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Boggo Road CRR PDA Planning – Transport Summary Report

Cross River Rail Delivery Authority – Transport Summary - Infrastructure Plan Background Report

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1 Introduction

1.1 Background

This transport network summary report provides an assessment of the existing roads, public transport (PT) and active transport (AT) (pedestrians and cyclists) infrastructure supporting the Boggo Road Cross River Rail (CRR) Priority Development Area (PDA) and opportunities to enhance provision to ensure:

- Access to/from the new Boggo Road CRR Station
- Access to/from and between future Boggo Road CRR PDA developments
- Access within the wider network
- Increased AT and PT mode share as a result of both the above.

The Queensland Government's CRR Precincts Delivery Strategy (The Strategy) sets a vision for each CRR Station Precinct that is aligned to the Government's policy priorities. The Strategy sets out a vision for the Boggo Road Precinct to become a world class innovation precinct, specialising in health, science and education jobs of the future.

This is to be achieved through enhancing the already established world-class health and research facilities with a focus on health, science, and education services. The Boggo Road CRR PDA will reinforce and maximise the precinct's role as a regionally significant economic cluster and enhance its reputation as a globally significant innovation precinct, facilitating skilled employment.

To support the Government's vision for the precinct, the current Boggo Road CRR PDA was declared by the Minister for Economic Development Queensland (MEDQ) on 2 October 2020 and an Interim Land Use Plan (ILUP) given effect. The Boggo Road CRR PDA was declared to assist with the delivery of the CRR Project's broader objectives.

Significant existing facilities and government land holdings are located within the Boggo Road CRR PDA which will support the continued focus and investment in health, science, innovation, research and education services. These facilities and land holdings include the Boggo Road Knowledge and Innovation Precinct (which includes the Ecosciences Precinct, Dutton Park Police Station and the heritage listed Boggo Road Gaol), the Pharmacy Australia Centre of Excellence (PACE), the Translational Research Institute (TRI) and the PAH.

The Boggo Road CRR PDA is generally bounded by Burke Street to the north, Cornwall Street to the south, Annerley Road to the west, and Ipswich Road to the east. The Boggo Road CRR PDA does not include Dutton Park State Primary School or the new Brisbane South State Secondary College (BSSSC) although these facilities have an important relationship to the health, science, innovation, research and education focus of the Boggo Road CRR PDA.

The MEDQ has delegated certain functions and powers under the Economic Development Act 2012 to the Cross River Rail Delivery Authority (CRRDA) including to plan, carry out, promote or coordinate activities to facilitate economic development and development for community purposes. The CRRDA is preparing a Development Scheme for the Boggo Road CRR PDA which will be applicable to development on land within the boundaries of the Boggo Road CRR PDA. From the date of its approval, the development scheme will replace the Boggo Road CRR PDA ILUP.

1.2 Study Area

The Boggo Road CRR PDA, identified in Figure 1-1, is approximately 39 hectares. It is a transit rich environment that includes a significant public transport interchange incorporating the new underground Boggo Road CRR station and tunnels (CRR Tunnels, Station and Development – CRR TSD), existing Park Road surface rail station and the CRR Rail Integration and Systems (CRR RIS) delivered new Dutton Park Station (providing improved

access to the PAH), and rail lines (Beenleigh/Gold Coast and Cleveland lines), and existing Eastern Busway stations (Princess Alexandra Hospital (PAH) and Boggo Road) and tunnels. The Boggo Road CRR PDA also includes significant existing and planned AT infrastructure including the PAH cycleway and the new Central Active Transport Connection Bridge (Central Bridge) which is being delivered as part of the CRR project. Figure 1-1 shows the Boggo Road CRR PDA Boundary as declared in October 2020.

