortfall" in parking, is outlined in the table below – refer 2017 concept consent.

Table 8.1 – Parking Assessment based on 2017 Concept Consent

Concept DA	Concept Yield	Parking Numbers	Actual Yield *	Comment
Retail/comm GFA	9,260m^2	154	5,044m^2	Considerably less GFA than Masterplan consent provided for
Apartment # for visitors	566	115	528	Less units than Masterplan consent provided for
Concept Parking #		**269**		
Provided in DA				
Retail/comm		93		
Visitor		31*		
Claimed shortfall		**145**		

*the actual yield is the sum of stage 1 actual, stage 2 proposed (noting stage 2 could be considered actual but for the parking modification currently before CN), stage 3 and 4 as proposed by the detailed DA

Table 8.2 is based on actual (Stage 1) or proposed (Stages 2, 3 & 4) yields and their respective parking requirements vs provisions.

Table 8.2 – Stage Review – Actual of Proposed (from DA Documents)						
Stage 1						
Apartment mix	**Retail/comm floor area**	**Yield**	**23 DCP**	**Consent**	**Strata**	**Pre-23 DCP**
1 bedroom		68	68			
2 bedroom		128	128			
3 bedroom		16	32			
Sub-total		*212*	*228*	*285*	*211*	
Visitor		0	Merit based		0	43
Commercial^	2,774m^2	31	46		31	46
Car wash		1	1		1	
					243	
Add – Hotel parking					42	
					285	
Strata plan parking #				285		
Stage 2						
Apartment mix	**Retail/comm floor area**	**Yield**	**23 DCP**	**Consent**	**Strata**	**Pre-23 DCP**
1 bedroom		35	35	35	35	
2 bedroom		77	77	77	87	
3 bedroom		9	18	18	19	
Sub-total		*121*	*130*	*138*	*141*	
Visitor			Merit based	0	7	25
Retail	1,290m^2		22	14	10	22
Car wash			1	1	1	
				153	160	
Strata plan parking #				159$^{\nabla}$		
Stage 3						
Apartment mix	**Retail/comm floor area**	**Yield**	**Current DCP**	**DA Proposed**	**Strata**	
1 bedroom		15	15	15		
2 bedroom		64	64	67		
3 bedroom*		11	22	25		
Sub-total		*90*	*101*	*107*	*107*	
Visitor			Merit based	6	6	18
Retail∞	981m^2	58	16	58	58	16
EV common resi@		2	2	2	2	
Car wash		1	1	1	1	
		151		174	174	
Strata plan parking #				175		
Stage 4						
Apartment mix	**Retail/comm floor area**	**Yield**	**Current DCP**	**DA Proposed**	**Strata**	
1 bedroom		9	9	9		
2 bedroom		80	80	80		
3 bedroom**		16	32	34		
Sub-total		*105*	*121*	*123*	*123*	
Visitor			Merit based	7	7	21
Retail^^	609m^2	5	9	5	5	9
EV common resi@		2	2	2	2	
Car wash		1	1	1	1	
		113	133	138	138	
Strata plan parking #				142		

^ excludes hotel parking as it is subject to its own consent and agreed parking

∇ 141 spaces above the 138 per CN, noting CN's previous advice that as long as proposal is consistent with DCP across whole development it is acceptable

* includes 10 exclusive EV charging points (included in residential parking #)

@ includes 2 non-exclusive EV charging points for residential (in addition to the DCP residential parking rates)

∞ includes 3 EV charging points

** includes 10 exclusive EV charging points (included in residential parking #)

^^ includes 1 EV charging point

Table 8.3 is based on the entire development, Stages 1, 2, 3 & 4 and their respective parking requirements vs provisions. The 684 spaces required under the 2023 DCP have zero (0) visitor spaces included as they are assessed on merit – the actual 735 spaces assume 31 visitor spaces across the 4 blocks.

Table 8.3 – Overall Parking Summary – East End Development Stages 1 to 4						
Apartment mix	**Retail/comm floor area**	**# Apartments**	**2023 DCP**	**Actual spaces**	**Difference**	**Actual + proposed (DA) strata plan #**
Stage 1						
1 bedroom		68	68			
2 bedroom		128	128			
3 bedroom*		16	32			
Total Stage 1		*212*	228	273		211
Stages 2, 3 & 4						
1 bedroom		59	59	59		
2 bedroom		221	221	232		
3 bedroom*		36	72	73		
176 Hunter St+		2	3	1		
Total Stage 2+3+4 parking (inc. 176 Hunter St)		318	355	462		371
Overall						
All stages - residential		530	583	583	0	582
Visitor			Merit based	20		
Stage 1 visitor in Stage 3			0	11		
EV common resi			4*	4*	0*	
Car wash resi			4*	4*	0*	
Retail/comm	5,579m^2		93	93	0	
			684	**735**		

+ subject to separate consent
* excluded from total

The following notes and assumptions are provided to further inform the parking assessment above:

- The Masterplan concept consent CN refers to is not relevant as it is not reflective of reality (i.e. # of apartments and retail/commercial floor area) – it was an estimate at a point in time that is now superseded with more accurate information
- QT Hotel parking is subject to its own specific DA approved by CN and is not factored into any of the numbers in the overall analysis
- Across all stages, the maximum number of residential parking spaces allowed under the current DCP is not exceeded
- EV charging non-exclusive parking bays are only relevant in Stages 3 & 4
- In Stage 3 residential, the development provides a total of 10 exclusive use EV chargers (included in residential parking numbers) and 2 non-exclusive use EV chargers
- In Stage 3 retail/commercial, the development provides 3 public use EV chargers as part of the 58 spaces
- Stage 3 retail/commercial parking comprises 17 x Stage 3 retail/commercial spaces, 11 x Stage 1 visitor spaces, 10 x Stage 1 other retail/commercial spaces, 4 x Stage 4 retail/commercial spaces and 16 additional spaces required for DCP compliance – total 58 spaces

- In addition to the 58 retail/commercial spaces in Stage 3, Stage 1 provides 31 spaces, Stage 2 provides 10 spaces and Stage 4 provides 5 spaces – total 104 spaces (which included 11 carry-over visitor spaces from Stage 1)
- **The Masterplan concept DA requires a minimum of 616 spaces which is satisfied**

It is pertinent to note that Stages 3 and 4 will not be deficient in respect to commercial and retail car parking spaces. The deficiency for commercial and retail car parking spaces is because of Stage 1 and 2, which are already approved, built, and deemed acceptable by the previous Panel. The deficiency would exist even if Stage 3 and 4 was approved.

The entirety of the precinct is deficient by 76 visitor parking spaces. However, of the 76 spaces, 50 spaces are attributed to Stage 1 and 2, which are already approved, built, and deemed acceptable by the previous Panel. The majority deficiency would exist even if Stage 3 and 4 was approved – strictly speaking, the argument is related to 26 car parking spaces. The changing context in relation to the Newcastle DCP, however, allows for a merit-based assessment for visitor spaces rather than strict compliance. DCP 2023 emphasises: *That there should not be a minimum or maximum parking rate for visitors, or commercial/retail uses in the Newcastle City Centre. The parking provision should be merits-based.*

Any reference to claimed deficiencies from a DA lodged in 2015 before the concept consent was issued should be updated with more accurate, or proposed, information from detailed DA plans. The "concept" was a high-level document that is now 8 years old and out of date, replaced by more accurate, actual or proposed plans for the project.

Nowhere in the consent, or any subsequent consent or consent modification, has CN sought to retrospectively undo the car parking concession that was provided upon issue of the concept consent. What CN approved was a discount against the DCP rates that were applicable at the time (DCP 2012) and that discount continues to remain applicable today.

In summary, the following parking methodology has been used:

- Residential parking has been allocated based on actual apartments built in Stages 1 and 2, and proposed apartments consistent with the DA across Stages 3 and 4 based on applying rates consistent with the current DCP,
- Retail/commercial parking consistent with the current DCP requirement of 1 space per 60m^2 of GFA and provides for the minimum number of required spaces – EV charging spaces are provisioned consistent with the current DCP on Stages 3 and 4,
- EV charging and parking has been provided consistent with the DCP in Stages 3 and 4
- The development provides for visitor car parking spaces across the entire development, this includes 11 visitor spaces that were moved from Stage 1 to Stage 3 with the approval of CN – the current DCP requires visitor parking to be provided on merit.
- A car wash bay is provided in every stage of the development.

Overall, the car parking allocation is aligned with the current DCP and CN's intention to *reduce car dependency and prioritise walking, cycling and use of public transport.*

8.4 Accessible Car Parking

Consent condition 54 of DA2017/00701.03, specifies that 10% of residential units within each stage of the development (except for Stage 1 where 8% of units) are to be developed as adaptable housing. Based on the provision of 195 apartments across both stages, the proposed development requires the provision of 20 adaptable apartments, each of which requires an adaptable/accessible car parking space.

That requirement is satisfied by the proposed provision of 20 accessible residential car parking spaces and 1 accessible visitor car parking space, thereby satisfying the above requirements.

NDCP 2012, Section 7.03.02, Part E (Amended), specifies that *"a portion of parking spaces is designed and designated by appropriate pavement marking and signposting as parking for people with a disability. Minimum rates are in accordance with the Building Code of Australia".*

Reference is therefore made to the National Construction Code (NCC) and Disability (Access to Premises – Buildings) Standards, in particular Table D3.5. In this regard, the Building Code of Australia (BCA) classifies commercial uses as Class 5 and retail uses as Class 6.

Table D3.5 CARPARKING SPACES FOR PEOPLE WITH A DISABILITY

Class of building to which the *carpark* or carparking area is associated	Number of *accessible* carparking spaces *required*
Class 5, 7, 8 or 9c	1 space for every 100 carparking spaces or part thereof.
Class 6	
(a) Up to 1000 carparking spaces; and	1 space for every 50 carparking spaces or part thereof.
(b) for each additional 100 carparking spaces or part thereof in excess of 1000 carparking spaces.	1 space.

Assuming the entire non-residential component is assessed as retail uses, the proposal requires the provision of 2 accessible car parking spaces, based on Table D3.5 of the BCA.

That requirement is satisfied by the proposed provision of 2 accessible retail/commercial car parking spaces.

All accessible car parking spaces are located in the vicinity of passenger lifts and have been designed in accordance with AS2890.6:2009 requirements, including dimensions, shared zones and overhead clearances.

8.5 Bicycle & Motorcycle Parking

Newcastle DCP 2012 requires bicycle and motorcycle parking to be provided at the following rates:

- residential bicycle parking: 1 space per dwelling (unless in separate storage)
- residential visitor bicycle parking: 1 space per 10 dwellings (Security Level C)
- shop bicycle parking: 1 space per 200m^2 GFA (50% Level B, 50% Level C)
- motorcycle parking: 1 space per 20 car spaces

Table 8.4 – Stages 3 & 4 Proposed DA Bicycle & Motorcycle Parking Provision			
Land Use	**Parking Requirement**	**Proposed Parking Provision**	**Complies**
Stage 3			
Residential bicycles	95 spaces (Level A)	106 spaces	Yes
Visitors bicycles	10 spaces (Level C)		
Comm/retail bicycles	4 spaces (50% Level B & C)	4 spaces	Yes
Motorcycles	6 spaces	9 spaces	Yes
Stage 4			
Residential	132 spaces (Level A)	93 spaces + private storage	Yes
Visitors	13 spaces (Level C)		
Comm/retail	3 spaces (50% Level B & C)	6 spaces	Yes
Motorcycles	8 spaces	0 spaces	No*
Condition 26A			
Visitors	26 spaces (Level C)	26 spaces	Yes

* capable of being conditioned given the abundance of potential locations within the Stage 4 car park

In this regard, residential bicycle parking is provided either in the form of a private storage cage per unit or a dedicated bicycle storage room, located throughout the basement parking levels. Commercial/retail staff bicycle parking is provided within a secure room located on Block 3

Basement Level 1 and Block 4 Level 1, whilst commercial/retail/residential visitor parking is provided in the form of racks located throughout the ground floor level of both stages.

Motorcycle parking is provided within basement level 1 of Stage 3 and within the ground floor level of Stage 4 – i.e. the car park entry levels.

8.6 Electric Vehicle Parking

Council's NDCP 2012, Section 7.03.02, Part E (Amended), sets out the design requirements for electric vehicle charging points in new development. In terms of residential EV charging points, the following is required:

- *Provide EV Distribution Board(s) of sufficient size to allow connection of all EV Ready connections,*

- *Locate EV Distribution Board(s) so that no future EV Ready connection will require a cable of more than 50m from the parking bay to connect,*

- *Identify on the plans submitted with the development application, the future installation location of the cable trays from the EV Distribution Board to the car spaces allocated to each dwelling that are provided a Future EV connection, with confirmation of adequacy from a suitably qualified person (such as an electrical engineer). Spatial allowances are to be made for cable trays and EV Distribution Board(s) when designing in other services.*

In terms of non-residential EV charging points, the following is required:

- *Development must provide 1 car parking space or 5% of all car parking spaces – whichever is greater - to have a 'Level 2' or higher standard electric vehicle charging point installed. A Development Application is accompanied by a report prepared by a suitably qualified and*

experienced person (such as an electrical engineer) demonstrating how the development will provide the specified electric vehicle charging point(s). This report should also include an accurate electrical plan, specifications for any off-street car parking and any electric kiosk requirements.

In response, the proposed development makes provision for 12 residential EV spaces and 3 non-residential EV spaces in Stage 3, and 10 residential EV spaces in Stage 4, thereby satisfying the above requirements. Furthermore, every car parking space will have at minimum a GPO such that someone can also use that to charge a car or an electric bicycle, if required.

All charging point locations will be identified on the Construction Certificate plans should the development receive approval.

8.7 Loading & Servicing

The off-street loading requirements applicable to the development proposal are specified in the Newcastle DCP 2012, Section 7.03 (Amended), as set out below.

Land Use	Requirements for Delivery and Service Vehicles
Commercial premises (50% of spaces adequate for trucks)	<20,000m^2 GFA 1 space per 4,000m^2 GFA >20,000m^2 GFA 5 + 1 space per 8,000m^2 over 20,000m^2
Supermarkets, shops and restaurants (all spaces adequate for trucks)	<2,000m^2 GFA 1 space per 400m^2 GFA >2,000m^2 5 + 1 space per 1,000m^2 over 2,000m^2
Residential flat buildings (50% of spaces adequate for trucks)	<200 flats or home units 1 space per 50 flats or home units >200 flats or home units 4 + 1 per 100 units over 200

(Source: Newcastle DCP 2012, Section 7.03 [Amended 27.09.22])

The proposed development will be serviced by a variety of commercial vehicles including tradesmen, couriers, retail deliveries, removalists and waste contractors. In this regard, both stages include a dedicated service area capable of accommodating trucks up to and including 12.5m long HRV trucks with a 4.5m overhead clearance.

Stage 3 service area comprises a drive-through arrangement whilst Stage 4 comprises a mechanical turntable, thereby allowing all service vehicles to enter and exit the site in a forward direction.

Whilst it is noted that the provision of a single loading bay for both Stage 3 and Stage 4 is less than above NDCP 2012 numerical requirement, it is consistent with the design competition brief and winning design, can and will be appropriately managed, and therefore considered acceptable.

Swept turn path diagrams of a 12.5m HRV truck accessing both respective loading areas are reproduced in Appendix D.

9. Design Assessment

9.1 Applicable Design Standards

The following design standards have been used as the basis for compliance with respect to the vehicular access, parking and loading requirements, including the temporary parking facilities:

- Australian Standards 2890.1:2004 – Off-Street Car Parking (AS2890.1)
- Australian Standards 2890.2:2018 – Off-Street Commercial Vehicle Facilities (AS2890.2)
- Australian Standards 2890.3:2015 – Bicycle Parking (AS2890.3)
- Australian Standards 2890.6:2022 – Off-Street Parking for People with Disabilities (AS2890.6)
- Australian Standards 4299:1995 – Adaptable Housing (AS4299)

Whilst the vehicular access, parking and loading areas have been designed in accordance with the above Australian Standards, it is expected that a condition of consent would be imposed requiring reconfirmation of compliance at the Construction Certificate stage (CC). Any minor amendments required to the current DA design can therefore be addressed at the CC stage.

9.2 Vehicular Access & Circulation Design

The following key compliances are noted with respect to the vehicular access design and circulation system:

- a 6.1m wide two-way driveway for both Stage 3 and Stage 4, in accordance with “Category 2” requirements
- first 6m of the driveways within the property boundary @ maximum 5% (1:20)
- 6.1m wide two-way internal ramps, facilitating two-way traffic flow
- top and bottom 2m ramp transitions @ 12.5% (1:8)
- maximum ramp gradients of 25% (1:4) servicing residential parking areas
- maximum ramp gradients of 20% (1:5) servicing retail parking areas
- 2.5m x 2.0m pedestrian sight triangle on the exit side of the Stage 3 driveway at the top of the ramp (sight triangle not possible on Stage 4, noting no footpath immediately outside the access driveway)
- minimum 5.8m wide aisles in residential parking areas in accordance with User Class 1/1A requirements
- minimum 6.6m wide aisles in retail parking areas in accordance with User Class 3/3A requirements
- minimum 1m “aisle extensions” at the end of dead-end parking aisles
- minimum 2.2m overhead clearance provided throughout the vehicular circulation system

Further to the above, the vehicular access and internal circulation arrangements have been designed to accommodate the swept turning path requirements of the B99 design vehicle as specified in AS2890.1, allowing them to circulate through the respective basement parking areas without difficulty, pass other vehicles, and to enter and exit the site in a forward direction at all times.

Swept turn path diagrams are reproduced in Appendix D.

9.3 Parking Design

The following key compliances are noted with respect to the parking area design:

- 5.4m long car parking spaces
- minimum 2.4m wide residential and visitor parking spaces in accordance with User Class 1/1A requirements
- 2.6m wide retail parking spaces in accordance with User Class 3/3A requirements
- 2.4m wide accessible car parking spaces *plus* 5.4m long x 2.4m wide "shared area", in accordance with AS2890.6
- minimum 300mm additional width for parking spaces located against walls
- minimum 2.5m overhead clearance provided above accessible parking spaces and adjacent shared areas
- minimum 2.2m overhead clearance provided above all other parking spaces
- columns in parking areas generally located ~750mm back from the edge of the parking aisle
- no obstructions within the "design envelope" of any car parking spaces
- motorcycle and bicycle parking areas designed in accordance with AS2890.1 & AS2890.3, respectively
- all vehicles are able to enter and exit the site in a forward direction at all times

9.4 Service Area Design

The following key compliances are noted with respect to the Stage 3 and Stage 4 service area designs:

- 12m diameter commercial grade mechanical turntable in Stage 4 with a minimum 14m diameter exclusion zone around
- 2m loading/unloading areas at the rear of the respective loading bays
- 4.5m overhead clearance provided within the loading dock truck manoeuvring area
- maximum ramp grade of 6.25% (1:16)
- maximum crossfall of 4% (1:25) within the Stage 3 loading bay
- 7.5m wide entry & exit door opening widths to the Stage 3 loading bay
- 6m wide door opening width to the Stage 4 loading bay
- all service vehicles are able to enter and exit the site in a forward direction

Further to the above, the vehicular access and service area arrangements have been designed to accommodate the swept turning path requirements of the HRV design vehicle, as specified in AS2890.2, allowing them to enter and exit the respective service areas in a forward direction at all times.

Swept turn path diagrams are reproduced in Appendix D.

10. Conclusion

In summary, the proposed development involves the construction of 195 residential apartments above 1,590m^2 of ground floor commercial/retail space, across Stages 3 & 4 of Newcastle East End.

Off-street parking in the Stages 3 & 4 DA scheme is proposed for a total of 304 car spaces across respective three-level car parks, all in accordance with Council's current DCP 2023 requirements and "legacy" requirements from Stages 1 & 2.

Vehicular access to the Stage 3 basement access driveway is proposed to be located off Stage 3's Thorn Street site frontage, whilst vehicular access to Stage 3's loading bay is configured with an entry driveway off Morgan Street and an exit driveway off Laing Street – i.e. a drive-through arrangement. The Stage 4 access driveway is proposed to be located at the southern end of the Morgan Street (Lower) site frontage, which accesses both the car parking area and the loading bay.

The proposed DA scheme allows all vehicles to enter and exit the site in a forward direction at all times. No vehicular access is proposed off the King Street, Newcomen Street or Hunter Street site frontages.

Based on the findings contained within this report, the following conclusions are made:

- the site is located in close proximity to a wide variety of public and active transport options as well as within the Newcastle City Centre
- the proposed development is expected to generate in the order of 77 vph during the weekday morning peak period and 98 vph during the weekday afternoon peak period, less at other times
- when compared to the approved Concept DA scheme, the proposal results in a *nett reduction* of vehicle trips during the weekday morning and afternoon peak periods
- the proposed *nett reduction* in traffic will not result in any unacceptable traffic implications to the surrounding road network, given SIDRA modelling was undertaken at the Concept DA stage with higher associated volumes
- the Council car park has been demolished and the light rail through the city centre completed, thereby reducing traffic volumes in the vicinity of the East End development since the Concept DA SIDRA modelling was undertaken
- the proposed Stage 3 & 4 development makes provision for 304 car parking spaces (including car wash bays and common EV charging spaces), which satisfies Council's NDCP 2023 current numerical parking requirements, including merit-based assessment for visitor parking
- Residential parking across the whole development is compliant with the current DCP – parking does not exceed maximum rates,
- Retail/commercial parking is compliant with the current DCP with a rate of 1 space per 60m^2 of retail/commercial GFA, a total of 93 spaces,
- Visitor parking is merit-based (there are no maximum or minimums,) Iris have provided visitor parking of 31 spaces at rates specified in the concept consent, and
- The parking occupancy survey results confirms that there is an extensive amount of parking remaining available for visitors within walking distance of the development, even during peak periods.
- The development will not create unacceptable impacts in terms of parking, noting any numerical 'deficiency' is limited only to visitor parking compared to the now irrelevant old DCP rates.

- the proposed development also makes provision for motorcycle parking spaces and bicycle parking spaces, which satisfies Council's NDCP 2012 current numerical requirements, including the provision of an additional 26 bicycles to satisfy MOD Condition 26A
- the proposed vehicular access, parking and loading area design complies with the relevant requirements of the AS2890 series
- swept turn paths of cars and trucks confirm that all vehicles are able to enter and exit the respective sites in a forward direction and circulate through the respective sites without difficulty.