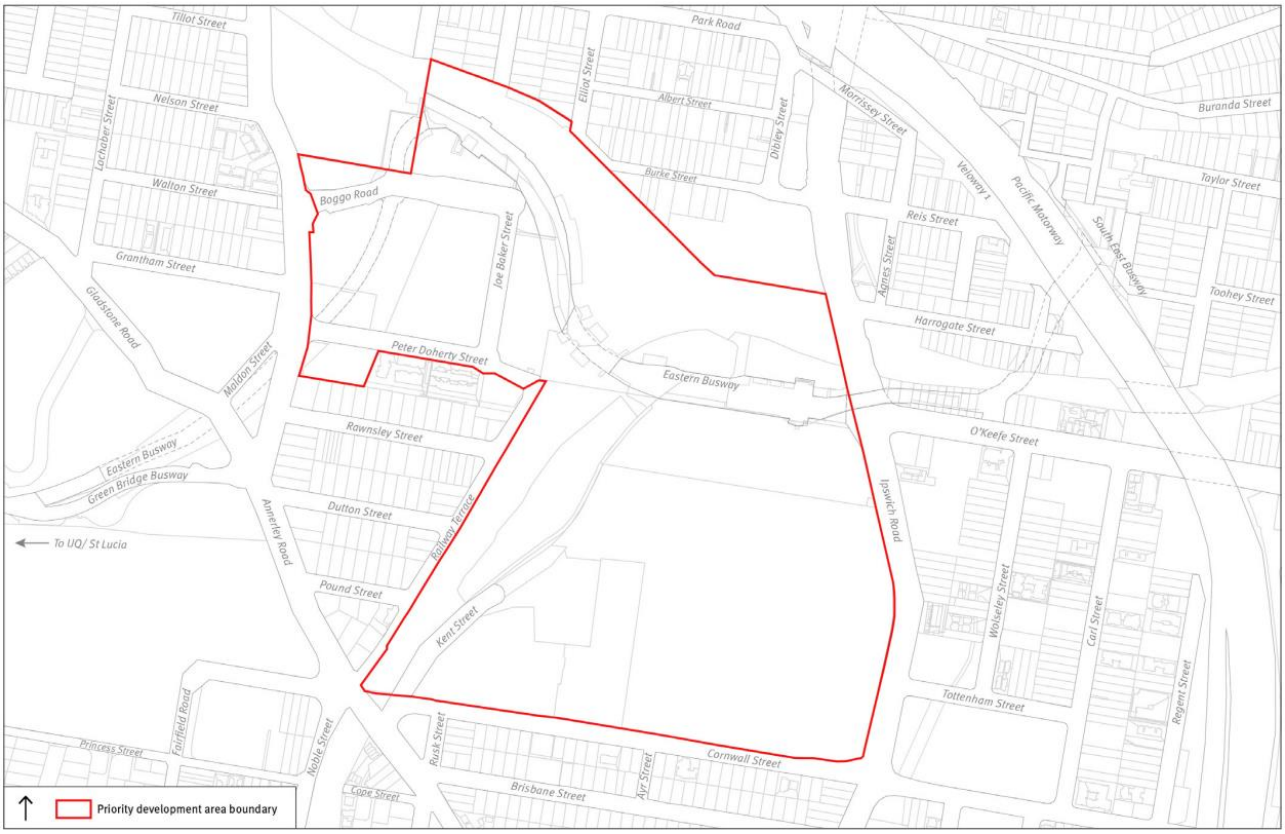


Figure 1-1: Boggo Road CRR PDA Boundary – Prepared by CRRDA (Map 1)

1.3 Objectives

This report provides a summary assessment of roads, PT and AT network infrastructure and identifies potential upgrades required to service future proposed development within the Boggo Road CRR PDA and the surrounding network. The outcomes of this report will assist in informing infrastructure plans for the Boggo Road CRR PDA Development Scheme and its supporting material, including a Development Charges and Offsets Plan (DCOP). This report sets out key transport infrastructure required to:

- Provide access and movement for all transport modes, with safety and convenience for walking and cycling prioritised over private and service vehicles
- Not impact on the efficiency or safety of surrounding transport networks
- Provide carparking and servicing to meet the functional requirements of the Boggo Road CRR PDA.

1.4 Assessment Methodology

This assessment was undertaken via onsite inspections, a desktop review of relevant documents research, and applying this to assess the proposed transport infrastructure. A range of relevant literature was reviewed, including:

- Brisbane City Council (BCC) City Plan 2014

- BCC Active Transport Strategy 2012-2026
- BCC Road Planning Notes
- Department of Transport and Main Roads (TMR): South East Queensland Principal Cycle Network Plan (SEQPCNP)
- TMR: Guideline, Selection and design of cycle tracks
- TMR: Queensland Walking Strategy 2019-2029
- TMR: Queensland Cycling Strategy 2017-2027
- Metro South Heath (MSH) PAH Masterplanning and technical reports
- Approved BCC development applications (DAs)
- Approved Ministerial Infrastructure Designation (MID) schemes
- Queensland Education Brisbane South State Secondary College (BSSSC) Masterplanning and technical reports.

The data, tools and research applied to undertake a desktop review of the proposed transport infrastructure include:

- Austraffic Classified Turn Counts 2021
- TTM Classified Turn Counts 2021 (Provided by MSH)
- TMR Open Data – Annual Cyclist Counts
- TransLink Ticketing Data 2019
- Brisbane Central Area Saturn Model (BCASM)
- Brisbane Strategic Transport Model (BSTM)
- Level of Service for Metrics (for Network Operations Planning) by Austroads (AP-R47515), Jan 2015
- SIDRA 9 to calculate intersection operation and performance
- Strava Global Heatmaps.

1.5 Desired Level of Service

In planning for future infrastructure provision and determining appropriate upgrades, it is noted that BCC's transport network Desired Standard of Service (DSS) contained in Part 4 – Local Government Infrastructure Plan (LGIP) of BCC's City Plan 2014 sets the following benchmarks:

- LGIP DSS Section 4.4.2.1 (d) – Road Networks:
    - (i) The off-peak operation of the road network provides a Level of Service (LoS) C
    - (ii) The peak period operation of the road network provides a LoS C, except where the road network is highly constrained and the use of alternative modes of transport in these areas is anticipated in the mode share targets stated in Map C3 Transport Network DSS Mode Share Targets.
- LGIP DSS Section 4.4.2.2 – Pathway Network:
    - (a) Provide a safe, attractive and convenient pedestrian and cycle pathway network that links residential areas to employment areas, major activity nodes, education facilities and PT interchanges, thereby encouraging walking and cycling as acceptable travel alternatives

(b) Plan, design and deliver the pathway network and associated infrastructure to comply with the following:

(i) The pathway network classification (as identified on the Bicycle network overlay map), connectivity, safety and access in accordance with the Infrastructure design planning scheme policy and the Bicycle network overlay code

(ii) Infrastructure design planning scheme policy (Chapters 1 and 4)

(iii) Bicycle network overlay code

(iv) Pathways are planned to provide for future demand needs in accordance with the Bicycle network overlay map and the Bicycle network overlay code.

It is noted that the Pathway Network does not apply a LoS, however, LoS C has been considered for typical commuter peaks noting a better LoS may be appropriate within and surrounding the PAH. Whilst future proofing for the use of micro-transport within the Boggo Road CRR PDA could encourage greater integration between Precinct 1 and Precinct 3 as described in section 2.1.

Future upgrades to or new AT infrastructure are recommended as options for consideration and discussion. These options have considered the feasibility of connections to the existing AT infrastructure internal and external to the Boggo Road CRR PDA.

For roads and PT, given the Boggo Road CRR PDA is within an existing concentrated urban environment which includes built-up land-uses along surrounding arterials and existing network congestion, there are limited opportunities to upgrade existing infrastructure. The assessment criteria of no net worsening of the physical condition or operating performance of state transport infrastructure and the associated transport network has been applied to this assessment. BCC road planning notes have been provided which are not committed works but identify the intention to plan for future network visions and provisioning of corridors for all transport modes.

1.6 Exclusions and Limitations

This report is not providing detailed design of proposed future transport infrastructure or built form details such as carparking and service requirements. This report has assessed a Baseline Potential Development Scenario with potential land use yields and staging.

Further, the final land-use proportions are unknown, and the values outlined within this report are indicative for planning purposes. Finally, whilst the PAH campus is within the Boggo Road CRR PDA and assumptions have been made to accommodate this assessment at the time of writing, it is noted that PAH Masterplanning is being revised, and includes a transport assessment and a car parking management strategy which in turns drives a traffic impact assessment (TIA), and if required, any mitigation measures.

2 Boggo Road CRR PDA

2.1 Overview

2.1.1 Transport Vision and Connectivity by Precinct

The Boggo Road CRR PDA created the opportunity to reinforce the Precinct as a key southern city destination and transport interchange with direct connections to the CRR rail network and Brisbane Metro services.

New and enhanced high-quality, sub-tropical, public realm will provide improved connectivity for pedestrians and cyclists between rail, bus and major institutional facilities within and surrounding the precinct. New civic spaces will be vibrant, open, and green, and revitalisation of landmarks such as the Boggo Road Gaol will celebrate the precinct's unique history and identity and contribute to its distinct character.