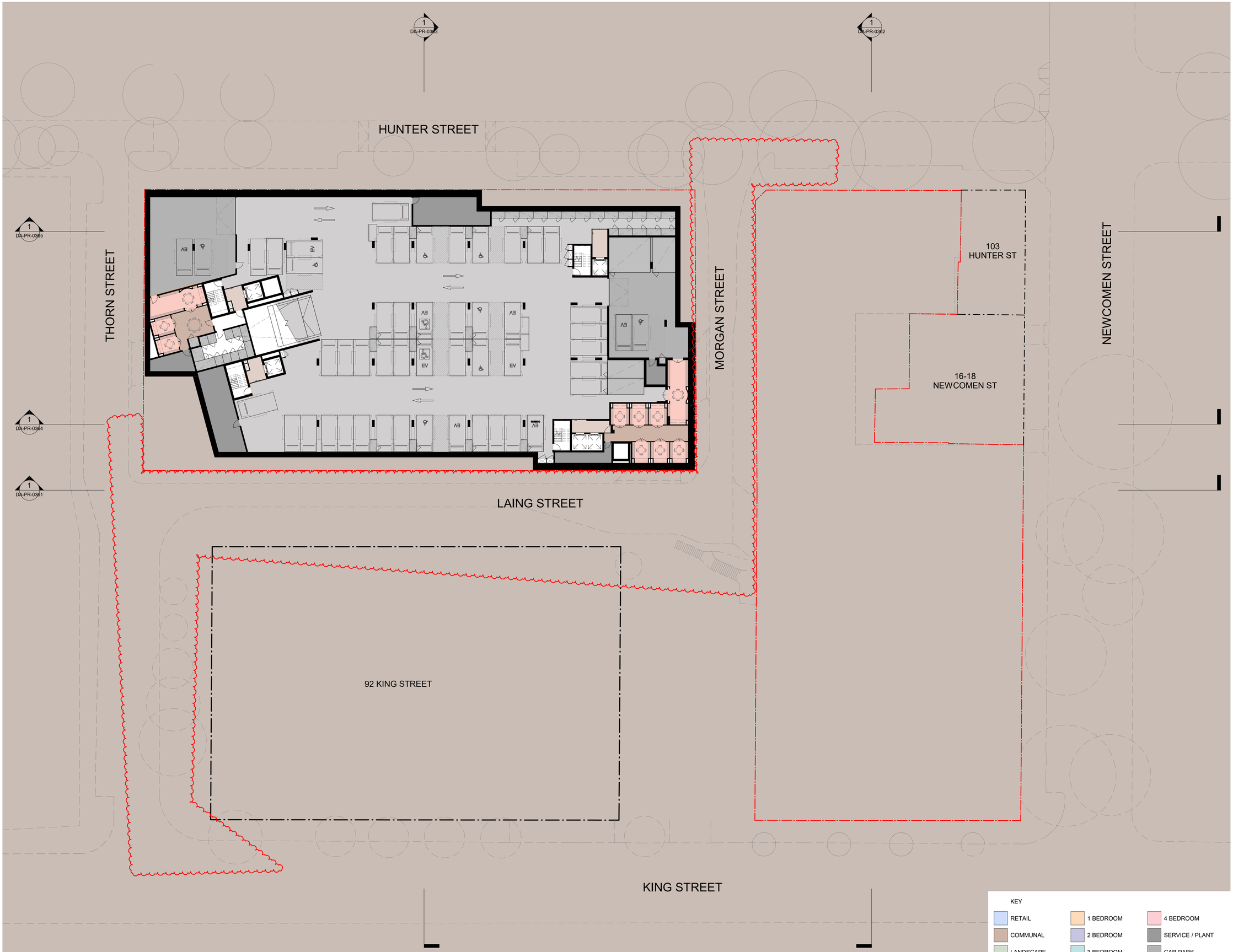
In light of the foregoing assessment, it is considered that the proposed development on Stages 3 & 4 of Newcastle East End is consistent with the Concept DA scheme, consistent with the winning design competition scheme, compliant with Australian Standards, and therefore supportable on vehicular access, traffic, parking and servicing grounds. In the circumstances, it is therefore concluded that the proposed development will not result in any unacceptable implications.

Appendix A

Proposed Stages 3 & 4 architectural plans

FOR APPROVAL

Rev	Date	Revision	By	Chk.
1	09.09.2022	FOR INFORMATION	JG	WG
2	28.09.2022	FOR INFORMATION	JG	RY
3	19.10.2022	FOR INFORMATION	JG	RY
4	25.10.2022	FOR INFORMATION	JG	RY
5	05.12.2022	FOR INFORMATION	JG	RY
6	28.02.2023	FOR INFORMATION	JG	RY
7	16.03.2023	DRAFT DA	JG/BR	RY
8	31.03.2023	FOR APPROVAL	BR	RY
9	20.12.2023	COUNCIL RFI RESPONSE	SG	WG
10	15.10.2024	COUNCIL RFI	JG	WG



KEY

RETAIL	1 BEDROOM	4 BEDROOM
COMMUNAL	2 BEDROOM	SERVICE / PLANT
LANDSCAPE	3 BEDROOM	CAR PARK

Precinct + Building 3W + 4S

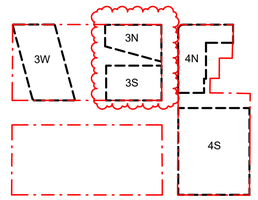
SJB Architects
Level 2, 490 Crown St
Surry Hills NSW
2010 Australia
T 61 2 9380 9911
sjb.com.au

Building 3N & 3S

Durbach Block Jaggers
Level 2, 9 Roslyn St
Potts Point NSW
2011 Australia
T 61 2 8297 3500
durbachblockjaggers.com

Building 4N

Curious Practice
24/526 Hunter Street,
Newcastle NSW
2300 Australia
T 61 4 1182 4600
curiouspractice.com



Client

iris

Project

EAST END STAGE 3 & 4

Hunter, Morgan, Newcomen, King Streets NEWCASTLE NSW 2300

Country: AWABAKAL

Drawing Name

FLOOR PLAN - PRECINCT - BASEMENT 03

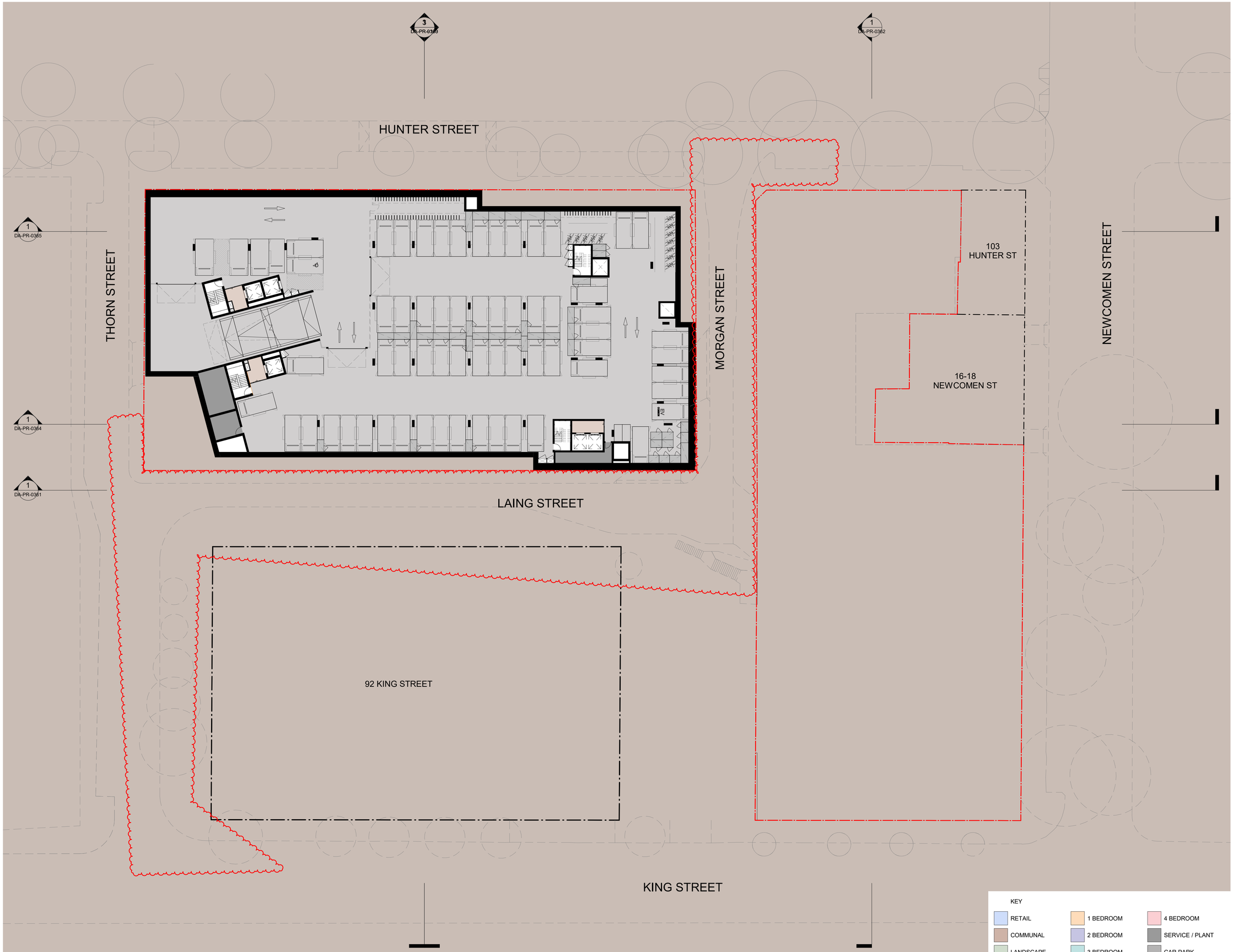
Drawn

0 2.5 5 12.5m
1:250 @A1

Date	Scale	Sheet Size
15.10.2024	1 : 250	@ A1
Drawn.	Chk.	Revision
JG	RY	10
Job No.	Drawing No.	
6668	DA-PR-0301	

FOR APPROVAL

Rev	Date	Revision	By	Chk.
1	09.09.2022	FOR INFORMATION	JG	WG
2	28.09.2022	FOR INFORMATION	JG	RY
3	19.10.2022	FOR INFORMATION	JG	RY
4	25.10.2022	FOR INFORMATION	JG	RY
5	05.12.2022	FOR INFORMATION	JG	RY
6	28.02.2023	FOR INFORMATION	JG	RY
7	16.03.2023	DRAFT DA	JG/BR	RY
8	31.03.2023	FOR APPROVAL	BR	RY
9	20.12.2023	COUNCIL RFI RESPONSE	SG	WG
10	15.10.2024	COUNCIL RFI	JG	WG



KEY

RETAIL	1 BEDROOM	4 BEDROOM
COMMUNAL	2 BEDROOM	SERVICE / PLANT
LANDSCAPE	3 BEDROOM	CAR PARK

Precinct + Building 3W + 4S

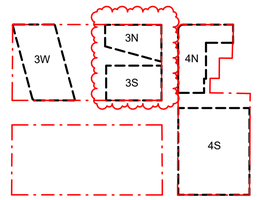
SJB Architects
Level 2, 490 Crown St
Surry Hills NSW
2010 Australia
T 61 2 9380 9911
sjb.com.au

Building 3N & 3S

Durbach Block Jaggers
Level 2, 9 Roslyn St
Potts Point NSW
2011 Australia
T 61 2 8297 3500
durbachblockjaggers.com

Building 4N

Curious Practice
24/526 Hunter Street,
Newcastle NSW
2300 Australia
T 61 4 1182 4600
curiouspractice.com



Client

iris

Project

EAST END STAGE 3 & 4

Hunter, Morgan, Newcomen, King Streets NEWCASTLE NSW 2300

Country: AWABAKAL

Drawing Name

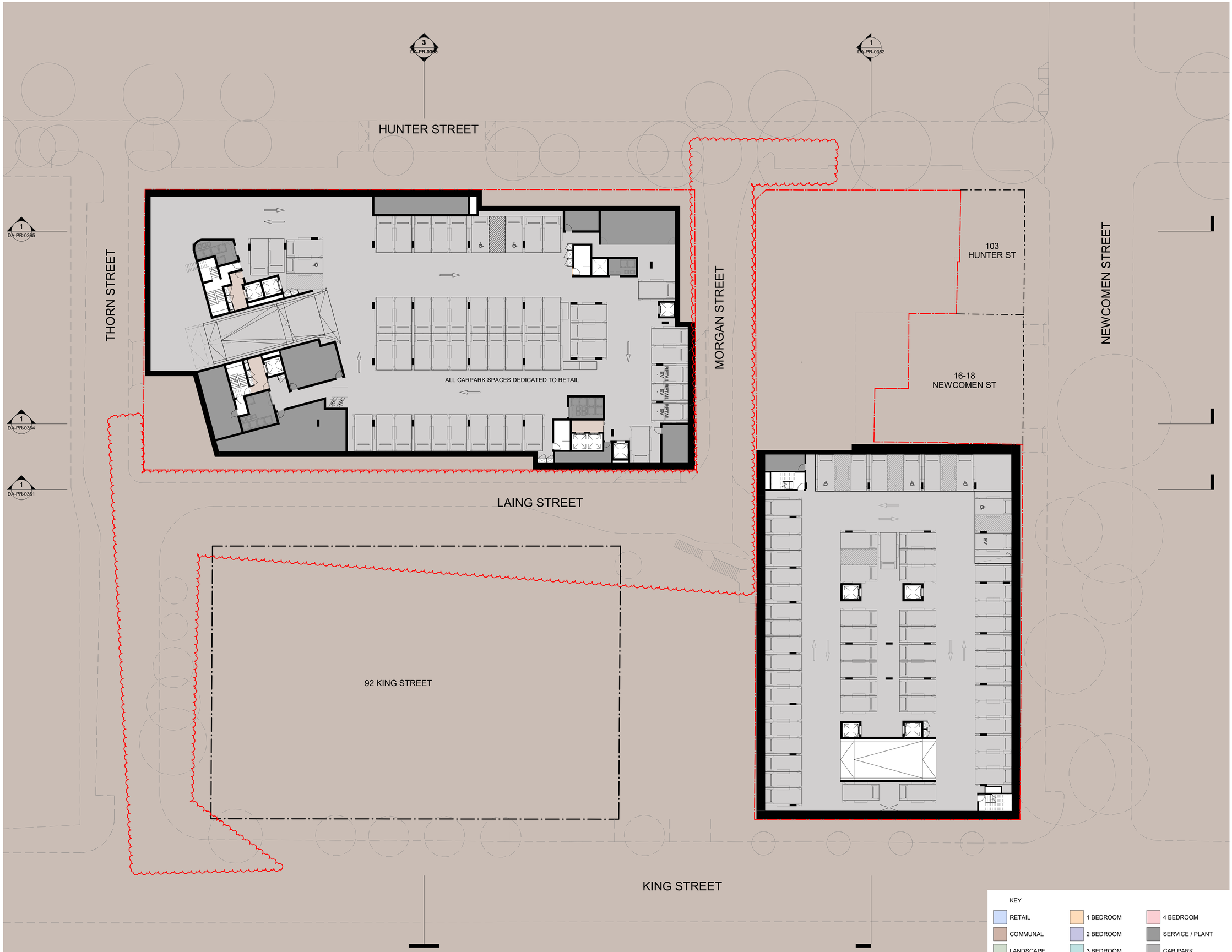
FLOOR PLAN - PRECINCT - BASEMENT 02

Drawn

0 2.5 5 12.5m

1:250 @A1

Date	Scale	Sheet Size
15.10.2024	1 : 250	@ A1
Drawn.	Chk.	Revision
JG	RY	10
Job No.	Drawing No.	
6668	DA-PR-0302	



KEY

RETAIL	1 BEDROOM	4 BEDROOM
COMMUNAL	2 BEDROOM	SERVICE / PLANT
LANDSCAPE	3 BEDROOM	CAR PARK

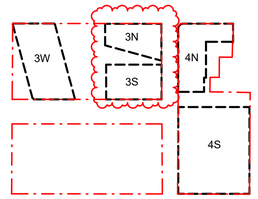
FOR APPROVAL

Rev	Date	Revision	By	Chk.
1	09.09.2022	FOR INFORMATION	JG	WG
2	28.09.2022	FOR INFORMATION	JG	RY
3	19.10.2022	FOR INFORMATION	JG	RY
4	25.10.2022	FOR INFORMATION	JG	RY
5	05.12.2022	FOR INFORMATION	JG	RY
6	28.02.2023	FOR INFORMATION	JG	RY
7	16.03.2023	DRAFT DA	JG/BR	RY
8	31.03.2023	FOR APPROVAL	BR	RY
9	20.12.2023	COUNCIL RFI RESPONSE	SG	WG
10	15.10.2024	COUNCIL RFI	JG	WG

Precinct + Building 3W + 4S
SJB Architects
Level 2, 490 Crown St
Surry Hills NSW
2010 Australia
T 61 2 9380 9911
sjb.com.au

Building 3N & 3S
Durbach Block Jaggers
Level 2, 9 Roslyn St
Potts Point NSW
2011 Australia
T 61 2 8297 3500
durbachblockjaggers.com

Building 4N
Curious Practice
24/526 Hunter Street,
Newcastle NSW
2300 Australia
T 61 4 1182 4600
curiouspractice.com



Client

iris

Project

EAST END STAGE 3 & 4

Hunter, Morgan, Newcomen, King Streets NEWCASTLE NSW 2300

Country: AWABAKAL

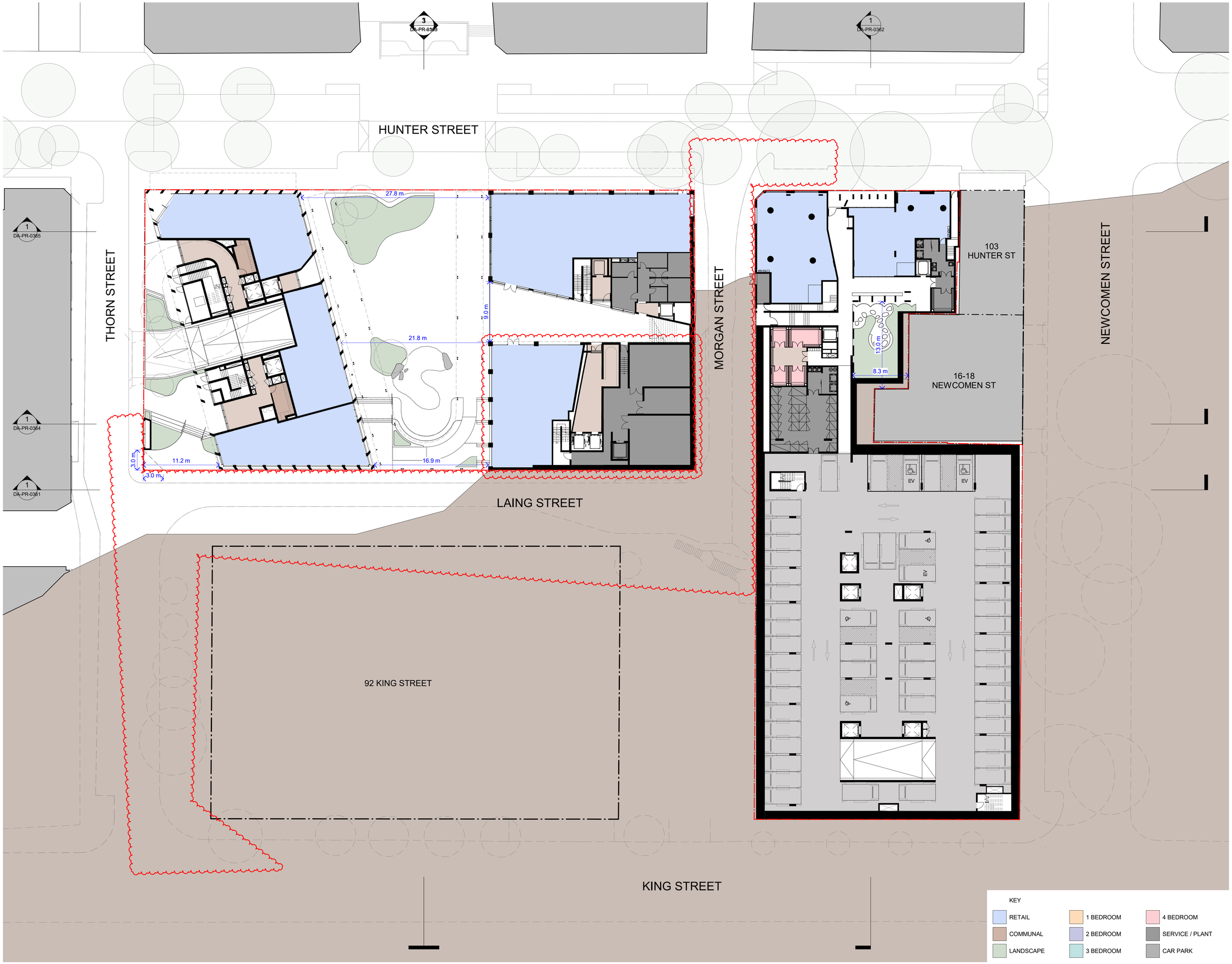
Drawing Name

FLOOR PLAN - PRECINCT - BASEMENT 01

Drawn

0 2.5 5 12.5m
1:250 @A1

Date	Scale	Sheet Size
15.10.2024	1 : 250	@ A1
Drawn.	Chk.	Revision
JG	RY	10
Job No.	Drawing No.	
6668	DA-PR-0303	



KEY

RETAIL	1 BEDROOM	4 BEDROOM
COMMUNAL	2 BEDROOM	SERVICE / PLANT
LANDSCAPE	3 BEDROOM	CAR PARK

FOR APPROVAL

Rev	Date	Revision	By	Chk.
1	09.09.2022	FOR INFORMATION	JG	WG
2	19.09.2022	FOR INFORMATION	JG	RY
3	28.09.2022	FOR INFORMATION	JG	RY
4	25.10.2022	FOR INFORMATION	JG	RY
5	05.12.2022	FOR INFORMATION	JG	RY
6	28.02.2023	FOR INFORMATION	JG	RY
7	16.03.2023	DRAFT DA	JG/BR	RY
8	31.03.2023	FOR APPROVAL	BR	RY
9	20.12.2023	COUNCIL RFI RESPONSE	SG	WG
10	15.03.2024	COUNCIL RFI	SG	RY
11	15.10.2024	COUNCIL RFI	JG	WG

Precinct + Building 3W + 4S

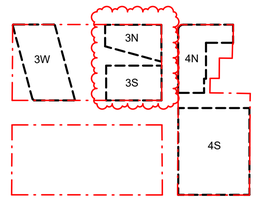
SJB Architects
Level 2, 490 Crown St
Surry Hills NSW
2010 Australia
T 61 2 9380 9911
sjb.com.au

Building 3N & 3S

Durbach Block Jaggers
Level 2, 9 Roslyn St
Potts Point NSW
2011 Australia
T 61 2 8297 3500
durbachblockjaggers.com

Building 4N

Curious Practice
24/526 Hunter Street,
Newcastle NSW
2300 Australia
T 61 4 1182 4600
curiouspractice.com



Client

iris

Project

EAST END STAGE 3 & 4

Hunter, Morgan, Newcomen, King Streets NEWCASTLE NSW 2300

Country: AWABAKAL

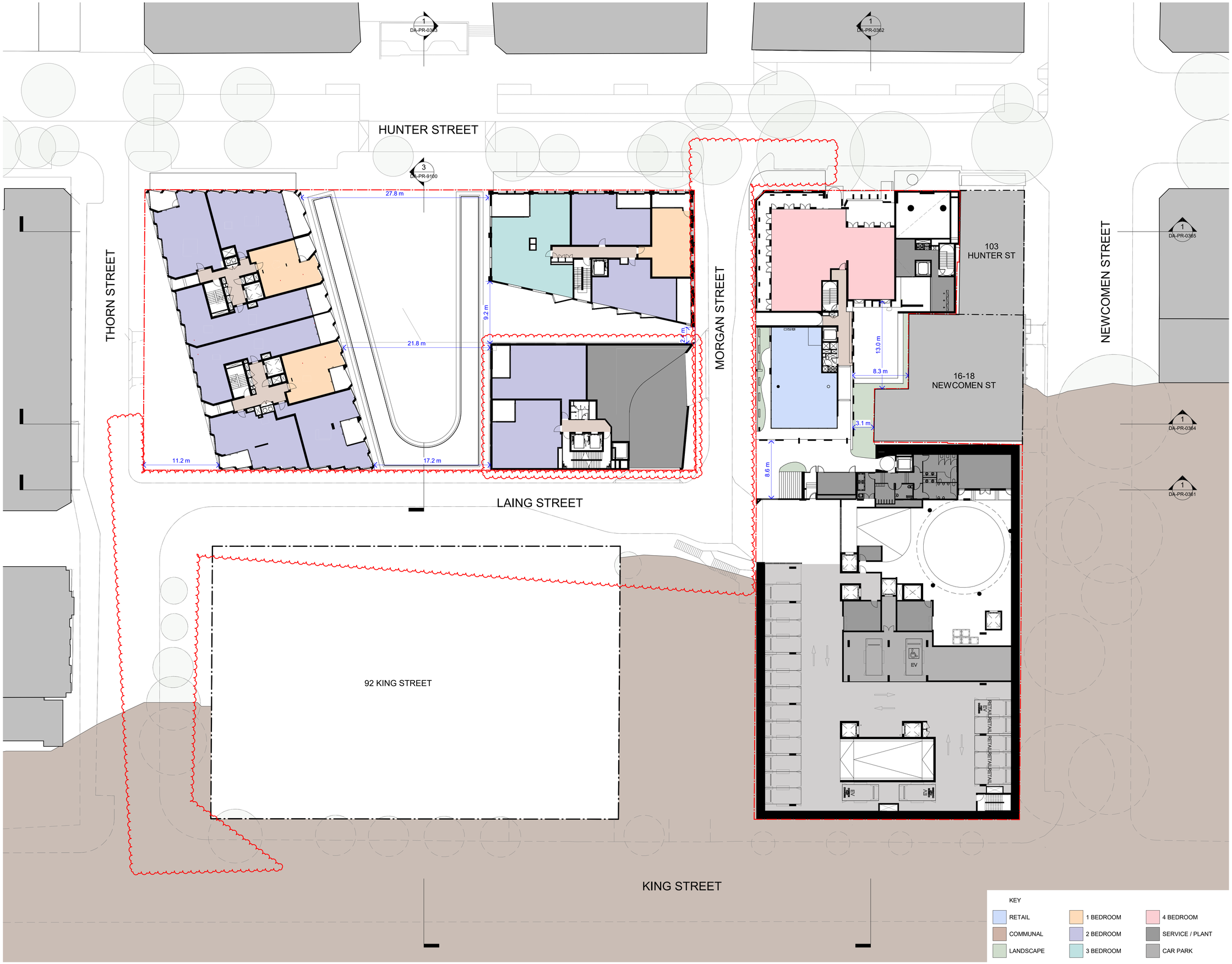
Drawing Name

FLOOR PLAN - PRECINCT - GROUND - (HUNTER ST GROUND)

Drawn

0 2.5 5 12.5m
1:250 @A1

Date	Scale	Sheet Size
15.10.2024	1 : 250	@ A1
Drawn.	Chk.	Revision
JG	RY	11
Job No.	Drawing No.	
6668	DA-PR-0304	



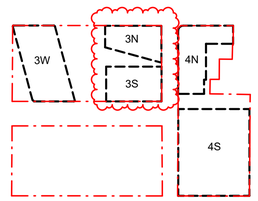
FOR APPROVAL

Rev	Date	Revision	By	Chk.
1	09.09.2022	FOR INFORMATION	JG	WG
2	28.09.2022	FOR INFORMATION	JG	RY
3	05.12.2022	FOR INFORMATION	JG	RY
4	28.02.2023	FOR INFORMATION	JG	RY
5	16.03.2023	DRAFT DA	JG/BR	RY
6	31.03.2023	FOR APPROVAL	BR	RY
7	20.12.2023	COUNCIL RFI RESPONSE	SG	WG
8	15.03.2024	COUNCIL RFI	SG	RY
9	15.10.2024	COUNCIL RFI	JG	WG

Precinct + Building 3W + 4S
SJB Architects
Level 2, 490 Crown St
Surry Hills NSW
2010 Australia
T 61 2 9380 9911
sjb.com.au

Building 3N & 3S
Durbach Block Jaggers
Level 2, 9 Roslyn St
Potts Point NSW
2011 Australia
T 61 2 8297 3500
durbachblockjaggers.com

Building 4N
Curious Practice
24/526 Hunter Street,
Newcastle NSW
2300 Australia
T 61 4 1182 4600
curiouspractice.com



Client

iris

Project

EAST END STAGE 3 & 4

Hunter, Morgan, Newcomen, King Streets NEWCASTLE NSW 2300

Country: AWABAKAL

Drawing Name

FLOOR PLAN - PRECINCT - LEVEL 01

Drawn

0 2.5 5 12.5m
1:250 @A1

Date	Scale	Sheet Size
15.10.2024	1 : 250	@ A1
Drawn.	Chk.	Revision
JG	RY	9
Job No.	Drawing No.	
6668	DA-PR-0305	

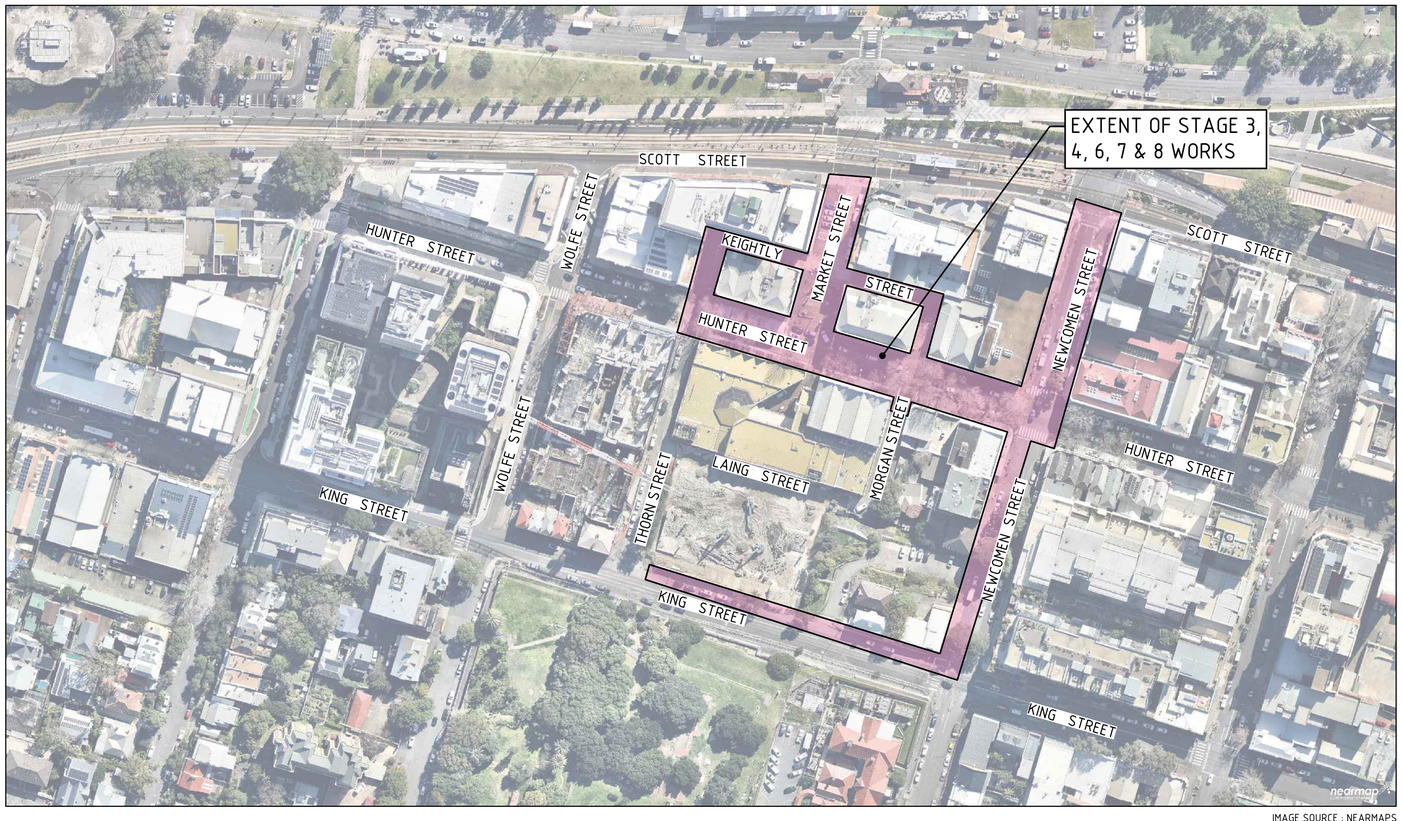
CJP | CONSULTING ENGINEERS

Appendix B

City of Newcastle's 50% public domain plans

EAST END REDEVELOPMENT PROJECT

DETAILED DESIGN - STAGES 3, 4, 6, 7 AND 8
CIVIL ENGINEERING PACKAGE



LOCALITY PLAN

IMAGE SOURCE : NEARMAPS

DRAWING LIST

DWG No.	DRAWING TITLE
DD50-C31.01	COVER SHEET, DRAWING LIST AND LOCALITY PLAN
DD50-C31.11	CIVIL SPECIFICATIONS
DD50-C31.21	GENERAL ARRANGEMENT PLAN
DD50-C31.51	TYPICAL SECTIONS - SHEET 1
DD50-C31.52	TYPICAL SECTIONS - SHEET 2
DD50-C32.01	CUT AND FILL EARTHWORKS PLAN
DD50-C35.31	CROSS SECTIONS - SHEET 1
DD50-C35.32	CROSS SECTIONS - SHEET 2
DD50-C35.33	CROSS SECTIONS - SHEET 3
DD50-C35.34	CROSS SECTIONS - SHEET 4
DD50-C35.35	CROSS SECTIONS - SHEET 5
DD50-C35.36	CROSS SECTIONS - SHEET 6
DD50-C35.37	CROSS SECTIONS - SHEET 7
DD50-C33.01	CIVIL WORKS PLAN - SHEET 1
DD50-C33.02	CIVIL WORKS PLAN - SHEET 2
DD50-C33.03	CIVIL WORKS PLAN - SHEET 3
DD50-C33.04	CIVIL WORKS PLAN - SHEET 4
DD50-C33.05	CIVIL WORKS PLAN - SHEET 5
DD50-C33.06	CIVIL WORKS PLAN - SHEET 6
DD50-C34.01	STORMWATER LONGITUDINAL SECTIONS - SHEET 1
DD50-C34.02	STORMWATER LONGITUDINAL SECTIONS - SHEET 2
DD50-C34.03	STORMWATER LONGITUDINAL SECTIONS - SHEET 3
DD50-C35.21	LONGITUDINAL SECTIONS - SHEET 1
DD50-C35.22	LONGITUDINAL SECTIONS - SHEET 2
DD50-C39.01	CIVIL DETAILS - SHEET 1
DD50-C39.02	CIVIL DETAILS - SHEET 2
DD50-C39.03	CIVIL DETAILS - SHEET 3

DRAWN: B DUGGAN DESIGNED: A KILLEN JOB MANAGER: A BROWN VERIFIER:

NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
A	ISSUED FOR 50% CONCEPT REVIEW	BD		AK	17.08.23

CLIENT: City of Newcastle

DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED

ARCHITECT

THE COPYRIGHT OF THIS DRAWING REMAINS WITH NORTHROP CONSULTING ENGINEERS PTY LTD

ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WORK.
NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.
THIS DRAWING MAY HAVE BEEN PREPARED USING COLOUR, AND MAY BE INCOMPLETE IF COPIED TO BLACK & WHITE.

NORTHROP
Newcastle
Level 1, 215 Pacific Hwy, Charlestown NSW 2290
Ph (02) 4943 1777 Email newcastle@northrop.com.au
ABN 81 094 433 100

PROJECT: EAST END REDEVELOPMENT PROJECT

STAGES 3 AND 4

DRAWING TITLE: CIVIL ENGINEERING PACKAGE

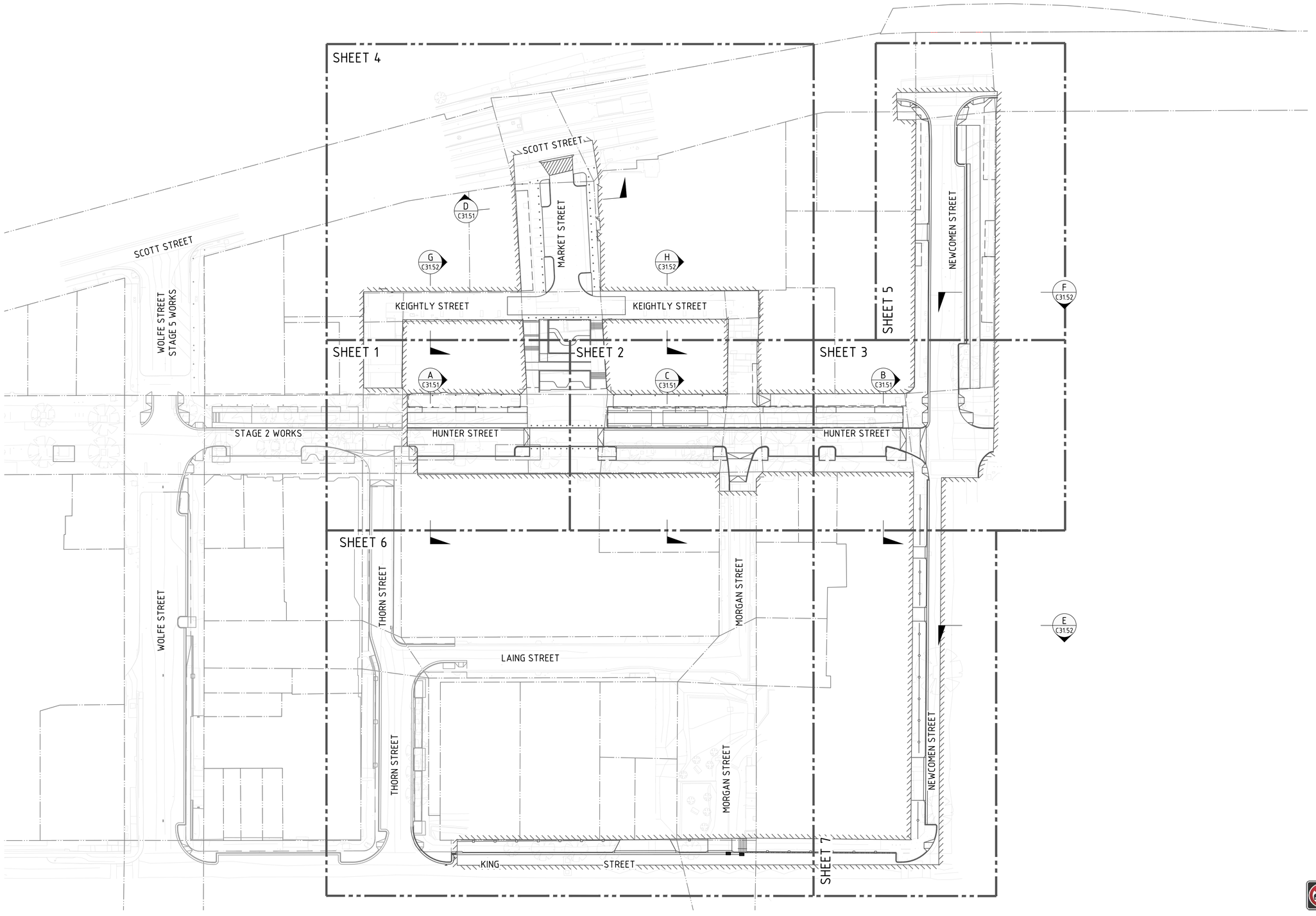
COVER SHEET, DRAWING LIST AND LOCALITY PLAN

JOB NUMBER: NL220675-03

DRAWING NUMBER: DD50-C31.01

REVISION: A

DRAWING SHEET SIZE = A1



DRAWN: B DUGGAN DESIGNED: A KILLEN JOB MANAGER: A BROWN VERIFIER:

DIAL BEFORE YOU DIG www.1100.com.au

NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
A	ISSUED FOR 50% CONCEPT REVIEW	BD	AB	AK	17.08.23

CLIENT: City of Newcastle

DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED

ARCHITECT

ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WORK.
NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.
THIS DRAWING MAY HAVE BEEN PREPARED USING COLOUR, AND MAY BE INCOMPLETE IF COPIED TO BLACK & WHITE.

SCALE 1:500@A1 — 0 5 10 15 20 25m

NORTHROP
Newcastle
Level 1, 215 Pacific Hwy, Charlestown NSW 2290
Ph (02) 4943 1777 Email newcastle@northrop.com.au
ABN 81 094 433 100

PROJECT: EAST END REDEVELOPMENT PROJECT

STAGES 3 AND 4

DRAWING TITLE: CIVIL ENGINEERING PACKAGE

GENERAL ARRANGEMENT PLAN

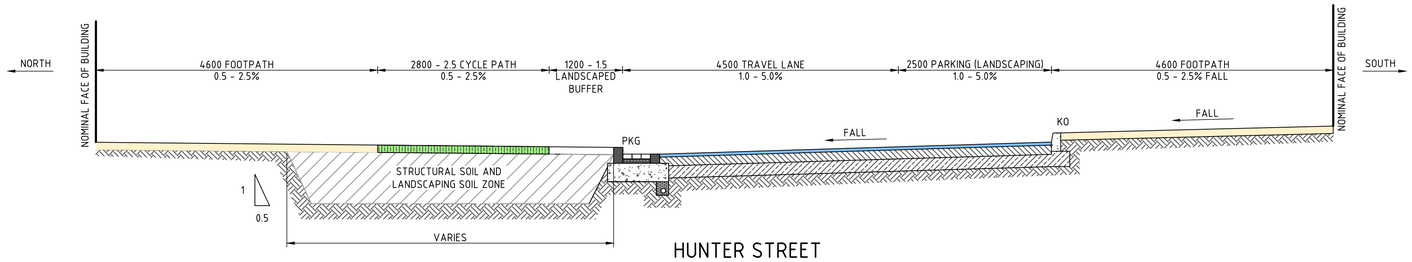
JOB NUMBER: NL220675-03

DRAWING NUMBER: DD50-C31.21

REVISION: A

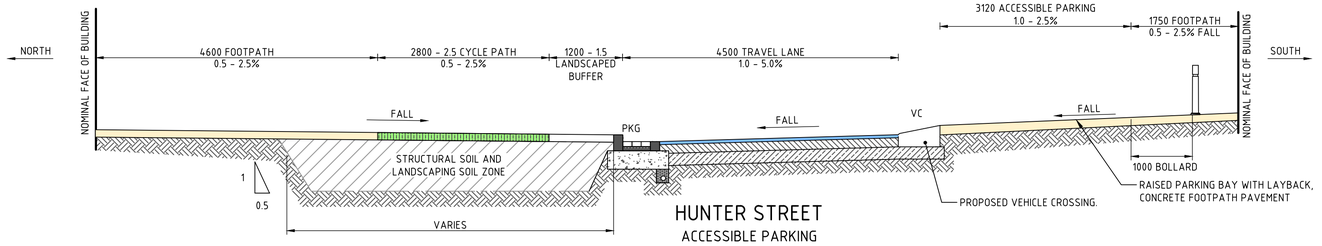
DRAWING SHEET SIZE = A1

Date : 17.08.2023 9:44 PM Plotted By : ANDREW KILLEN Found : \\ne-ncfp1\job_files1\year 2022 jobs\nl220675 - east end public domain plan stages 3,4,5,6,7 & 8\o - drawings\CIVIL\03-CAD\03-cc stages 3 and 4 - 50%\NL220675-01-DD50 C31.21 GENERAL ARRANGEMENT PLAN.dwg



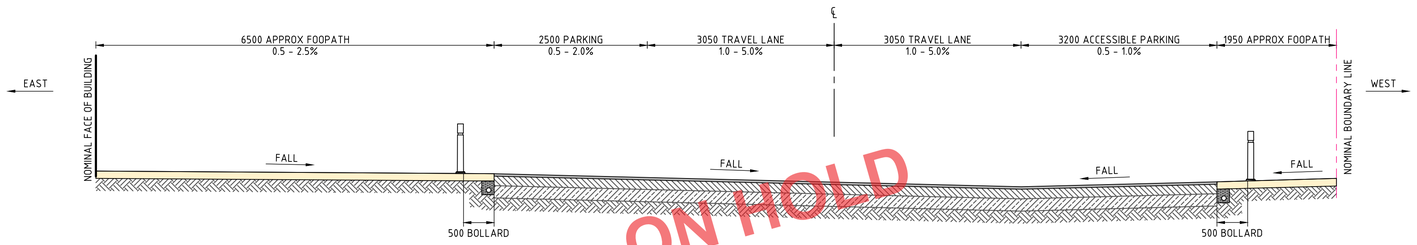
HUNTER STREET
THORN STREET TO MORGAN STREET

SECTION A (C31.21)
SCALE 1:20



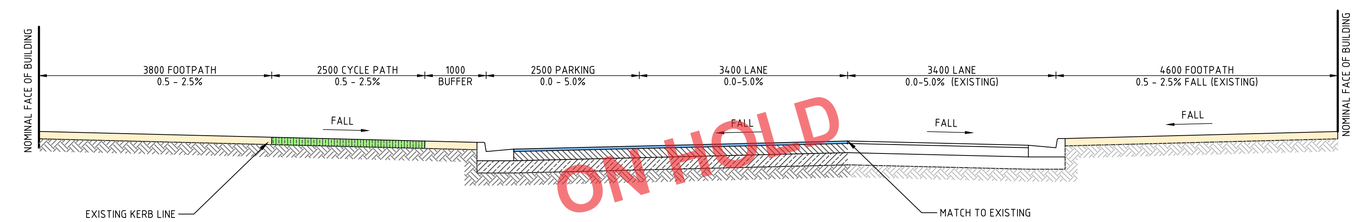
HUNTER STREET
ACCESSIBLE PARKING

SECTION B (C31.21)
SCALE 1:20



MARKET STREET
SCOTT STREET TO HUNTER STREET

SECTION C (C31.21)
SCALE 1:20



NEWCOMEN STREET
CONCEPT CYCLEWAY

SECTION D (C31.21)
SCALE 1:20

DRAWN: B. DUGGAN DESIGNED: A. KILLEN JOB MANAGER: A. BROWN VERIFIER:

DIAL BEFORE YOU DIG www.1100.com.au

NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
A	ISSUED FOR 50% CONCEPT REVIEW	BD		AK	17.08.23

CLIENT: City of Newcastle

DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED

ARCHITECT

ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WORK.
NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.
THIS DRAWING MAY HAVE BEEN PREPARED USING COLOUR, AND MAY BE INCOMPLETE IF COPIED TO BLACK & WHITE.