The current draft proposed Boggo Road CRR PDA Development Scheme (August 2021) refers to the Boggo Road CRR PDA being made up of three precincts, each having its own precinct intent, preferred uses and sub-areas. Figure 2-1 shows the Boggo Road CRR PDA boundary and describes the intent for each of the three precincts defined within the Boggo Road CRR PDA.

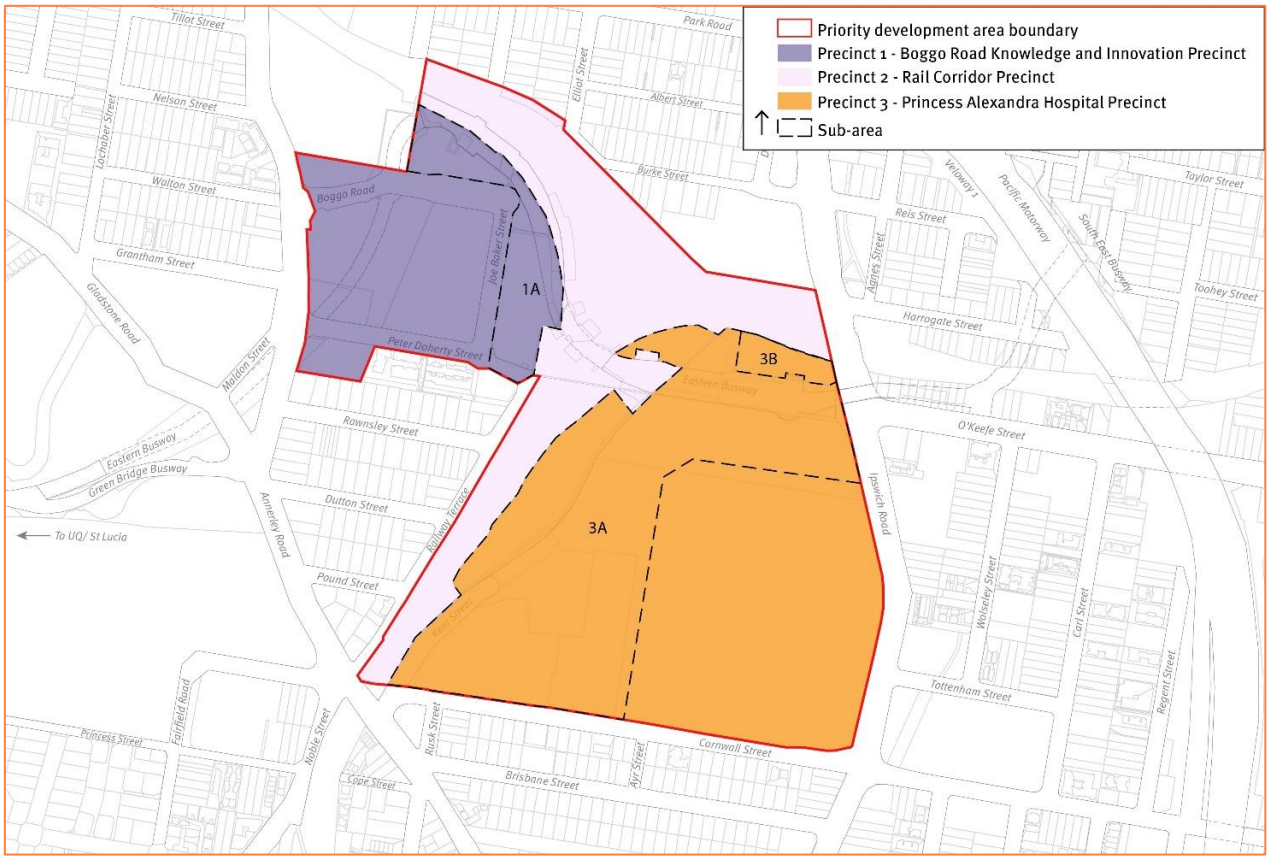


Figure 2-1: Boggo Road CRR PDA draft Proposed Development Scheme – Precinct Boundary Map (10/08/2021) – Prepared by Place Design Group

2.1.1.1 Precinct 1 – Boggo Road Knowledge and Innovation Precinct (Boggo Road Precinct) – Precinct Intent

This is a vibrant mixed-use precinct, with concentration on knowledge, research and innovation activities integrated with high-quality public realm. The precinct will be a high frequency transit destination and thriving hub of activity, providing a memorable and engaging experience for commuters, workers, visitors, students, and local community. The precinct is not intended to accommodate additional residential development, however, a site has an existing approved development application (DA) (lodged with Brisbane City Council (BCC) prior to the Boggo Road CRR PDA being declared) for up to 82 units.