SCALE 1:25@ A1 (0 0.25 0.5 0.75 1 1.25m)

NORTHROP
Newcastle
Level 1, 215 Pacific Hwy, Charlestown NSW 2290
Ph (02) 4943 1777 Email newcastle@northrop.com.au
ABN 81 094 433 100

PROJECT: **EAST END REDEVELOPMENT PROJECT**

STAGES 3 AND 4

DRAWING TITLE: **CIVIL ENGINEERING PACKAGE**

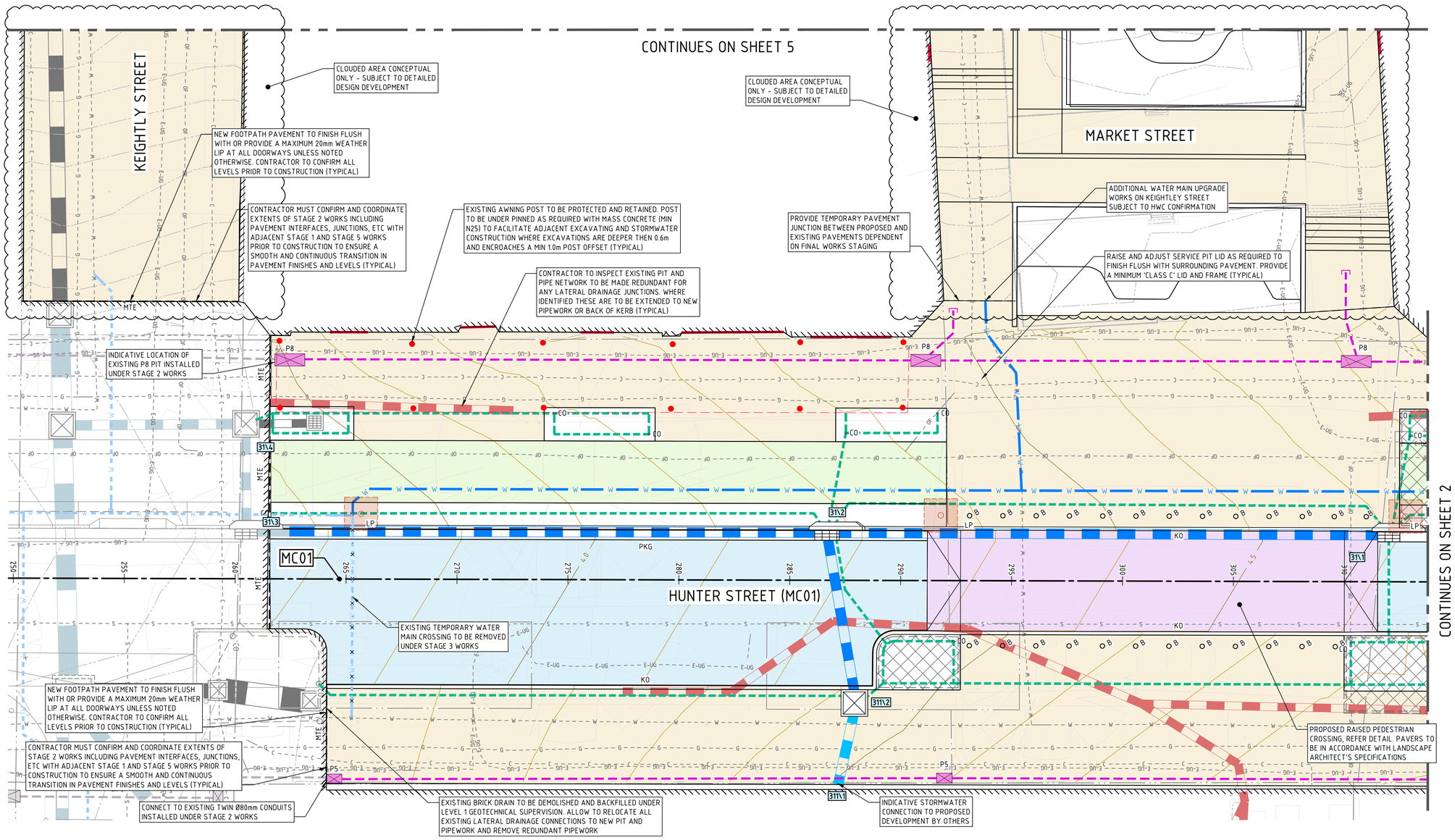
TYPICAL SECTIONS - SHEET 1

JOB NUMBER: **NL220675-03**

DRAWING NUMBER: **DD50-C31.51** REVISION: **A**

DRAWING SHEET SIZE = A1

Date : 17.08.2023 5:44 PM Plotted By : ANDREW KILLEN Found : \\ne-ncfp1\job_files1\year 2022 jobs\nl220675 - east end public domain plan stages 3,4,5,6,7 & 8\o - drawings\CIVIL\03-CAD\03-cc stages 3 and 4 - 50%\NL220675-01-DD50 C31.51 TYPICAL SECTIONS.dwg



LEGEND

- EXISTING LOT BOUNDARY. CADASTRAL INFORMATION SUPPLIED BY OTHERS.
- KR — DENOTES KERB RAMP IN ACCORDANCE WITH CoN STANDARD DRAWING A1201
- VC — DENOTES VEHICLE CROSSING IN ACCORDANCE WITH CN STANDARD DRAWING A1300
- PKG — DENOTES PERMEABLE KERB AND GUTTER.
- KG — DENOTES KERB AND GUTTER IN ACCORDANCE WITH CN DRAWING A1200
- KO — DENOTES KERB ONLY IN ACCORDANCE WITH CoN STANDARD DRAWING A1200
- FK — DENOTES FLUSH KERB IN ACCORDANCE WITH CoN STANDARD DRAWING A1200
- MTE — MATCH TO EXISTING
- eXX — EXISTING KERB AND TYPE AS PER ABOVE
- 311\1 — STORMWATER PIT AND ID TAG
- EXISTING DRAINAGE STRUCTURE.
- DENOTES EXISTING STORMWATER PIPE (PREVIOUS STAGE).
- DENOTES PROPOSED STORMWATER PIPE
- DENOTES REDUNDANT STORMWATER PIPE TO BE REMOVED
- SW — DENOTES EXISTING STORMWATER PIPE (APPROXIMATE FROM CN GIS).
- W — DENOTES INDICATIVE EXTENT OF HWC WATER MAIN RENEWAL WORKS - FINAL ALIGNMENT SUBJECT TO CONFIRMATION BY HWC.
- W — DENOTES EXISTING STAGE 2 WATER MAIN SERVICE
- DENOTES EXTENT OF AC PAVEMENT.
- DENOTES EXTENT OF CONCRETE CYCLE PATH IN ACCORDANCE WITH CoN STANDARD DRAWING A1406. FINISHED TO LANDSCAPE ARCHITECTS DETAILS.
- DENOTES RAISED CONCRETE CROSSING WITH PAVER INLAY.
- DENOTES EXTENT OF CONCRETE FOOTPATH PAVEMENT WITH PAVER SURFACING IN ACCORDANCE WITH CoN STANDARD DRAWING A1405. PAVERS TO LANDSCAPE ARCHITECT'S DETAILS.
- DENOTES EXTENT OF CONCRETE FOOTPATH PAVEMENT WITH BANDING IN ACCORDANCE WITH CoN STANDARD DRAWING A1409. CONCRETE FINISH TO BE TESTED FOR SLIP RESISTANT FOR STEEP GRADES.
- B — DENOTES BOLLARD IN ACCORDANCE WITH CN DRAWING A3642, SURFACE MOUNTED ON UNIT PAVERS UNLESS NOTED OTHERWISE.
- EXISTING DOORWAY THRESHOLD
- EXISTING COLUMN TO BE RETAINED
- DENOTES NOMINAL EXTENT OF STRUCTURAL SOIL ZONE IN ACCORDANCE WITH CN SPECIFICATIONS
- LP — DENOTES PROPOSED LOCATION OF PROPOSED STREET LIGHT AND FOOTING REFER TO ELECTRICAL ENGINEERS AND NORTHROP STRUCTURAL DRAWINGS REF NL220675 FOR RESPECTIVE DETAILS
- P5 P8 — DENOTES PROPOSED LOCATION OF COMMS PIT AS LABELED. POSITION TO BE CONFIRMED ON SITE.
- DENOTES PROPOSED LOCATION OF STACKED TWIN Ø80mm BLANK COMMS CONDUITS FOR FUTURE USE. MIN COVER OF 450mm IN FOOTPATHS AND 600mm UNDER ROAD CROSSINGS
- XX.XX — DESIGN CONTOURS
- DENOTES INDICATIVE OUTLINE OF EXISTING AWNING OVER

ENGINEER'S NOTES

1. THESE NOTES ARE TO BE READ IN CONJUNCTION WITH ALL OTHER NOTES IN THIS SET SPECIFICALLY THE NOTES PROVIDED ON THE EXISTING SERVICES PLAN. THE CONTRACTOR MUST LOCATE AND CONFIRM ALL EXISTING SERVICES PRIOR TO CONSTRUCTION AND ALLOW TO UNDERTAKE THE NECESSARY DESIGN AND APPROVAL PROCESS TO ANY AND ALL SERVICES ADJUSTMENTS.
2. ALL WORKS AND ELEMENTS DETAILED ON THIS PLAN ARE TO BE CONSTRUCTED IN ACCORDANCE WITH CURRENT CN SPECIFICATIONS STANDARD DRAWINGS AND TECHNICAL MANUALS, CURRENT AND RELEVANT AUTHORITY SPECIFICATIONS, CURRENT AUSTRALIAN STANDARDS AND SAFE WORK PROCEDURES.
3. THE CONTRACTOR IS TO ENSURE THE SAFETY OF ALL EMPLOYEES, SITE VISITORS AND PUBLIC DURING CONSTRUCTION. THIS INCLUDE ENSURING THE SITE IS SAFE AND SECURE AFTER HOURS.
4. THE CONTRACTOR IS TO CONFIRM ALL EXISTING AND PROPOSED ELEMENTS (E.G. SERVICES, SURFACE LEVELS, WORKS EXTENTS ETC) PRIOR TO CONSTRUCTION AND ENSURE WORKS CAN BE UNDERTAKEN IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SERVICE DURING AND ADJACENT TO CONSTRUCTION ACTIVITIES. THIS INCLUDES ANY SERVICE ADJUSTMENTS REQUIRED TO FACILITATE THE PROPOSED DESIGN.
6. THE CONTRACTOR IS TO INSPECT AND ALLOW TO REPLACE ALL EXISTING SERVICE PITS AND LIDS/COVERS ETC IF THE EXISTING PIT AND LID IS DAMAGED AND UNSUITABLE FOR ADJUSTMENT. PIT REPLACEMENT AND ADJUSTMENTS TO BE IN ACCORDANCE WITH AUTHORITY SPECIFICATIONS AND UNDERTAKEN BY ACCREDITED PERSONNEL. LIDS TO MEET MIN CLASS 'C' REQUIREMENTS
7. FLUSH FINISHES ARE TO BE PROVIDED BETWEEN ALL PIT/VALVE/MAINTENANCE HATCHES AND SURROUNDING PAVEMENT FINISHES. MAXIMUM ALLOWABLE VERTICAL STEP DIFFERENCE BETWEEN FINISHED PAVEMENT LEVELS AND SERVICE COVER IS NOT TO EXCEED 5mm
8. IF CLASHES OR DISCREPANCIES ARE FOUND/IDENTIFIED BETWEEN PROPOSED ELEMENTS AND ANY EXISTING SERVICE THAT HAS THE POTENTIAL TO PREVENT OR AFFECT CONSTRUCTION, THE CONTRACTOR IS TO NOTIFY THE SUPERINTENDENT FOR FURTHER ADVICE PRIOR TO CONTINUING WITH CONSTRUCTION.
9. SUBSOIL DRAINS ARE TO BE INSTALLED WHERE NOMINATED ON THE STORMWATER PLANS, AT ALL PAVEMENT INTERFACES AND LANDSCAPE LOW POINTS AND IN ACCORDANCE WITH CN SPECIFICATIONS.
10. ALL PROPOSED KERBS ARE TO BE INSTALLED IN ACCORDANCE WITH CN STANDARD DRAWINGS AND SPECIFICATIONS AND CONSTRUCTED ABOVE A MINIMUM COMPACTED SUBBASE THICKNESS OF 150mm UNLESS ADVISED OTHERWISE
11. THE CONTRACTOR IS TO DEMOLISH AND REMOVE FROM SITE ALL EXISTING FEATURES (KERBS, KERB RAMPS, VEHICLE CROSSINGS ETC) THAT ARE MADE REDUNDANT BY PROPOSED WORKS AND SPOIL FROM SITE.
12. WHERE EXISTING PAVEMENTS I.E. FOOTPATHS AND ROAD PAVEMENTS ARE MORE THEN 150mm BELOW PROPOSED FINISHED SURFACE LEVELS, THE CONTRACTOR IS TO CONFIRM PAVEMENT SUITABILITY FOR USE AS SUBGRADE BY A QUALIFIED GEOTECHNICAL ENGINEER. IF THE PAVEMENT IS CONFIRMED AS SUITABLE, THE CONTRACTOR MAY LEAVE THE EXISTING PAVEMENT IN PLACE AND CONSTRUCT THE PROPOSED PAVEMENT (FOOTPATH OR AC DEEP LIFT) OVER AND AS DETAILED. NOTE, NEW CONCRETE PAVEMENTS ARE TO BE CONSTRUCTED ON A MIN 30mm SAND LAYER TO ENSURE BOND BREAKING AND CRACK CONTROL PROPERTIES.
13. EXISTING GRANULAR MATERIAL BELOW ALL PAVEMENTS MAY BE REUSED WHEN APPROVED BY THE SUPERVISING GEOTECHNICAL ENGINEERING AUTHORITY IF QUALITY AND IS SUITABLE AND IN ACCORDANCE WITH CURRENT CN SPECIFICATIONS..
14. THE CONTRACTOR IS TO CONFIRM ON SITE THE DEPTH AND LOCATION OF AN EXISTING CONCRETE PAVEMENT UNDER HUNTER STREET AND ALLOW TO REMOVE THE PAVEMENT AS REQUIRED TO CONSTRUCT THE PROPOSED PAVEMENTS AND LANDSCAPING BEDS
15. THE INTENT OF THE LEVELS SHOWN ON THESE PLANS IS TO PROVIDE A FLUSH FINISH WITH EXISTING DOORWAYS WHERE POSSIBLE. IF A FLUSH FINISH GENERATES A STEP FOOTPATH CROSSFALL (GREATER THEN 2.5%), A WEATHER STRIP/THRESHOLD OF MAXIMUM 25mm IS TO BE INSTALLED. WHERE EXISTING STEPS ARE IDENTIFIED, STEPS MAY BEEN RETAINED WITH HEIGHTS ADJUSTED TO COMPLY WITH CURRENT BCA REQUIREMENTS.
16. THE CONTRACTOR IS TO CHECK ALL DOORWAY AND PROPOSED LEVELS AS PER THE ABOVE PRIOR TO CONSTRUCTION AND ADVISE THE SUPERINTENDENT OF DISCREPANCIES OR CROSS FALL GRADES FLATTER THEN 0.5% ARE IDENTIFIED. LEVELS MAY BE ADJUSTED ON SITE (IF REQUIRED) TO A MAXIMUM +/-25mm OF THE DESIGN LEVELS TO FACILITATE MINIMUM CROSSFALLS OF 1.0%, FLUSH JUNCTIONS WITH DOORWAYS AND SURFACE DRAINAGE AWAY FROM BUILDING. CN AND THE SUPERINTENDENT MUST BE ADVISED PRIOR TO CONSTRUCTION OF LEVEL ADJUSTMENT TO CONFIRM FOOTPATH GRADES AND OUTCOMES.
17. ON SITE LEVEL ADJUSTMENTS GREATER THAN +/-25mm MUST BE CONFIRMED AND APPROVED BY CN PRIOR TO CONSTRUCTION
18. ALL LEVEL ADJUSTMENTS MADE ON SITE ARE TO ENSURE SURFACE RUNOFF IS DIRECTED AWAY FROM DOORWAYS AND BUILDING OPENINGS.
19. A SMOOTH JUNCTION IS TO BE MADE WITH ALL EXISTING PAVEMENTS WHERE REQUIRED. A SMOOTH TEMPORARY JUNCTION IS TO BE MADE AT THE INTERFACE WITH ADJACENT PROPOSED STAGES AND WHERE CoN REPRESENTATIVE'S ADVISE.
20. ALL PROPOSED PAVEMENTS ARE TO BE IN ACCORDANCE WITH CoN COMMERCIAL REQUIREMENTS AND SPECIFICATIONS AND GEOTECHNICAL REPORTS AND ADVICE..
21. SUBSOIL DRAINS ARE TO BE INSTALLED WHERE NOMINATED ON THE STORMWATER PLANS, AT ALL PAVEMENT INTERFACES AND LANDSCAPE LOW POINTS AND IN ACCORDANCE WITH CoN SPECIFICATIONS.

NOT FOR CONSTRUCTION

VERIFIER:
JOB MANAGER: A. BROWN
DESIGNED: A. KILLEN
DRAWN: B. DUGGAN

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
A	ISSUED FOR 50% CONCEPT REVIEW	BD		AK	17.08.23

CLIENT: City of Newcastle
DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED

ARCHITECT

ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WORK.
NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.
THIS DRAWING MAY HAVE BEEN PREPARED USING COLOUR, AND MAY BE INCOMPLETE IF COPIED TO BLACK & WHITE.

SCALE 1:100 @ A1 (0 1 2 3 4 5m)

NORTHROP
Newcastle
Level 1, 215 Pacific Hwy, Charlestown NSW 2290
Ph (02) 4943 1777 Email newcastle@northrop.com.au
ABN 81 094 433 100

PROJECT: EAST END REDEVELOPMENT PROJECT
STAGES 3 AND 4

DRAWING TITLE: CIVIL ENGINEERING PACKAGE
CIVIL WORKS PLAN - SHEET 1

JOB NUMBER: NL220675-03
DRAWING NUMBER: DD50-C33.01
REVISION: A
DRAWING SHEET SIZE = A1

CONTINUES ON SHEET 5

REFER TO SHEET 1 FOR LEGEND

CLOUDED AREA CONCEPTUAL ONLY - SUBJECT TO DETAILED DESIGN DEVELOPMENT

KEIGHTLY STREET

ADDITIONAL WATER MAIN UPGRADE WORKS ON KEIGHTLEY STREET SUBJECT TO HWC CONFIRMATION

PROPOSED FOOTPATH TO RAMP DOWN AT MAXIMUM 7% LONGITUDINAL GRADE TO MATCH INTO EXISTING SHOP FRONT.

DENOTES NOMINAL OUTER LIMIT (TOP OF CUTTING) OF STRUCTURAL SOIL ZONE (TYPICAL)

CONTINUES ON SHEET 1

CONTINUES ON SHEET 3

HUNTER STREET (MC01)

MORGAN STREET

ACCESSIBLE PARKING AREA CONSTRUCTED AT GRADE.

BUILDING INTERFACE LEVELS TO BE COORDINATED WITH PROPOSED DEVELOPMENT ADJACENT (TYPICAL).

TERMINATE AND CAP TWIN Ø80mm CONDUITS FOR FUTURE EXTENSION UNDER DEVELOPER WORKS

STORMWATER WORKS ON MORGAN STREET TO BE COORDINATED WITH DEVELOPER WORKS

PROPOSED RAISED PEDESTRIAN CROSSING, REFER DETAIL. PAVERS TO BE IN ACCORDANCE WITH LANDSCAPE ARCHITECT'S SPECIFICATIONS

REDUNDANT STORMWATER PIPEWORK ALONG SOUTH SIDE OF HUNTER STREET TO BE REMOVED (TYPICAL).

INDICATIVE STORMWATER CONNECTION TO PROPOSED DEVELOPMENT BY OTHERS

BUILDING INTERFACE LEVELS TO BE COORDINATED WITH PROPOSED DEVELOPMENT ADJACENT (TYPICAL).

DRAWN: B. DUGGAN DESIGNED: A. KILLEN JOB MANAGER: A. BROWN VERIFIER:

NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
A	ISSUED FOR 50% CONCEPT REVIEW	BD		AK	17.08.23

CLIENT: City of Newcastle

DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED

ARCHITECT

ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WORK.
NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.
THIS DRAWING MAY HAVE BEEN PREPARED USING COLOUR, AND MAY BE INCOMPLETE IF COPIED TO BLACK & WHITE.

SCALE 1:100 @ A1 — 0 1 2 3 4 5m

NORTHROP
Newcastle
Level 1, 215 Pacific Hwy, Charlestown NSW 2290
Ph (02) 4943 1777 Email newcastle@northrop.com.au
ABN 81 094 433 100

PROJECT: EAST END REDEVELOPMENT PROJECT
STAGES 3 AND 4

DRAWING TITLE: CIVIL ENGINEERING PACKAGE
CIVIL WORKS PLAN - SHEET 2

JOB NUMBER: NL220675-03

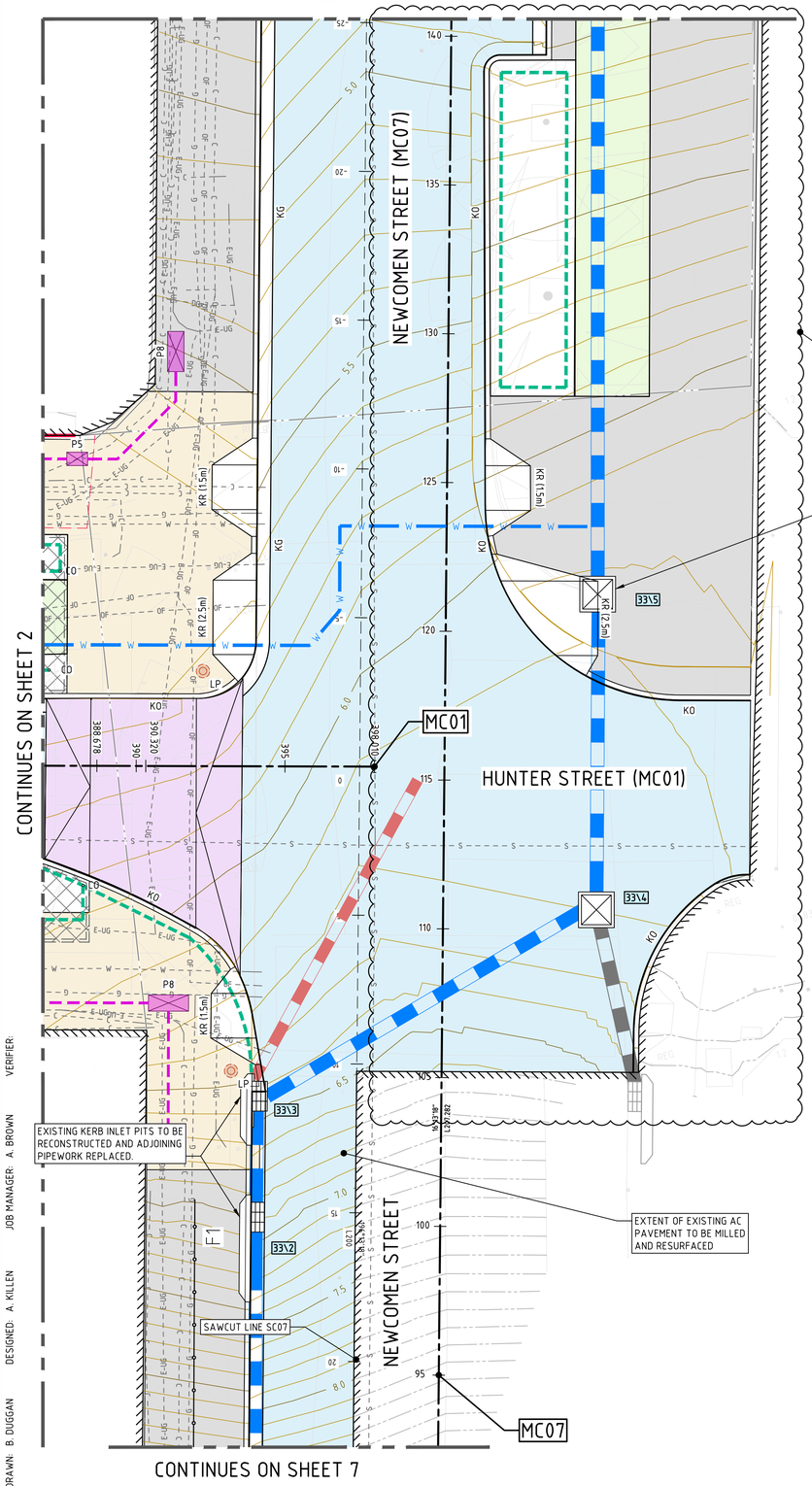
DRAWING NUMBER: DD50-C33.02

REVISION: A

DRAWING SHEET SIZE = A1

CONTINUES ON SHEET 4

REFER TO SHEET 1 FOR LEGEND



CONTINUES ON SHEET 2

CONTINUES ON SHEET 7

DRAWN: B. DUGGAN DESIGNED: A. KILLEN JOB MANAGER: A. BROWN VERIFIER:

NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
A	ISSUED FOR 50% CONCEPT REVIEW	BD		AK	17.08.23

CLIENT: City of Newcastle

DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED

ARCHITECT

ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WORK.
NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.
THIS DRAWING MAY HAVE BEEN PREPARED USING COLOUR, AND MAY BE INCOMPLETE IF COPIED TO BLACK & WHITE.

SCALE 1:100 @ A1

0 1 2 3 4 5m

NORTHROP
Newcastle
Level 1, 215 Pacific Hwy, Charlestown NSW 2290
Ph (02) 4943 1777 Email newcastle@northrop.com.au
ABN 81 094 433 100

PROJECT: EAST END REDEVELOPMENT PROJECT
STAGES 3 AND 4

DRAWING TITLE: CIVIL ENGINEERING PACKAGE
CIVIL WORKS PLAN - SHEET 3

JOB NUMBER: NL220675-03

DRAWING NUMBER: DD50-C33.03

REVISION: A

DRAWING SHEET SIZE = A1

REFER TO SHEET 1 FOR LEGEND

EXISTING STORMWATER PIT TO BE UPGRADED TO 2.4m KERB INLET PIT AND GRATE. DOWNSTREAM PIPEWORK TO BE UPGRADED.

EXISTING KERB INLET PIT AND DOWNSTREAM PIPEWORK TO BE RETAINED.

SAWCUT LINE SC07

NEWCOMEN STREET (MC07)

MC07

CLOUDED AREA CONCEPTUAL ONLY - SUBJECT TO DETAILED DESIGN DEVELOPMENT

CONTINUES ON SHEET 3

DRAWN: B DUGGAN
DESIGNED: A KILLEN
JOB MANAGER: A BROWN
VERIFIER:

NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
A	ISSUED FOR 50% CONCEPT REVIEW	BD		AK	17.08.23

CLIENT: City of Newcastle

DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED

ARCHITECT

ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WORK.
NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.
THIS DRAWING MAY HAVE BEEN PREPARED USING COLOUR, AND MAY BE INCOMPLETE IF COPIED TO BLACK & WHITE.

SCALE 1:100 @ A1

0 1 2 3 4 5m

NORTHROP
Newcastle
Level 1, 215 Pacific Hwy, Charlestown NSW 2290
Ph (02) 4943 1777 Email newcastle@northrop.com.au
ABN 81 094 433 100

PROJECT: EAST END REDEVELOPMENT PROJECT
STAGES 3 AND 4

DRAWING TITLE: CIVIL ENGINEERING PACKAGE
CIVIL WORKS PLAN - SHEET 4

JOB NUMBER: NL220675-03
DRAWING NUMBER: DD50-C33.04
REVISION: A
DRAWING SHEET SIZE = A1

REFER TO SHEET 1 FOR LEGEND

REFER TO SHEET 1 FOR LEGEND

THORN STREET

LAING STREET

MORGAN STREET

MORGAN STREET

NEWCOMEN STREET (MC07)

KING STREET (MC06)

WORKS IN CLOUDED AREA TO BE UNDERTAKEN UNDER DEVELOPER WORKS. REFER DETAILED DESIGN PACKAGE BY OTHERS.

EXISTING STORMWATER JUNCTION BOX TO BE RETAINED AND NEW PIPEWORK EXTENDED TO NEW KERB INLET PIT UPSTREAM OF EXISTING DRIVEWAY.

EXISTING LOCALISED STEEP SECTIONS OF FOOTPATH TO BE RETAINED TO MATCH INTO EXISTING DRIVEWAY LEVELS (TYPICAL).

ALL EXISTING PEDESTRIAN HANDRAILS TO BE REPLACED IN SAME LOCATION ALONG NEWCOMEN STREET (TYPICAL).

FUTURE STORMWATER UPGRADE BY OTHERS.

EXISTING CONCRETE STAIRS AND HANDRAILS TO BE RECONSTRUCTED TO MATCH EXISTING. DETAILS TO BE PROVIDED AT DETAILED DESIGN STAGE. ALTERNATIVELY, SUBJECT TO CONFIRMATION OF TIMING OF ADJOINING REDEVELOPMENT WORKS, STAIRS TO BE REMOVED AND FOOTPATH REGRADED TO CREATE COMPLIANT RAMP ACCESS. UTILITIES WILL REQUIRE ADJUSTMENT

EXISTING SANDSTONE KERB AND GUTTER CAN BE RETAINED OR REINSTATED AROUND BLISTER TO MATCH OTHER SIDE OF NEWCOMEN STREET - SUBJECT TO CN CONFIRMATION.

EXISTING STEP UP TO DOOR THRESHOLD TO BE RETAINED.

EXISTING STONE RETAINING WALL TO BE RETAINED AND PROTECTED FOR THE DURATION OF CONSTRUCTION

EXISTING WELDED MESH FENCING ALONG TOP OF RETAINING WALL TO BE REPLACED IN ACCORDANCE WITH CoN STANDARD DRAWING A3507.

EXISTING FOOTPATH LEVELS PROPOSED TO BE RETAINED ALONG KING STREET (TYPICAL).

EXISITING LOCATION OF DRIVEWAY LAYBACK SERVICING FORMER MULTI-STOREY CARPARK NOW DEMOLISHED. REQUIREMENT FOR LAYBACK TO BE CONFIRMED AS PART OF DESIGN PROGRESSION.

EXISTING ORDINANCE FENCE TO BE REPLACED IN ACCORDANCE WITH CN STANDARD DRAWING A3500.

EXISTING AC RAISED PEDESTRIAN CROSSING TO BE RETAINED AND REINSTATED.

SAWCUT LINE SC06

SAWCUT LINE SC07

EXTENT OF EXISTING AC PAVEMENT TO BE MILLED AND RESURFACED

EXISITING DRIVEWAY LAYBACK TO SERVICING PRIVATE CARPARK TO BE RECONSTRUCTED.

EXISTING STORMWATER PITS AND ADJOINING PIPEWORK TO BE REPLACED.

MC07

NOT FOR CONSTRUCTION

DRAWN: B. DUGGAN
DESIGNED: A. KILLEN
JOB MANAGER: A. BROWN
VERIFIER:

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
A	ISSUED FOR 50% CONCEPT REVIEW	BD		AK	17.08.23

CLIENT: City of Newcastle

DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED

ARCHITECT

ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WORK.
NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.
THIS DRAWING MAY HAVE BEEN PREPARED USING COLOUR, AND MAY BE INCOMPLETE IF COPIED TO BLACK & WHITE.

SCALE 1:200@A1 0 2 4 6 8 10m

NORTHROP
Newcastle
Level 1, 215 Pacific Hwy, Charlestown NSW 2290
Ph (02) 4943 1777 Email newcastle@northrop.com.au
ABN 81 094 433 100

PROJECT: EAST END REDEVELOPMENT PROJECT
STAGES 3 AND 4

DRAWING TITLE: CIVIL ENGINEERING PACKAGE
CIVIL WORKS PLAN - SHEET 6

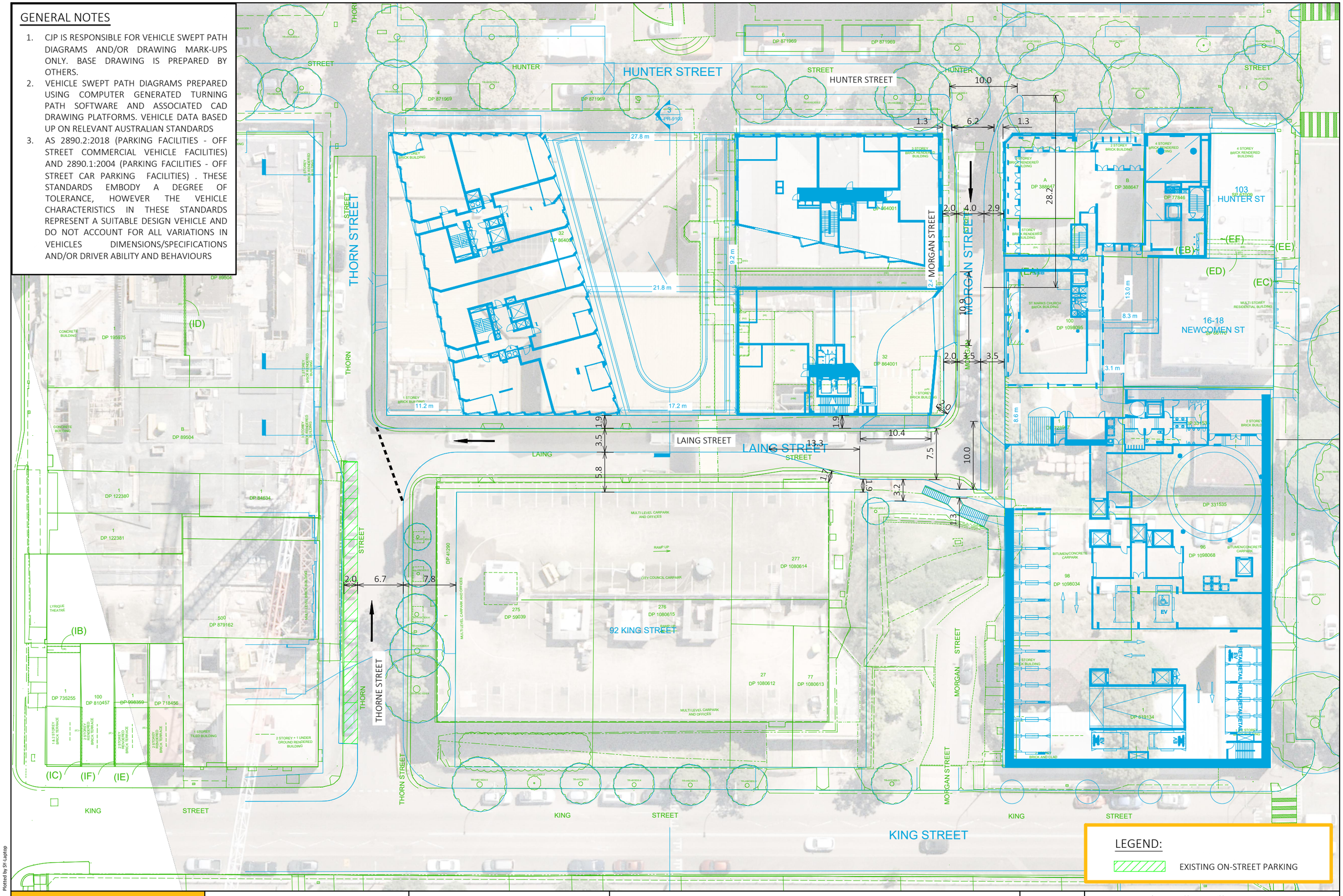
JOB NUMBER: NL220675-03
DRAWING NUMBER: DD50-C33.06
REVISION: A
DRAWING SHEET SIZE = A1

Appendix C

Proposed Road Concept Plan

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES) AND 2890.1:2004 (PARKING FACILITIES - OFF STREET CAR PARKING FACILITIES) . THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS



Plotted by SY-Laptop

CJP CONSULTING ENGINEERS

CJP Consulting Engineers
PO Box 1184
Hunters Hill NSW 2110
M: 0415 256 233
E: info@cjpconsultingengineers.com.au

PRELIMINARY PLAN
FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY.
THE EXACT LOCATIONS SHALL BE PROVEN ON SITE.
ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.

NEWCASTLE EAST END
ROAD CONCEPT PLAN - MORGAN ST/LAING ST/THORNE ST
CONCEPT LAYOUT

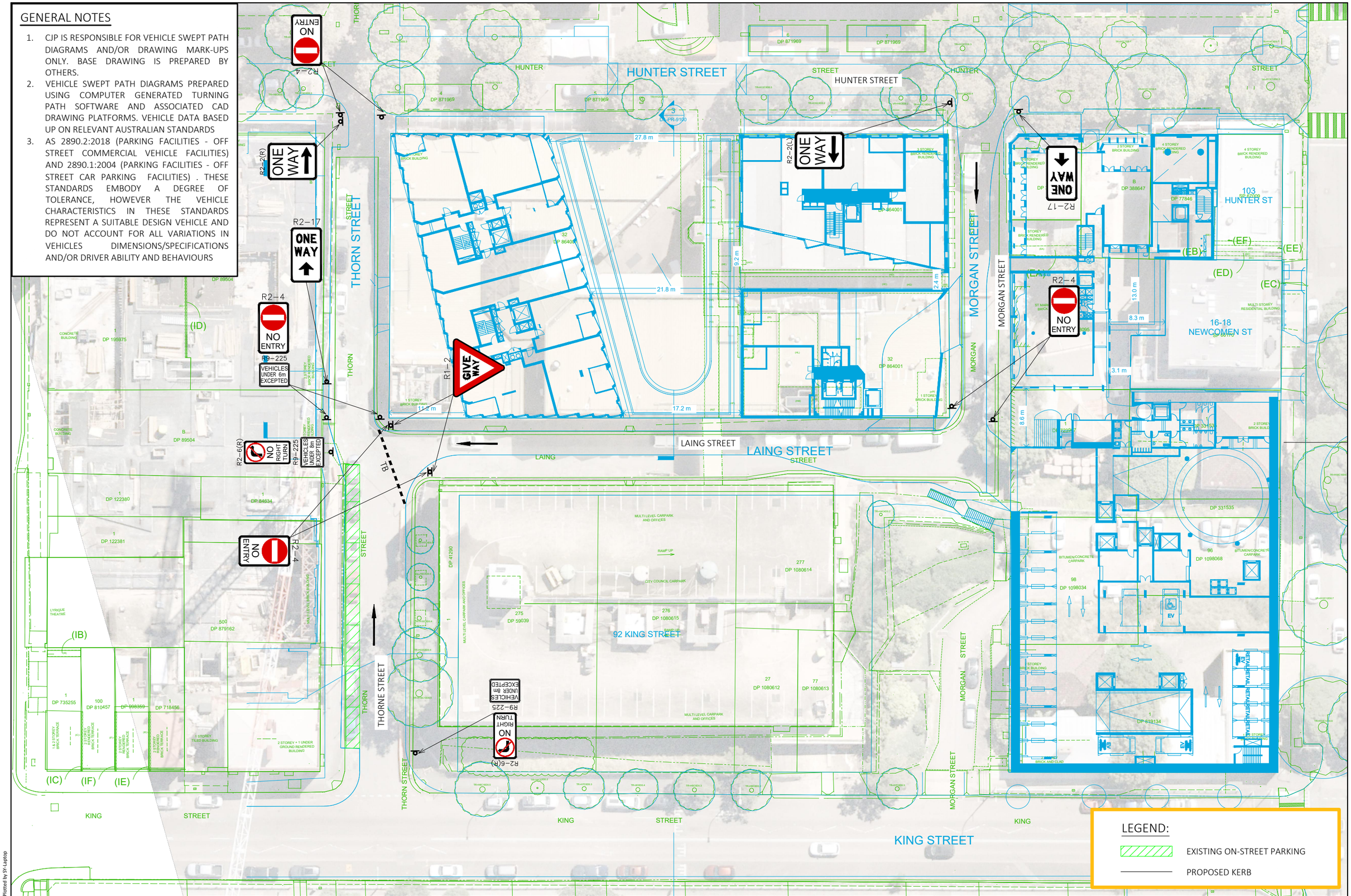
SCALE 0 5.0 10.0 1:500 @ A3

DRAWING NO. 22064-D03-V3 | SHEET NO. 01 OF 03

ISSUE DATE 7 November 2024 | DRAWN BY X.DI | REVIEWED BY C.PALMER

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES) AND 2890.1:2004 (PARKING FACILITIES - OFF STREET CAR PARKING FACILITIES) . THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS



LEGEND:

- EXISTING ON-STREET PARKING
- PROPOSED KERB

Plotted by SY-Laptop

CJP CONSULTING ENGINEERS

CJP Consulting Engineers
PO Box 1184
Hunters Hill NSW 2110
M: 0415 256 233
E: info@cjpconsultingengineers.com.au

PRELIMINARY PLAN

FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE PROVEN ON SITE. ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.

NEWCASTLE EAST END
ROAD CONCEPT PLAN - MORGAN ST/LAING ST/THORNE ST
SIGNAGE AND LINE MARKING PLAN

SCALE 0 5.0 10.0 1:500 @ A3

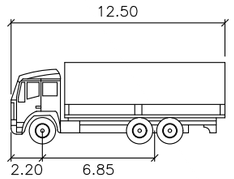
DRAWING NO. 22064-D03-V3	SHEET NO. 02 OF 03
ISSUE DATE 7 November 2024	DRAWN BY X.DI
	REVIEWED BY C.PALMER

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES) AND 2890.1:2004 (PARKING FACILITIES - OFF STREET CAR PARKING FACILITIES) . THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS

SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 500mm CLEARANCE FROM VEHICLE BODY



HRV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.7

HUNTER STREET
THORN STREET
MORGAN STREET
LAING STREET
THORNE STREET
KING STREET
92 KING STREET
103 HUNTER ST
16-18 NEWCOMEN ST
27.8 m
21.8 m
17.2 m
11.2 m
9.2 m
2.4 m
13.0 m
8.3 m
3.1 m
8.6 m
HRV STANDARDS 2018 (AU)

Plotted by SY-Laptop

CJP CONSULTING ENGINEERS

CJP Consulting Engineers
PO Box 1184
Hunters Hill NSW 2110
M: 0415 256 233
E: info@cjpconsultingengineers.com.au

PRELIMINARY PLAN
FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY.
THE EXACT LOCATIONS SHALL BE PROVEN ON SITE.
ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.

NEWCASTLE EAST END
ROAD CONCEPT PLAN - MORGAN ST/LAING ST/THORNE ST
SWEPT PATH ASSESSMENT

SCALE 0 5.0 10.0 1:500 @ A3

DRAWING NO. 22064-D03-V3	SHEET NO. 03 OF 03
ISSUE DATE 7 November 2024	DRAWN BY X.DI
	REVIEWED BY C.PALMER

CJP | CONSULTING ENGINEERS

Appendix D

Swept Turn Paths

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES) AND 2890.1:2004 (PARKING FACILITIES - OFF STREET CAR PARKING FACILITIES) . THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS

DA-PR-0365

THORN STREET

27.8 m

9.0 m

21.8 m

0.3

5.6

3.0

0.6

3.0

0.3

3.0 m

11.2 m

3.0 m

16.9 m

1
DA-PR-0364

1
DA-PR-0361

LAIN

Plotted by SY-Laptop

CJP CONSULTING ENGINEERS

CJP Consulting Engineers
PO Box 1184
Hunters Hill NSW 2110
M: 0415 256 233
E: info@cjpconsultingengineers.com.au

PRELIMINARY PLAN
FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY.
THE EXACT LOCATIONS SHALL BE PROVEN ON SITE.
ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.