2.1.1.2 Precinct 2 – Rail Corridor Precinct – Precinct Intent

This precinct is intended to maintain the primary function of accommodating key state transport corridors, including the heavy railway and busway corridors that traverse the Boggo Road CRR PDA. Through the delivery of the Central Bridge, the precinct will serve an important role in resolving a complex physical barrier between Boggo Road and PAH Precincts by improving AT functionality and access.

The precinct will maintain appropriate interfaces to development and infrastructure both within the precinct, and as it interfaces with the Boggo Road Precinct and PAH Precinct. Major development activity beyond core transit functions is not readily anticipated within the precinct.

2.1.1.3 Precinct 3 – Princess Alexandra Hospital (PAH) Precinct – Precinct Intent

This precinct is anchored by the PAH, a national leading tertiary health care centre and associated world-class academic and research institutions, the TRI and PACE. The continued growth and advancement of these major health and knowledge facilities will drive renewal and redevelopment across the precinct.

The precinct will accommodate new hospital and research related development and facilities that respond to the changing community health needs, optimised clinical operations and renewal of ageing buildings or non-essential uses. Through staged renewal and redevelopment, the precinct will provide new and enhanced public spaces, improved wayfinding, and support complementary uses and improved amenity for patients, employees, and visitors. Development within Sub-Area 3A will accommodate clinical uses and a greater intensity of research, innovation, and allied commercial activity, situated along the rail corridor, and leveraging off the improved AT functionality of the Central Bridge.

2.2 Land Use Scenario and Indicative Strategy

The land use mix for the Boggo Road CRR PDA is anticipated to be predominantly office, Hospital/health, research, and education, with a minor amount of residential, retail and commercial uses. The Baseline Potential Development Scenario – Reference Scheme and the potential land uses are as listed in Table 2-1 noting it is a reference scheme and subject to change both in scale and timing. Whilst Appendix C includes the potential development yields and indicative staging plans for Boggo Road CRR PDA planning, there are three (3) potential development stages and associated sites being investigated, as illustrated below in Figure 2 1.

Table 2-1: Boggo Road CRR PDA Potential Land Uses (GFA) and Units – Reference Scheme (Indicative Only)

Stage (Timing)	Building Name	Land Use	GFA/Dwelling	Units
Stage 2 (2025 – 2026)	E-01	Office	25,855	GFA
	E-04	Retail	1,935	GFA
		Commercial	2,550	GFA
	E-05	Residential	82	Dwellings
	TRI2.0	Office	6,616	GFA
Stage 3 (2027 – 2031)	E-02	Office	20,544	GFA
	E-03	Office	19,308	GFA
	PAH-9	Office	36,036	GFA
	R-01	Health	14,550	GFA
	PAH-05	Hospital	39,220	GFA
Stage 4 (2032 – 2041)	R-02	Research	9,570	GFA
	PACE3	Office	8,500	GFA
	PAH-2	Hospital	32,724	GFA
	PAH-1	Hospital	22,620	GFA
	PAH-6	Hospital	14,288	GFA
	PAH-8	Hospital	26,040	GFA

Stage (Timing)	Building Name	Land Use	GFA/Dwelling	Units
	PAH-7	Health	26,505	GFA
	PAH-10	Health	9,495	GFA
	PAH-3A	Hospital	7,000	GFA
	PAH-3B	Hospital	18,000	GFA
	E-06	Office	10,800	GFA