NEWCASTLE EAST END
CAR PARK COMPLIANCE REVIEW - 3W GROUND
CONCEPT LAYOUT

N

SCALE 0 2.0 4.0 1:200 @ A3

DRAWING NO. 22064-D01-V5 | SHEET NO. 01 OF 14

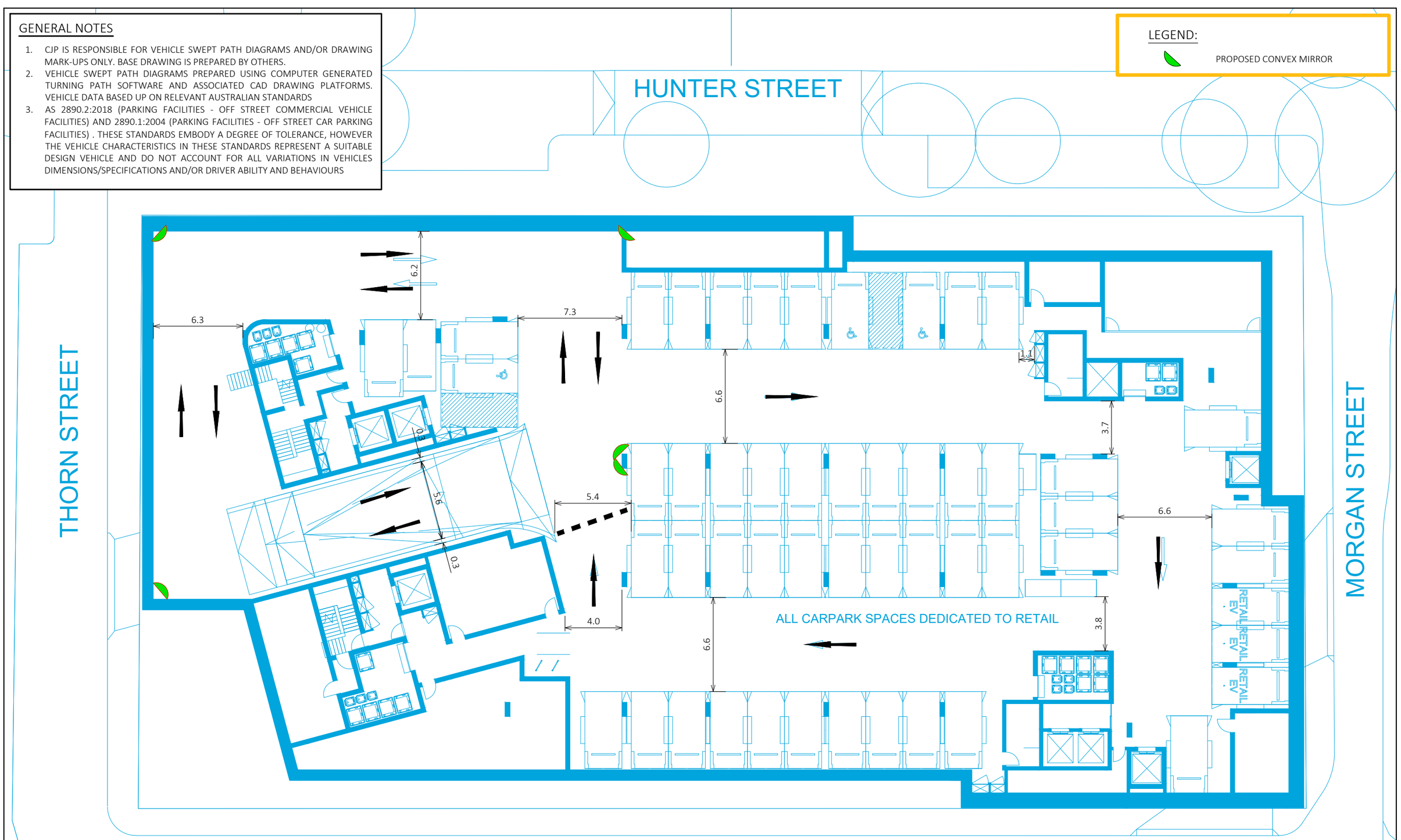
ISSUE DATE 7 November 2024 | DRAWN BY X.DI | REVIEWED BY C.PALMER

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES) AND 2890.1:2004 (PARKING FACILITIES - OFF STREET CAR PARKING FACILITIES) . THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS

LEGEND:

PROPOSED CONVEX MIRROR



Plotted by SY-Laptop

CJP CONSULTING ENGINEERS

CJP Consulting Engineers
PO Box 1184
Hunters Hill NSW 2110
M: 0415 256 233
E: info@cjpconsultingengineers.com.au

PRELIMINARY PLAN

FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY.
THE EXACT LOCATIONS SHALL BE PROVEN ON SITE.
ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.

NEWCASTLE EAST END
CAR PARK COMPLIANCE REVIEW - 3W AND 3E BASEMENT 1
CONCEPT LAYOUT

N

SCALE 0 2.5 5.0 1:250 @ A3

DRAWING NO. 22064-D01-V5 | SHEET NO. 02 OF 14

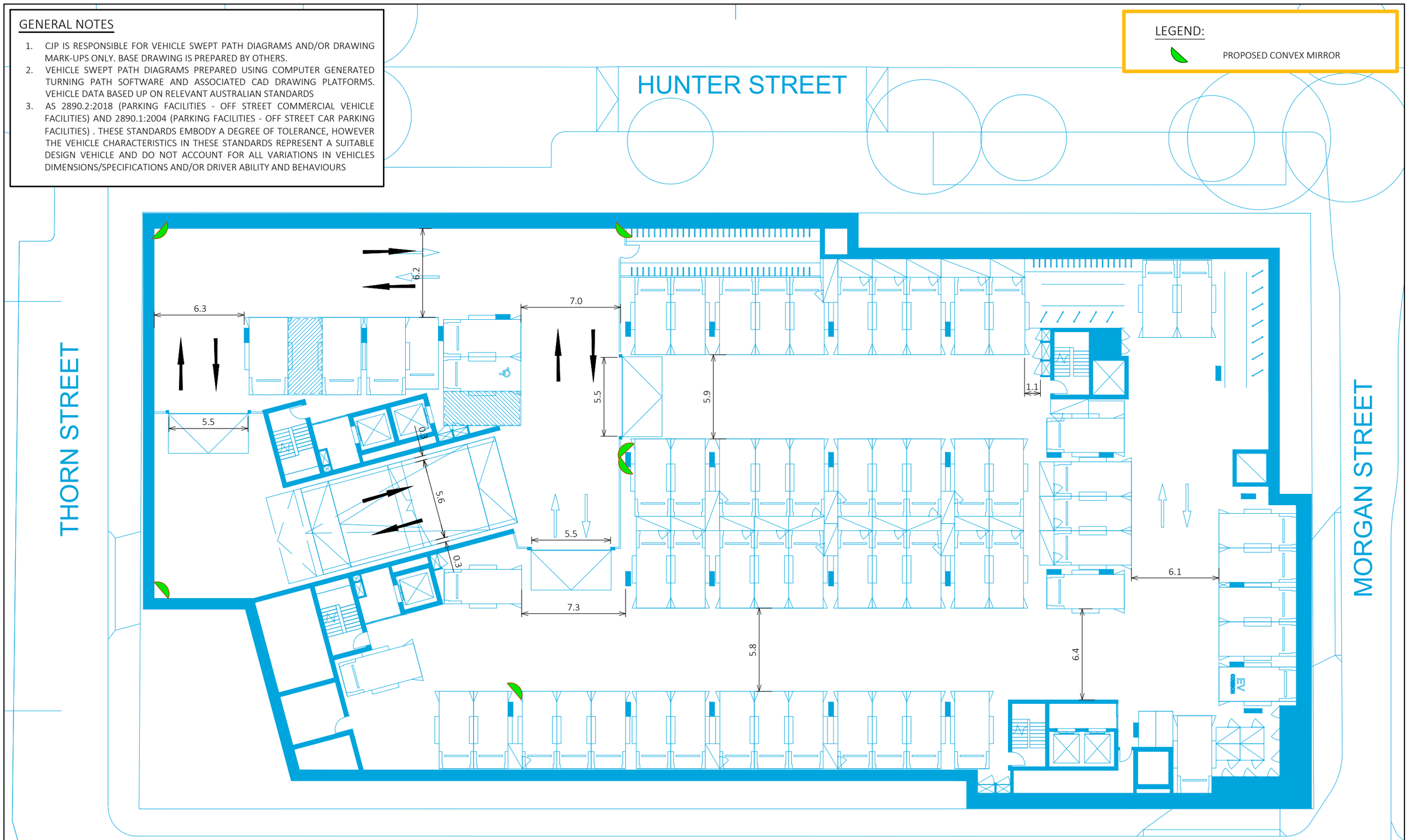
ISSUE DATE 7 November 2024 | DRAWN BY X.DI | REVIEWED BY C.PALMER

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES) AND 2890.1:2004 (PARKING FACILITIES - OFF STREET CAR PARKING FACILITIES) . THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS

LEGEND:

PROPOSED CONVEX MIRROR



Plotted by SY-Laptop

CJP CONSULTING ENGINEERS

CJP Consulting Engineers
PO Box 1184
Hunters Hill NSW 2110
M: 0415 256 233
E: info@cjpconsultingengineers.com.au

PRELIMINARY PLAN

FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE PROVEN ON SITE. ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.

NEWCASTLE EAST END
CAR PARK COMPLIANCE REVIEW - 3W AND 3E BASEMENT 2
CONCEPT LAYOUT

SCALE 0 2.5 5.0 1:250 @ A3

DRAWING NO. 22064-D01-V5 | SHEET NO. 03 OF 14

ISSUE DATE 7 November 2024 | DRAWN BY X.DI | REVIEWED BY C.PALMER

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES) AND 2890.1:2004 (PARKING FACILITIES - OFF STREET CAR PARKING FACILITIES) . THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS

LEGEND:

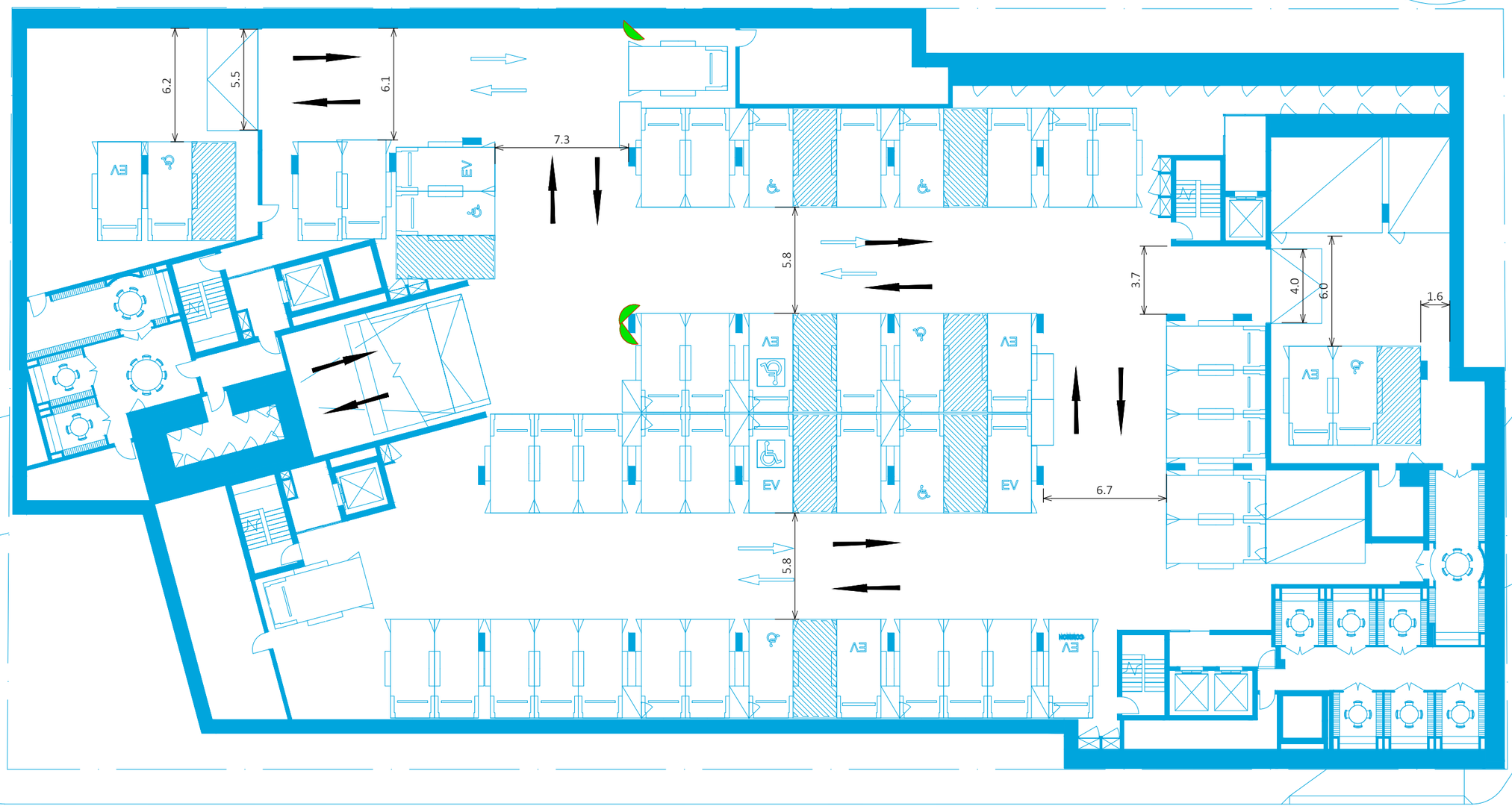
PROPOSED CONVEX MIRROR

HUNTER STREET

THORNBURN STREET

MORGAN STREET

LAING STREET



Plotted by SY-Laptop

CJP CONSULTING ENGINEERS

CJP Consulting Engineers
PO Box 1184
Hunters Hill NSW 2110
M: 0415 256 233
E: info@cjpconsultingengineers.com.au

PRELIMINARY PLAN

FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE PROVEN ON SITE. ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.

NEWCASTLE EAST END
CAR PARK COMPLIANCE REVIEW - 3W AND 3E BASEMENT 3
CONCEPT LAYOUT

SCALE 0 2.5 5.0 1:250 @ A3

DRAWING NO. 22064-D01-V5

SHEET NO. 04 OF 14

ISSUE DATE 7 November 2024

DRAWN BY X.DI

REVIEWED BY C.PALMER

SWEPT PATH KEY:

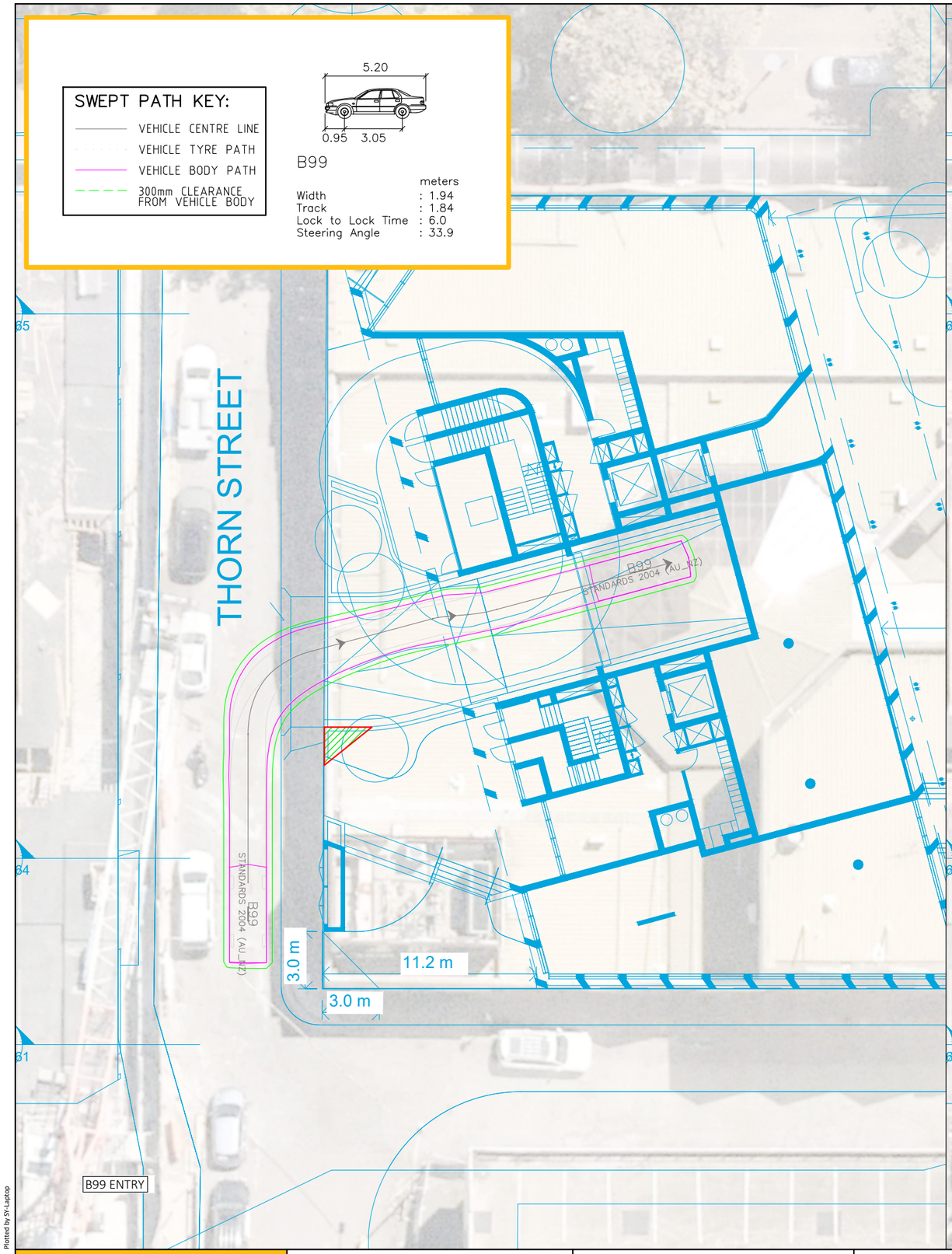
- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

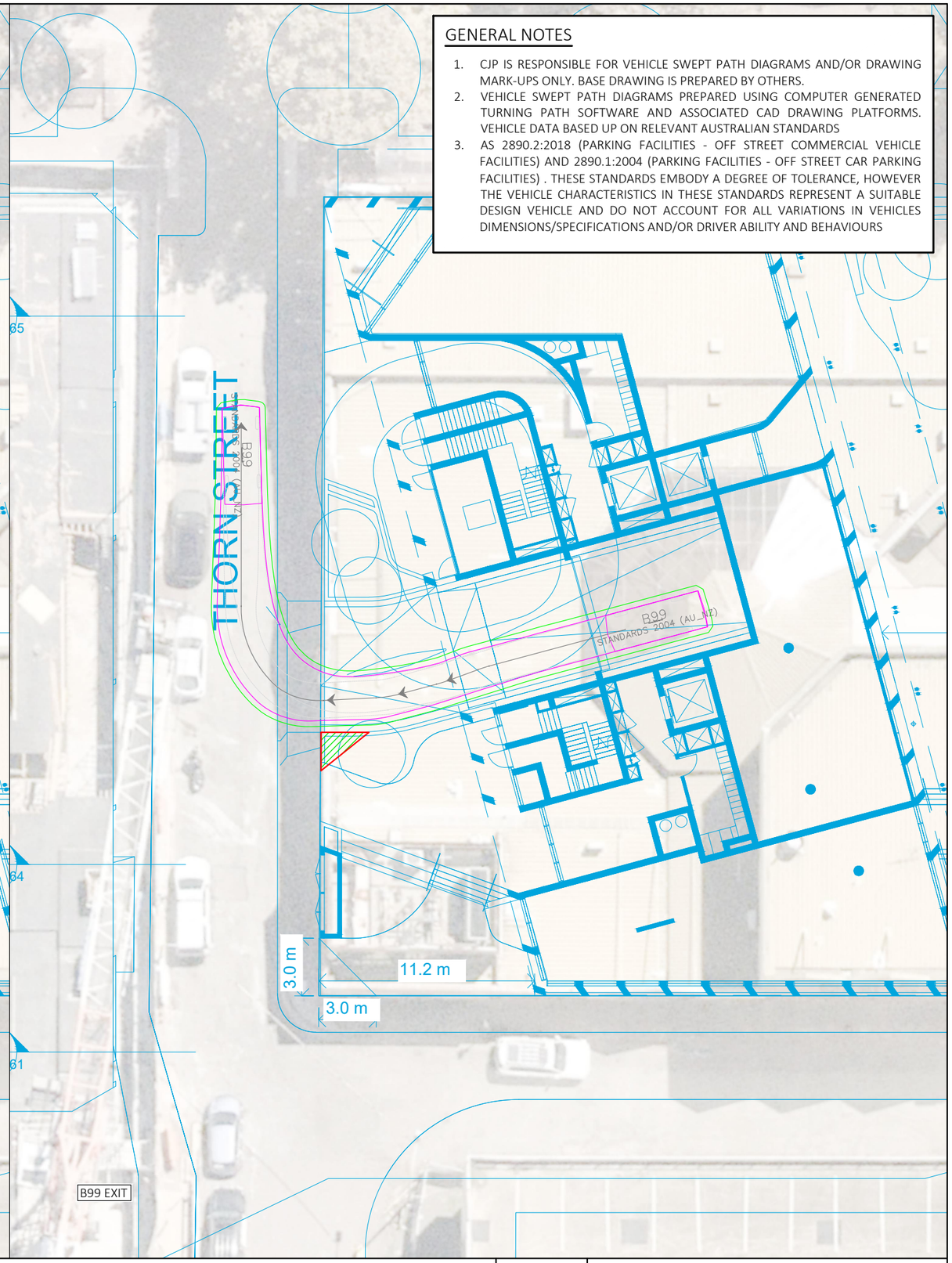
B99

	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES) AND 2890.1:2004 (PARKING FACILITIES - OFF STREET CAR PARKING FACILITIES) . THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS





Plotted by SY-Laptop

CJP CONSULTING ENGINEERS

CJP Consulting Engineers
PO Box 1184
Hunters Hill NSW 2110
M: 0415 256 233
E: info@cjpconsultingengineers.com.au

PRELIMINARY PLAN
FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY.
THE EXACT LOCATIONS SHALL BE PROVEN ON SITE.
ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.

NEWCASTLE EAST END
CAR PARK COMPLIANCE REVIEW - 3W GROUND
SWEPT PATH ASSESSMENT

SCALE 0 2.5 5.0 1:250 @ A3

DRAWING NO. 22064-D01-V5	SHEET NO. 05 OF 14
ISSUE DATE 7 November 2024	DRAWN BY X.DI
	REVIEWED BY C.PALMER

LEGEND:

PROPOSED CONVEX MIRROR

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES) AND 2890.1:2004 (PARKING FACILITIES - OFF STREET CAR PARKING FACILITIES) . THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS

THORN STREET

MORGAN STREET

16-18
NEWCOMEN ST

1
DA-PR-0365

1
DA-PR-0364

B99 ENTRY

B99 EXIT

ALL CARPARK SPACES DEDICATED TO RETAIL

RETAIL EV

5.20

0.95 3.05

B99

	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

4.91

0.92 2.80

B85

	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

Plotted by SY-Laptop

CJP CONSULTING ENGINEERS

CJP Consulting Engineers
PO Box 1184
Hunters Hill NSW 2110
M: 0415 256 233
E: info@cjpconsultingengineers.com.au

PRELIMINARY PLAN
FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY
THE EXACT LOCATIONS SHALL BE PROVEN ON SITE
ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.