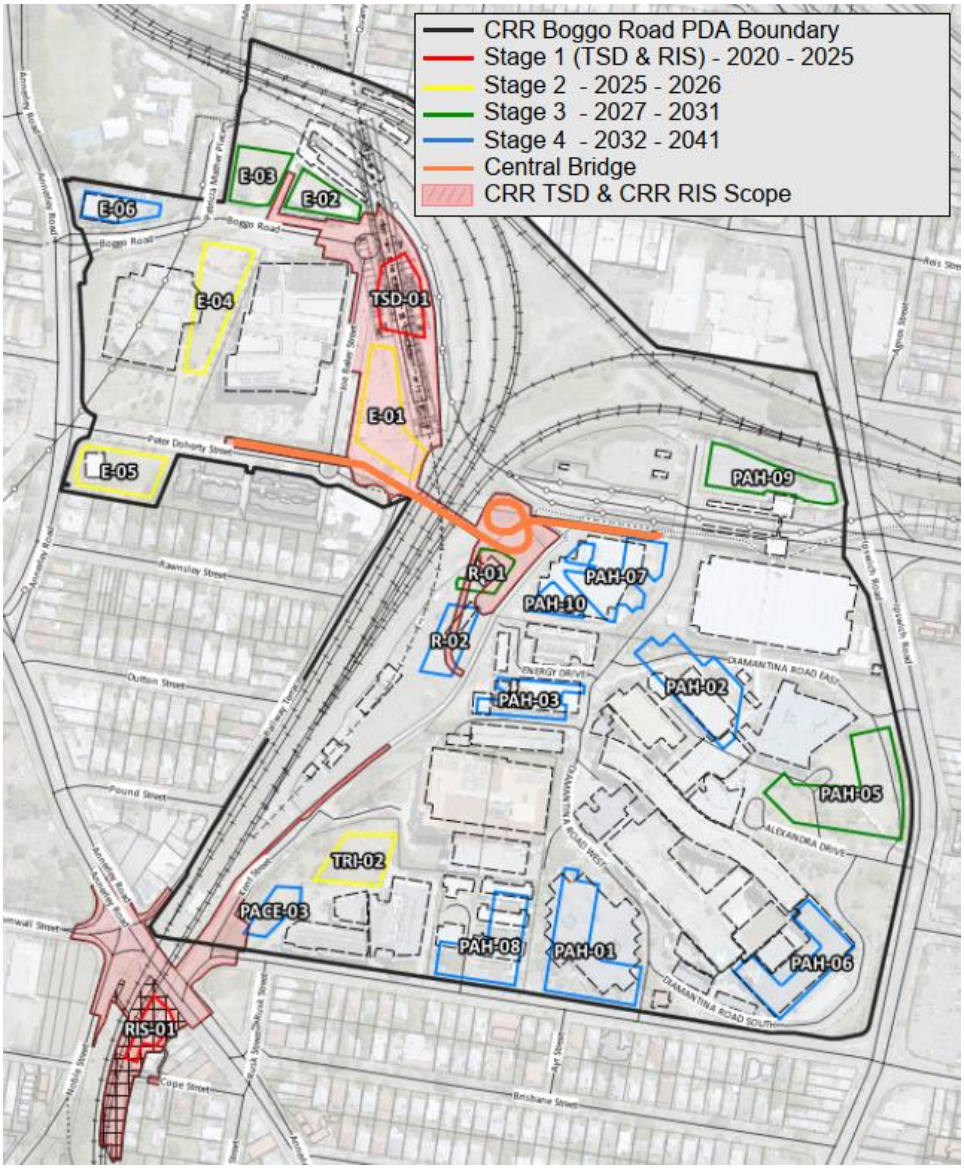


Figure 2-2: Boggo Road CRR PDA Potential Future Development Sites – Reference Scheme

Note, future PDA potential development opportunity sites and staging are conceptual and indicative only for infrastructure network analysis purposes.

Each of these land uses will generate some traffic demand, however, given the Boggo Road CRR PDA has access to excellent PT accessibility with three (3) existing major PT stations and AT infrastructure, it is expected that a significant proportion of the travel demand will be satisfied by non-private vehicle mode share. Further, the future re-development will be replacing some previous land uses where the traffic generated will be offset against the new developments.

Note, the final land-use proportions are unknown, and these values are for planning purposes only, making the list above indicative only. It should be noted that splits between certain land uses, particularly commercial and

office, are not known at this stage. Reasonable assumptions and sensitivity analysis have been applied where possible for the assessment.

2.3 Trip Rate Development

The assessments outlined in this report are based on a traffic model developed to determine the impacts (if any) on existing roads, PT and AT transport infrastructure by the ultimate development year (2032 – 2041). Trip generation rates were developed by:

- Determining the potential land uses of the Boggo Road CRR PDA
- Sourcing acceptable traffic generation rates for each of the land-uses, while considering PT and AT mode shares
- Applying the traffic demand to the traffic model to distribute according to existing travel patterns
- Using the assigned traffic demands to determine the impacts on the infrastructure.