NEWCASTLE EAST END
CAR PARK COMPLIANCE REVIEW - 3W AND 3E BASEMENT 1
SWEPT PATH ASSESSMENT

SCALE 0 4.0 8.0 1:400 @ A3

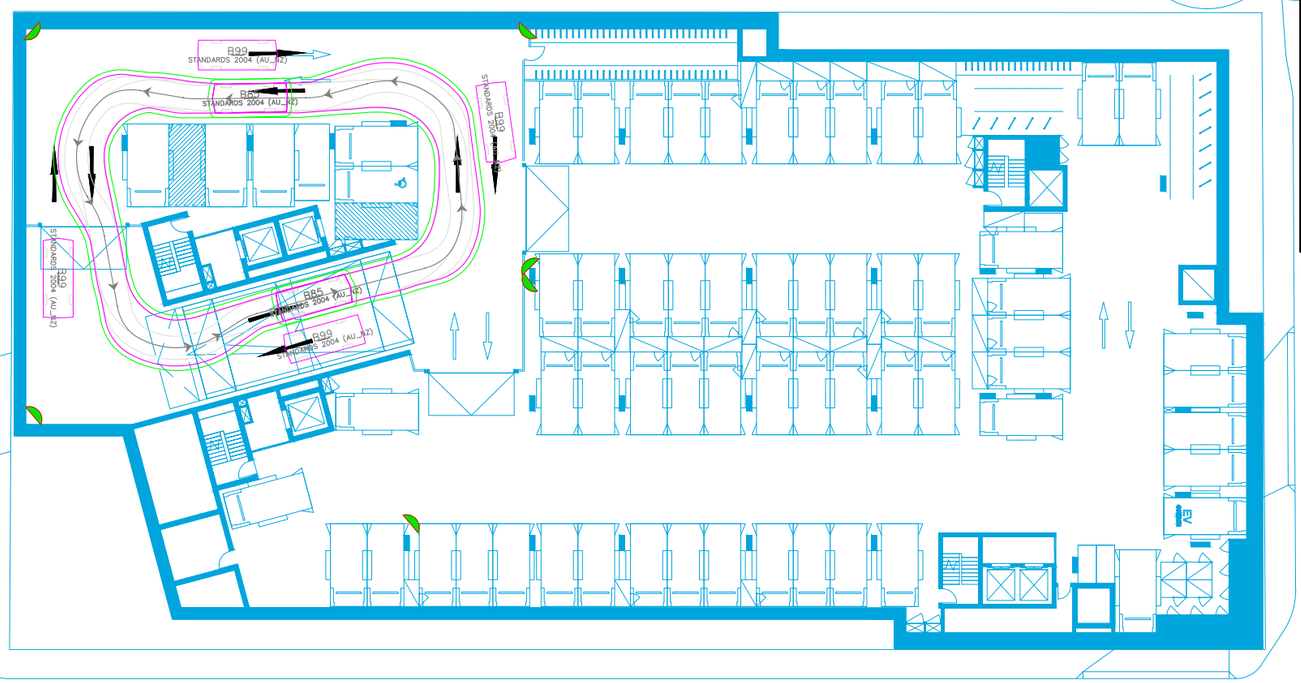
DRAWING NO. 22064-D01-V5	SHEET NO. 06 OF 14
ISSUE DATE 7 November 2024	DRAWN BY X.DI
	REVIEWED BY C.PALMER

LEGEND:

PROPOSED CONVEX MIRROR

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES) AND 2890.1:2004 (PARKING FACILITIES - OFF STREET CAR PARKING FACILITIES) . THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS



THORN STREET

MORGAN STREET

LAING STREET

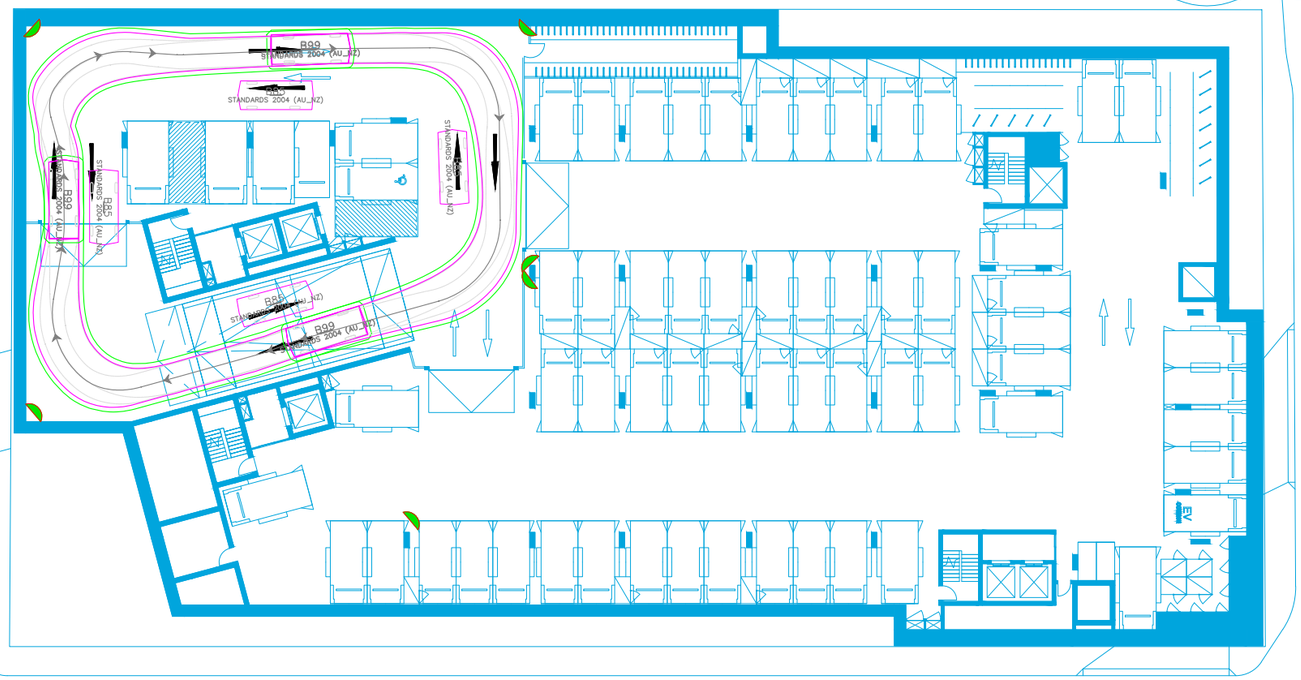
16-18 NEWCOMEN ST

1 DA-PR-0365

1 DA-PR-0364

B99 ENTRY

1 DA-PR-0361



THORN STREET

MORGAN STREET

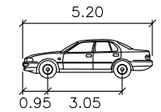
LAING STREET

1 DA-PR-0365

1 DA-PR-0364

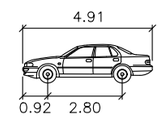
B99 EXIT

1 DA-PR-0361



B99

	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9



B85

	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

Plotted by JV-Laptop

CJP CONSULTING ENGINEERS

CJP Consulting Engineers
PO Box 1184
Hunters Hill NSW 2110
M: 0415 256 233
E: info@cjpconsultingengineers.com.au

PRELIMINARY PLAN

FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE PROVEN ON SITE. ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED

NEWCASTLE EAST END
CAR PARK COMPLIANCE REVIEW - 3W AND 3E BASEMENT 2
SWEPT PATH ASSESSMENT

SCALE 0 4.0 8.0 1:400 @ A3

DRAWING NO. 22064-D01-V5

SHEET NO. 07 OF 14

ISSUE DATE 7 November 2024

DRAWN BY X.DI

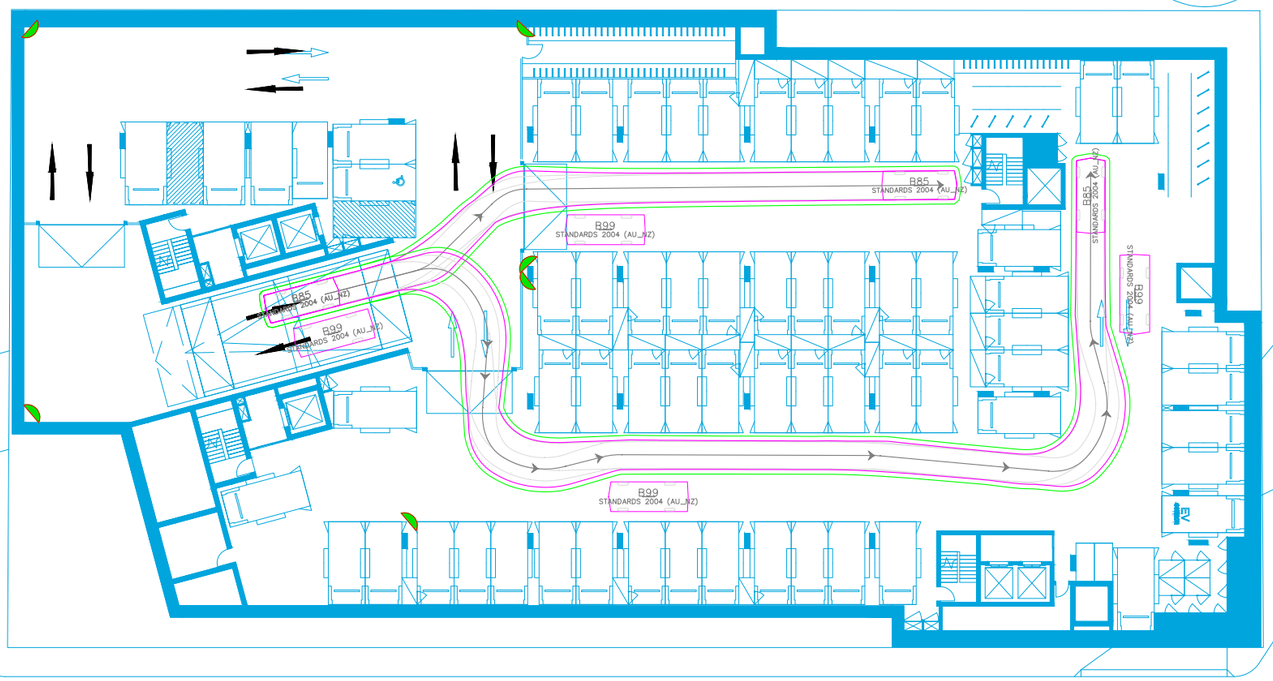
REVIEWED BY C.PALMER

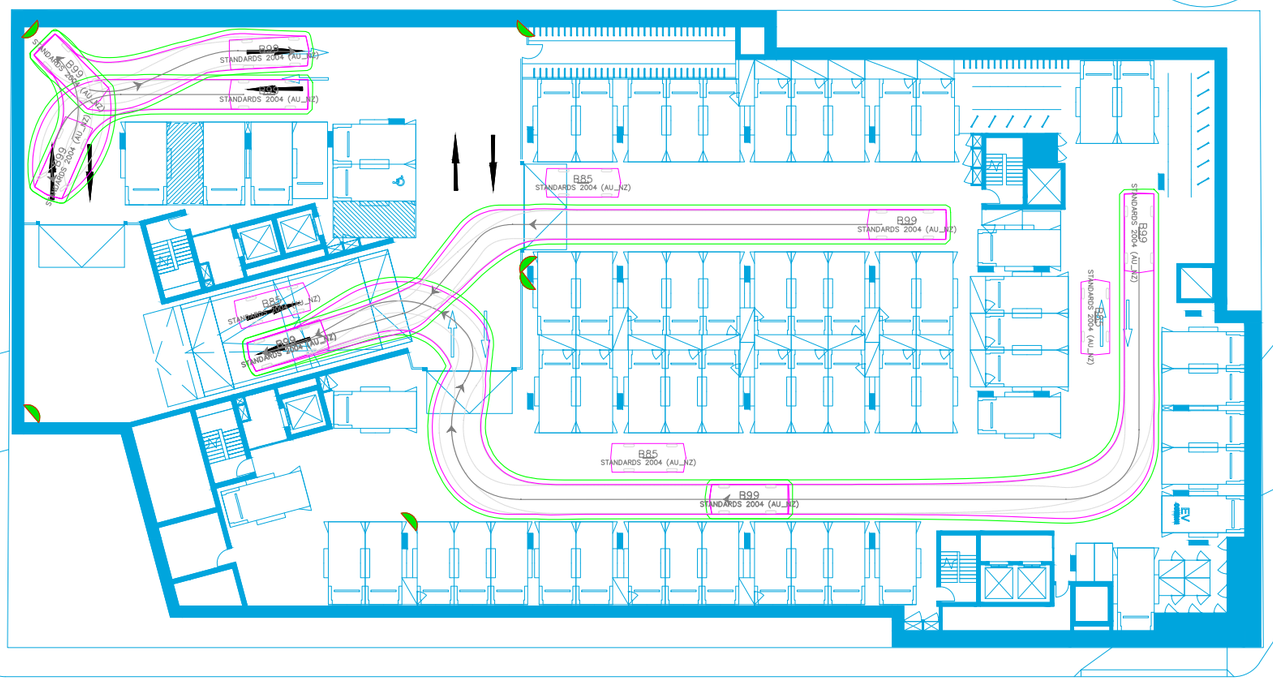
LEGEND:

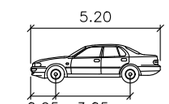
PROPOSED CONVEX MIRROR

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES) AND 2890.1:2004 (PARKING FACILITIES - OFF STREET CAR PARKING FACILITIES) . THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS







B99

	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

CJP CONSULTING ENGINEERS

CJP Consulting Engineers
PO Box 1184
Hunters Hill NSW 2110
M: 0415 256 233
E: info@cjpconsultingengineers.com.au

PRELIMINARY PLAN

FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE PROVEN ON SITE. ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED

NEWCASTLE EAST END
CAR PARK COMPLIANCE REVIEW - 3W AND 3E BASEMENT 2
SWEPT PATH ASSESSMENT

SCALE 0 4.0 8.0 1:400 @ A3

DRAWING NO. 22064-D01-V5	SHEET NO. 08 OF 14
ISSUE DATE 7 November 2024	DRAWN BY X.DI
	REVIEWED BY C.PALMER

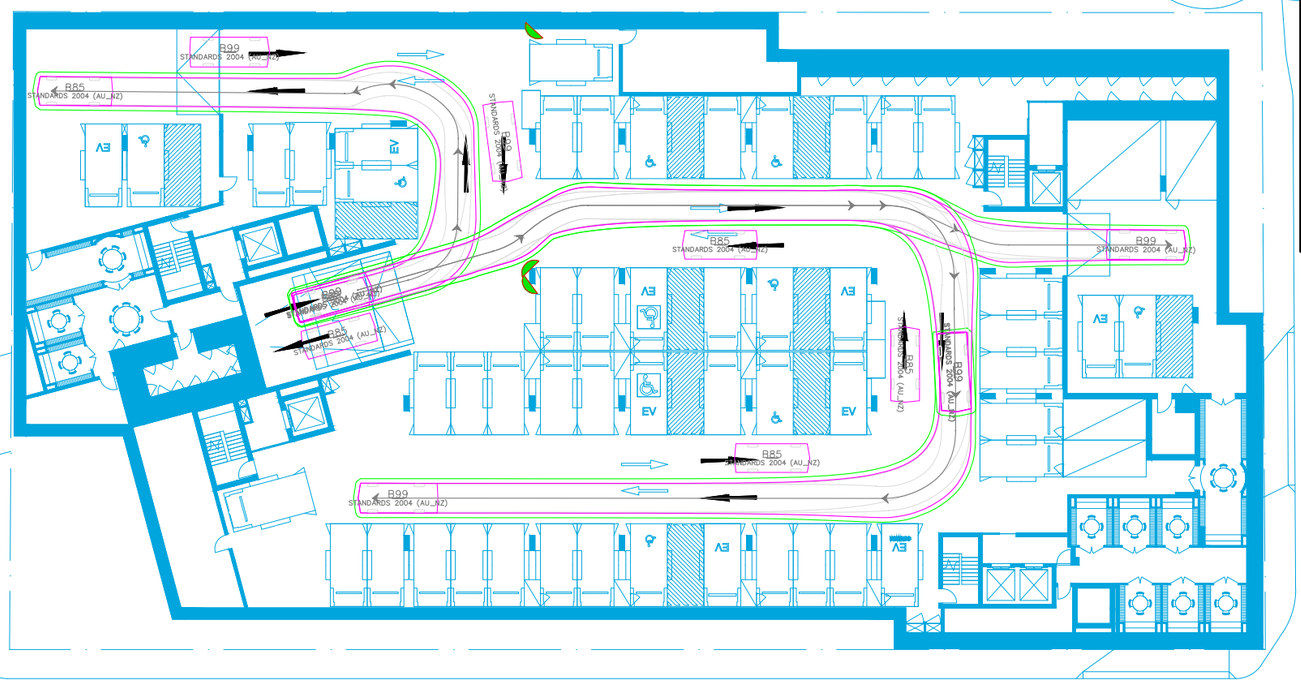
Plotted by JV-Laptop

LEGEND:

PROPOSED CONVEX MIRROR

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES) AND 2890.1:2004 (PARKING FACILITIES - OFF STREET CAR PARKING FACILITIES) . THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS



THORN STREET

MORGAN STR

LAING STREET

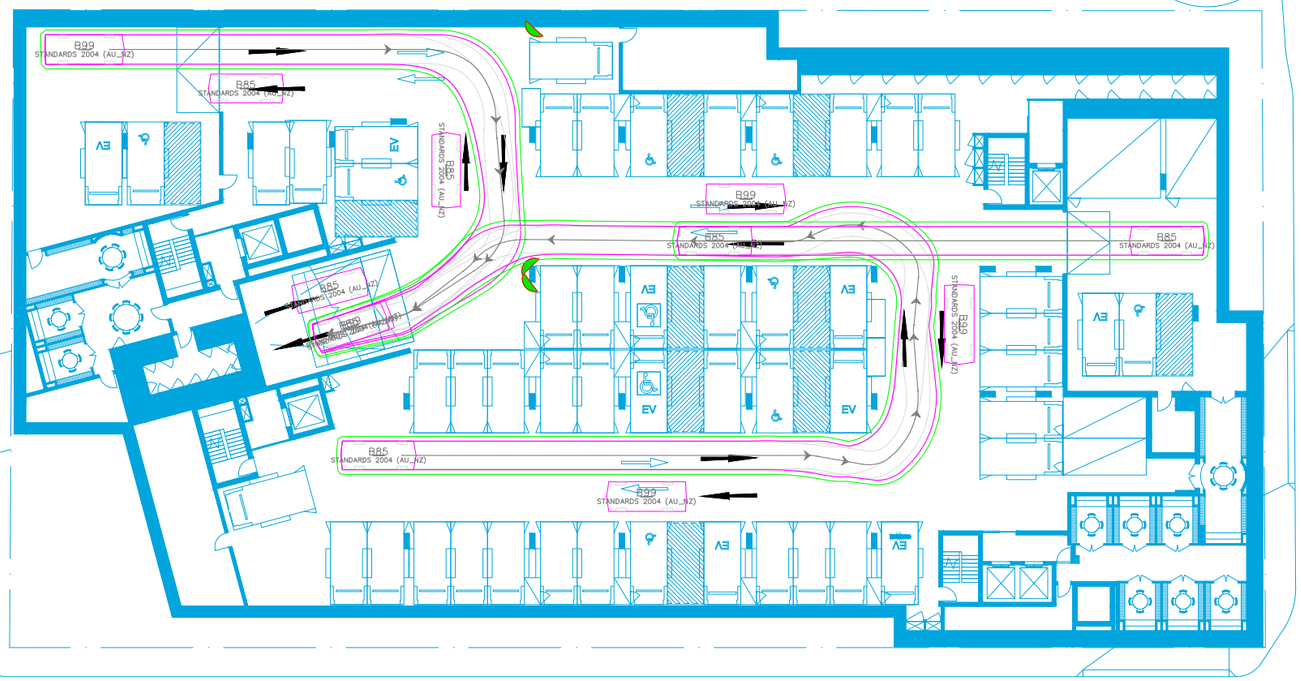
16-18 NEWCOMEN ST

1 DA-PR-0365

1 DA-PR-0364

1 DA-PR-0361

B99 ENTRY



THORN STREET

MORGAN STREET

LAING STREET

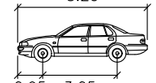
1 DA-PR-0365

1 DA-PR-0364

1 DA-PR-0361

B99 EXIT

5.20



0.95 3.05

B99

	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

4.91

0.92 2.80

B85

	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

Plotted by JV-Laptop

CJP CONSULTING ENGINEERS

CJP Consulting Engineers
PO Box 1184
Hunters Hill NSW 2110
M: 0415 256 233
E: info@cjpconsultingengineers.com.au

PRELIMINARY PLAN

FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE PROVEN ON SITE. ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED

NEWCASTLE EAST END
CAR PARK COMPLIANCE REVIEW - 3W AND 3E BASEMENT 3
SWEPT PATH ASSESSMENT

SCALE 0 4.0 8.0 1:400 @ A3

DRAWING NO. 22064-D01-V5

SHEET NO. 09 OF 14

ISSUE DATE 7 November 2024

DRAWN BY X.DI

REVIEWED BY C.PALMER

LEGEND:

PROPOSED CONVEX MIRROR

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES) AND 2890.1:2004 (PARKING FACILITIES - OFF STREET CAR PARKING FACILITIES) . THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS

DA-PR-0301

ET

3.1 m

8.6 m

10.0

8.5

5.5

14.0

12.0

5.8

6.1

EV

5.8

5.8

0.3

5.5

0.3

5.8

1.0

1.6

RETAIL RETAIL RETAIL RETAIL RETAIL

PROVIDE 2.5m x 2m CLEAR SIGHT LINES AT THE PROPERTY LINE TO ENSURE ADEQUATE VISIBILITY TO PEDESTRIANS FOR EXITING VEHICLES

Plotted by SY-Laptop

CJP CONSULTING ENGINEERS

CJP Consulting Engineers
PO Box 1184
Hunters Hill NSW 2110
M: 0415 256 233
E: info@cjpconsultingengineers.com.au

PRELIMINARY PLAN

FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY
THE EXACT LOCATIONS SHALL BE PROVEN ON SITE.
ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.