2.3.1 Mode Share

CRR Station trip modelling assisted in evaluating the future mode share forecasts for this precinct. Whilst individual Precincts may have localised mode shares (e.g. PAH more car focused than the Boggo Road CRR PDA overall due to the nature of its land use), the overall mode share forecasts anticipate a reduction in car usage in favour of PT by the ultimate development year, aligning with the vision for the Boggo Road CRR PDA.

2.3.2 Broad Study Assumptions

The following assumptions were applied to the trip generation calculations:

- Current trip rates have an amount of mode share (i.e. non-vehicle trips). Rates were pro-rated to account for current mode share to proposed mode share for future long-term stages
- Hospital trip rates were based off existing boom gate data provided by MSH for the PAH's existing multistorey carpark facility. It is acknowledged as a limitation of the current assessment that future trip rates will be revised by MSH as part of the revised PAH Masterplan.
- Given the forecasted mode share shift to PT, and PT focus of the Boggo Road CRR PDA, high mode share shifts are applicable for the associated trip generation rates
- The proportions of trips to and from the Boggo Road CRR PDA for each trip purpose and peak period assume the current in/out splits of the existing road network.

2.4 Trip Generation

It is assumed that the minor retail land uses do not contribute to additional trips as they most likely consist of smaller scale stores that people visit as part of other trip or work purposes. A range of trip generation rates were used to assess different rates of PT and AT take-up. Based on the typical industry standard peak hour trip generation rates, Table 2-2 provides trips for the AM and PM peak periods for the high mode share scenario.

Table 2-2: Boggo Road CRR PDA – AM and PM Trip Generation by Typical Rates (Vehicles Per Hour)

Stage	Precinct 1				Precinct 3				Total			
	AM		PM		AM		PM		AM		PM	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Stage 1	0	0	0	0	0	0	0	0	0	0	0	0
Stage 2	104	28	34	88	18	2	3	13	122	30	37	101
Stage 3	109	15	20	80	161	24	28	126	270	39	48	206

Stage 4	0	0	0	0	141	28	20	136	141	28	20	136
TOTAL	213	42	54	168	319	54	51	275	532	96	105	443

2.5 Carparking Rates

The purpose of this section is to identify maximum proposed parking spaces for existing GFA/land uses for sites within the Boggo Road CRR PDA for which parking will be available. It has been noted that future proposed developments E-04 and E-05 have BCC approved development permits, whilst TRI2.0 has and approved Ministerial Infrastructure Designation (MID), with PACE3 anticipated to be approved in the near future (at the time of writing). It is also noted that MSH are undertaking a carparking management strategy of the PAH which could feed into this assessment at a later stage. Car parking rates applicable to the draft proposed Boggo Road CRR PDA Development Scheme (10 September 2021 version) have been adapted from BCC City Plan 2014 as per Table 2-3.

Table 2-3: Recommended Carparking Rates

Use	Carparking Rates – Maximum number of spaces
Uses other than multiple dwelling, parking station, rooming accommodation and short-term accommodation (which are separately identified below)	**Boggo Road knowledge and innovation Precinct 1:** • 1 space per 100m^2 gross floor area (GFA) **Princess Alexandra Hospital Precinct 3 – Area A (refer Figure 2-3):** • 1 space per 300m^2 gross floor area (GFA) **Princess Alexandra Hospital Precinct 3 – Area B (refer Figure 2-3):** • 0.5 spaces per bed plus 0.8 spaces per staff for Hospital • 1 space per 200m^2 gross floor area (GFA) for uses other than Hospital.
Multiple dwelling	• 0.5 space per 1-bedroom dwelling • 1 space per 2-bedroom dwelling • 1.5 spaces per 3-bedroom dwelling • 2 spaces per 4 and above bedroom dwelling • 1 visitor space for every 20 dwelling units • Parking may be provided in tandem spaces where 2 spaces are provided for 1 dwelling • At least 50% of visitor parking is provided in communal areas, and not in tandem with resident parking.
Rooming accommodation, and Short-term accommodation	• 0.25 spaces per room