NEWCASTLE EAST END
CAR PARK COMPLIANCE REVIEW - 4S BASEMENT 1
CONCEPT LAYOUT

N

SCALE 0 2.5 5.0 1:250 @ A3

DRAWING NO. 22064-D01-V5 | SHEET NO. 10 OF 14

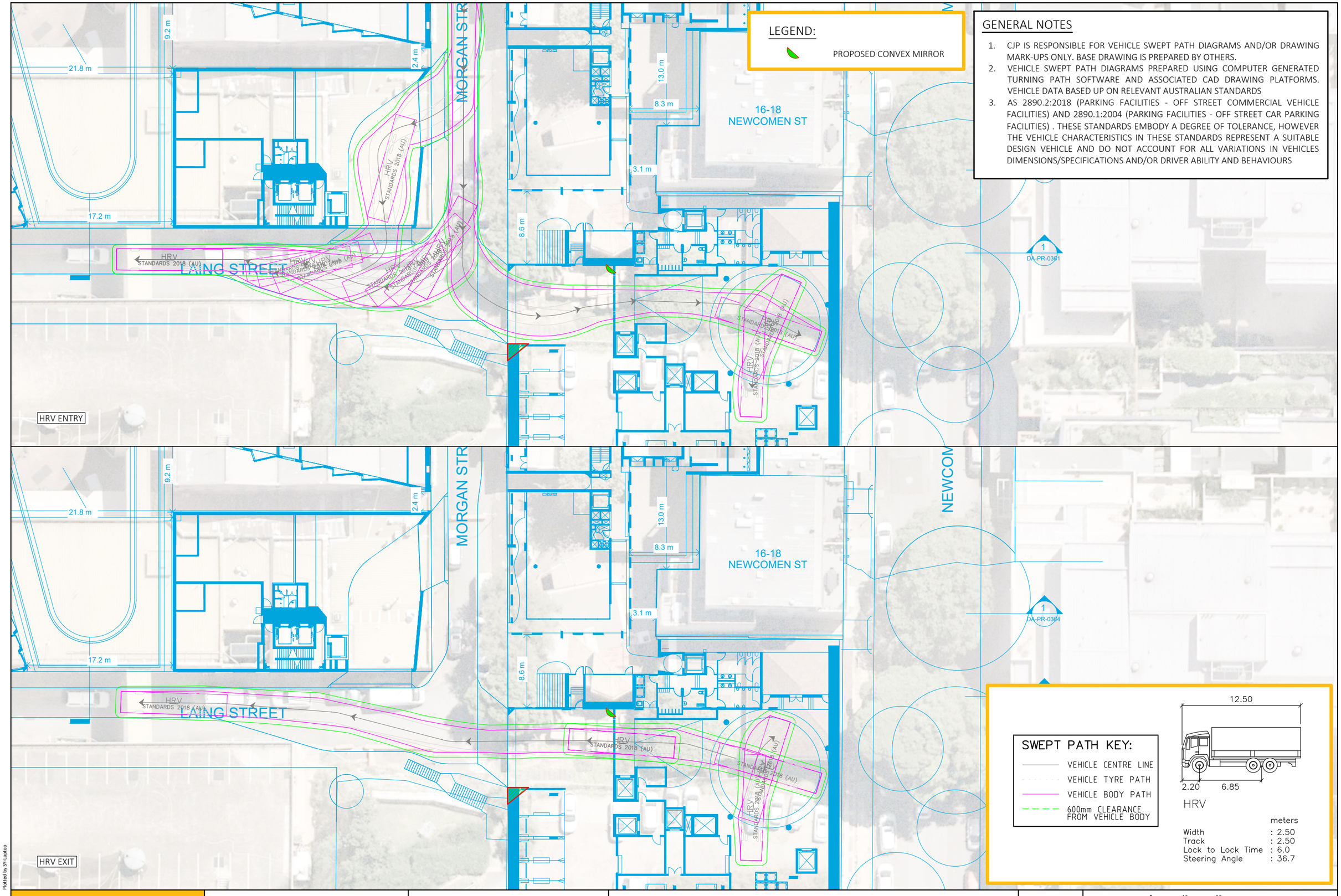
ISSUE DATE 7 November 2024 | DRAWN BY X.DI | REVIEWED BY C.PALMER

LEGEND:

PROPOSED CONVEX MIRROR

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES) AND 2890.1:2004 (PARKING FACILITIES - OFF STREET CAR PARKING FACILITIES) . THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS



SWEPT PATH KEY:

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

HRV

meters	
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.7

Plotted by SY-Laptop

CJP CONSULTING ENGINEERS

CJP Consulting Engineers
PO Box 1184
Hunters Hill NSW 2110
M: 0415 256 233
E: info@cjpconsultingengineers.com.au

PRELIMINARY PLAN

FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY.
THE EXACT LOCATIONS SHALL BE PROVEN ON SITE.
ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.

NEWCASTLE EAST END
CAR PARK COMPLIANCE REVIEW - 4S BASEMENT 2 & 3
CONCEPT LAYOUT

SCALE 0 4.0 8.0 1:400 @ A3

DRAWING NO. 22064-D01-V5	SHEET NO. 11 OF 14
ISSUE DATE 7 November 2024	DRAWN BY X.DI
	REVIEWED BY C.PALMER

SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

B99

	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

B85

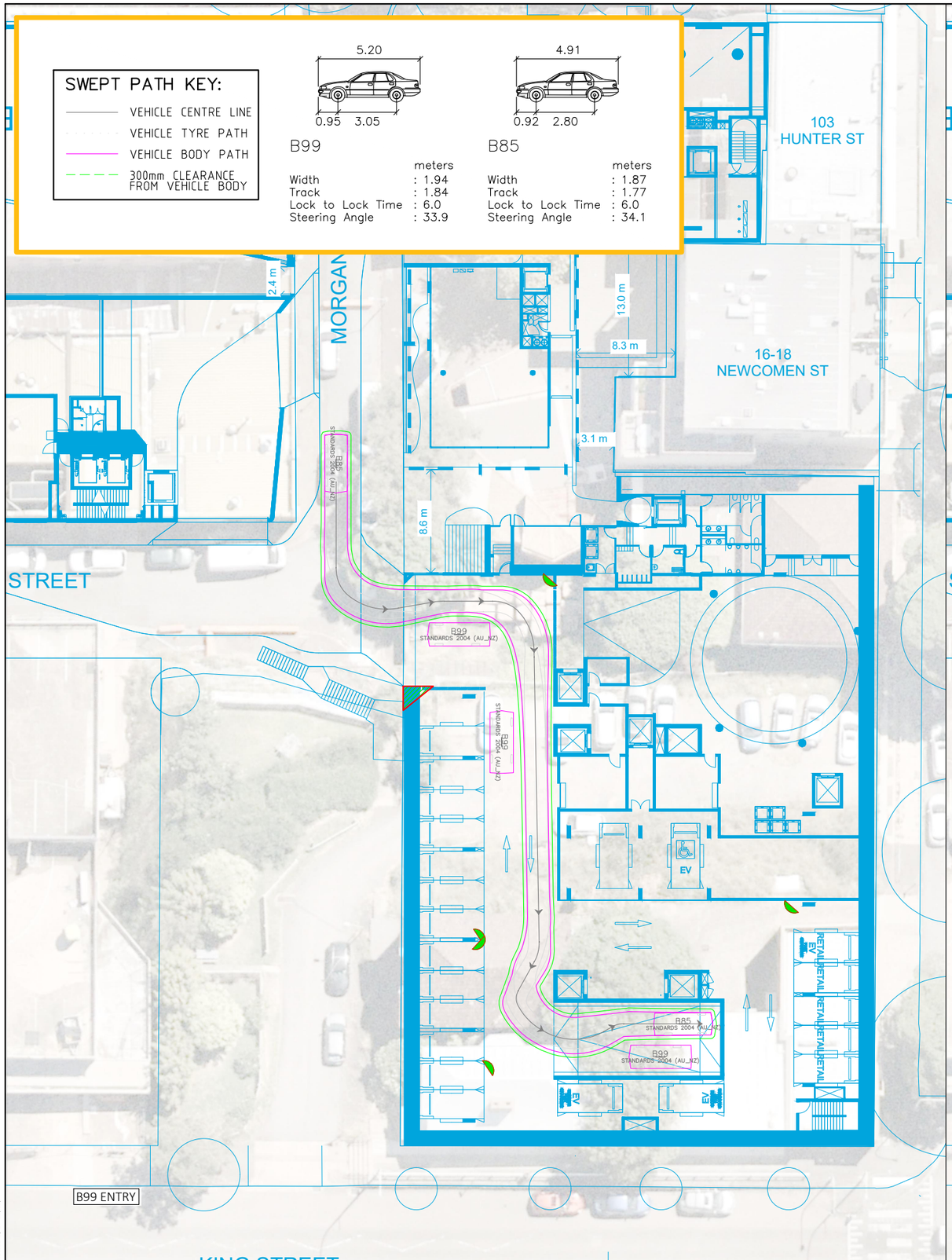
	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

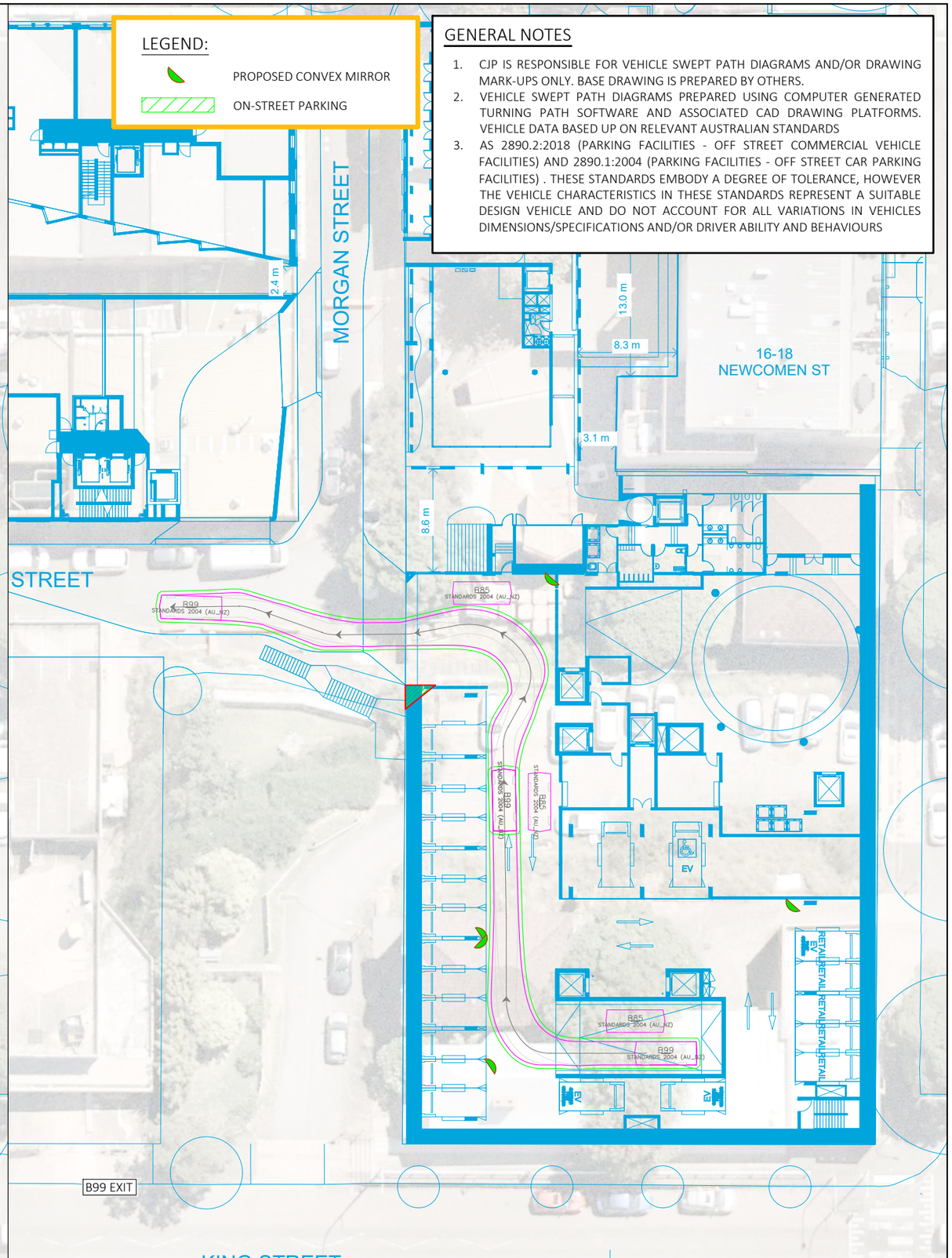
LEGEND:

- PROPOSED CONVEX MIRROR
- ON-STREET PARKING

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES) AND 2890.1:2004 (PARKING FACILITIES - OFF STREET CAR PARKING FACILITIES) . THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS





Plotted by SY-Laptop

CJP CONSULTING ENGINEERS

CJP Consulting Engineers
PO Box 1184
Hunters Hill NSW 2110
M: 0415 256 233
E: info@cjpconsultingengineers.com.au

PRELIMINARY PLAN
FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY.
THE EXACT LOCATIONS SHALL BE PROVEN ON SITE.
ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.

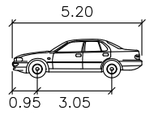
NEWCASTLE EAST END
CAR PARK COMPLIANCE REVIEW - 4S BASEMENT 1
SWEPT PATH ASSESSMENT

SCALE 0 4.0 8.0 1:400 @ A3

DRAWING NO. 22064-D01-V5	SHEET NO. 12 OF 14
ISSUE DATE 7 November 2024	DRAWN BY X.DI
	REVIEWED BY C.PALMER

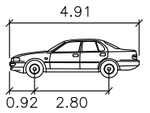
SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY



B99

	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9



B85

	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

LEGEND:

PROPOSED CONVEX MIRROR

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES) AND 2890.1:2004 (PARKING FACILITIES - OFF STREET CAR PARKING FACILITIES) . THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS

NEWCOMEN STREET

MORGAN STREET

16-18 NEWCOMEN ST

8.3 m

B99 ENTRY

B99 EXIT

KING STREET

Plotted by SY-Laptop

CJP CONSULTING ENGINEERS

CJP Consulting Engineers
PO Box 1184
Hunters Hill NSW 2110
M: 0415 256 233
E: info@cjpconsultingengineers.com.au

PRELIMINARY PLAN

FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY
THE EXACT LOCATIONS SHALL BE PROVEN ON SITE.
ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.

NEWCASTLE EAST END
CAR PARK COMPLIANCE REVIEW - 4S BASEMENT 2
SWEPT PATH ASSESSMENT

SCALE 0 4.0 8.0 1:400 @ A3

DRAWING NO. 22064-D01-V5	SHEET NO. 13 OF 14
ISSUE DATE 7 November 2024	DRAWN BY X.DI
	REVIEWED BY C.PALMER

SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

B99

	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

B85

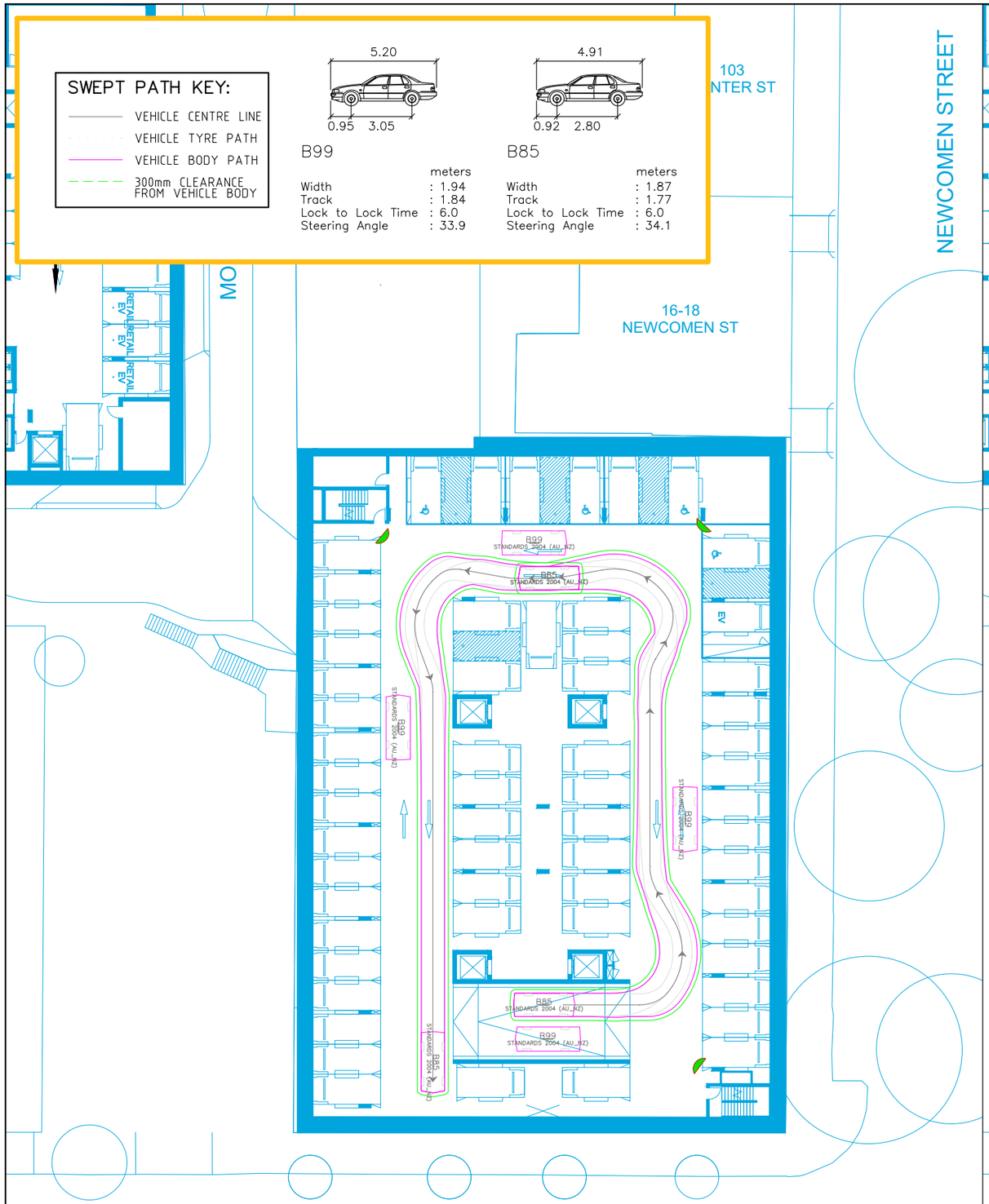
	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

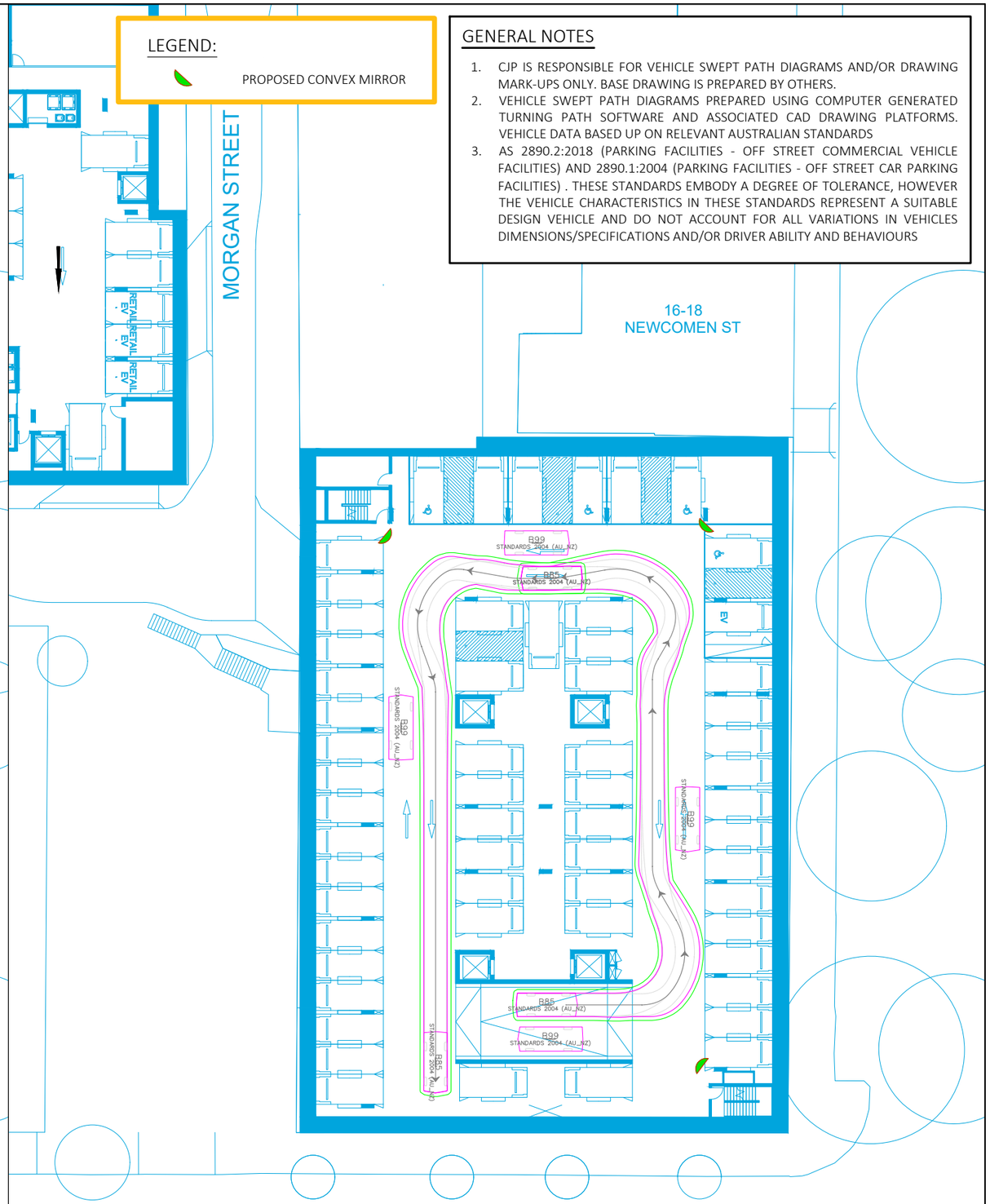
LEGEND:

PROPOSED CONVEX MIRROR

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES) AND 2890.1:2004 (PARKING FACILITIES - OFF STREET CAR PARKING FACILITIES) . THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS





Plotted by SY-Laptop

CJP CONSULTING ENGINEERS

CJP Consulting Engineers
PO Box 1184
Hunters Hill NSW 2110
M: 0415 256 233
E: info@cjpconsultingengineers.com.au

PRELIMINARY PLAN

FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY.
THE EXACT LOCATIONS SHALL BE PROVEN ON SITE.
ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.

NEWCASTLE EAST END
CAR PARK COMPLIANCE REVIEW - 4S BASEMENT 3
SWEPT PATH ASSESSMENT

SCALE 0 4.0 8.0 1:400 @ A3

DRAWING NO. 22064-D01-V5	SHEET NO. 14 OF 14
ISSUE DATE 7 November 2024	DRAWN BY X.DI
	REVIEWED BY C.PALMER