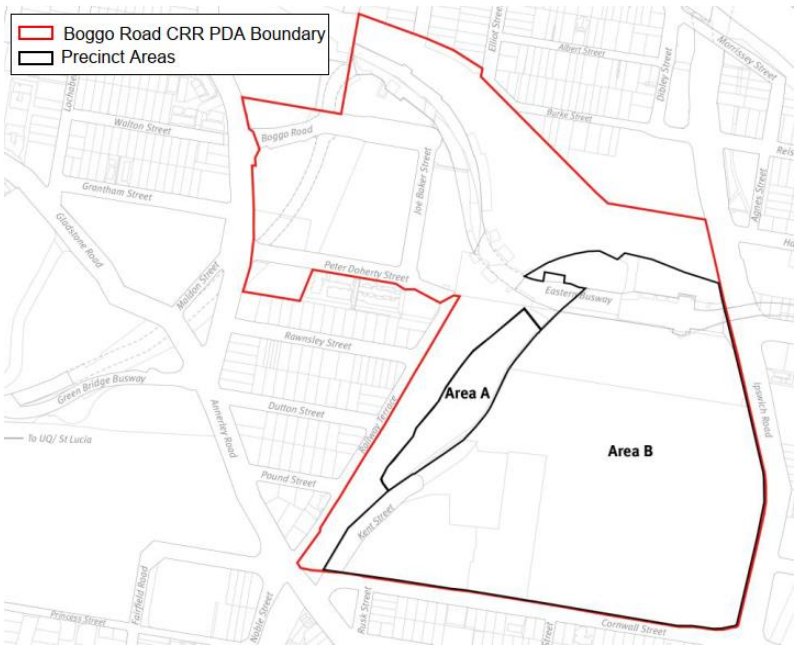


Figure 2-3: Boggo Road CRR PDA Parking Precinct Areas (Source: Boggo Road CRR PDA Map 13)

3 Existing Network Provisions

3.1 Key Features

The key features, prior to any CRR TSD works, of the Boggo Road CRR PDA include:

- PAH campus which includes TRI, and PACE
- Ecosciences Building
- Boggo Road Gaol
- Eastern Busway including PAH Busway Station and Boggo Road Station connecting through to University of Queensland (UQ)
- Cleveland and Gold Coast Rail Lines including:
  - Park Road Station
  - Dutton Park Station
  - Dutton Park to Fisherman's Island Dual Guage (Frieght) Rail Line.

3.2 Active Transport

3.2.1 Pedestrians

At present the study area has a footpath network of standard widths on all roads with typical street furniture such as trees, bike parking, benches, mailboxes and bus shelters creating pinch points, and pedestrian crossings as illustrated in Figure 3-1. Due to the high-capacity road network around the Boggo Road CRR PDA, it is necessary for pedestrian crossings to utilise pedestrian refuges and islands when navigating intersections. Often the segments between the islands and the footpaths have no signage or furniture to indicate a crossing, which is undesirable from a road safety perspective. Moreover, this staged approach is often undesirable for disabled pedestrians, which is an issue in this precinct given the proximity to the PAH. Overall, the Boggo Road CRR PDA has opportunities yet to be realised in terms of safe and efficient pedestrian movements. There may be opportunities to improve pedestrian amenities by adding in pedestrian crossings on the missing legs, and revising the free left slip turns specifically.

There is poor pedestrian permeability between Precinct 1 and Precinct 3 as the rail corridor (Precinct 2) forms a significant barrier to all forms of transport. The CRR TSD delivered Central Bridge for pedestrians and cyclists will shorten the journey between the landing points of the bridge from over 1 km to approximately 100 m, making the pedestrian journey far more attractive. Major rail stations surrounding the study area are at present poorly integrated with the local major employers (such as the PAH) and require pedestrians to walk long distances (over 1 km) through poorly sign posted areas with low levels of passive surveillance.

The previous PAH Masterplan (currently being updated) notes that there will be high pedestrian and/or cyclist volumes:

- Precinct 1 and Precinct 3 of the Boggo Road CRR PDA via the Central Bridge
- The Dutton Park Rail station, along Kent Street through to the eastern landing point of the Central Bridge
- The centre point of Kent Street, through the centre of the PAH campus through to Ipswich Road.

Lower volume paths are noted through the centre of the PAH campus between O'Keefe Street and Cornwall Street.

Major pedestrian desire lines appear to reflect users of the application, with T.J. Doyle Memorial Drive and Sir William MacGregor Drive being popular recreational running routes. Further, Kent Street, Annerley Road, Gladstone Road and Cornwall Street form the remainder of the large pedestrian desire lines. It is noted that the future Central Bridge will also accommodate pedestrians and thus, it is expected that Kent Street desire will be shifted to this bridge once constructed, leaving Kent Street as an access road to End of Trip Facilities (EOTF) at the PAH and the future stages development sites. Local trips not directly to the Boggo Road CRR PDA developments sites may occur but they are expected to be low in quantity.

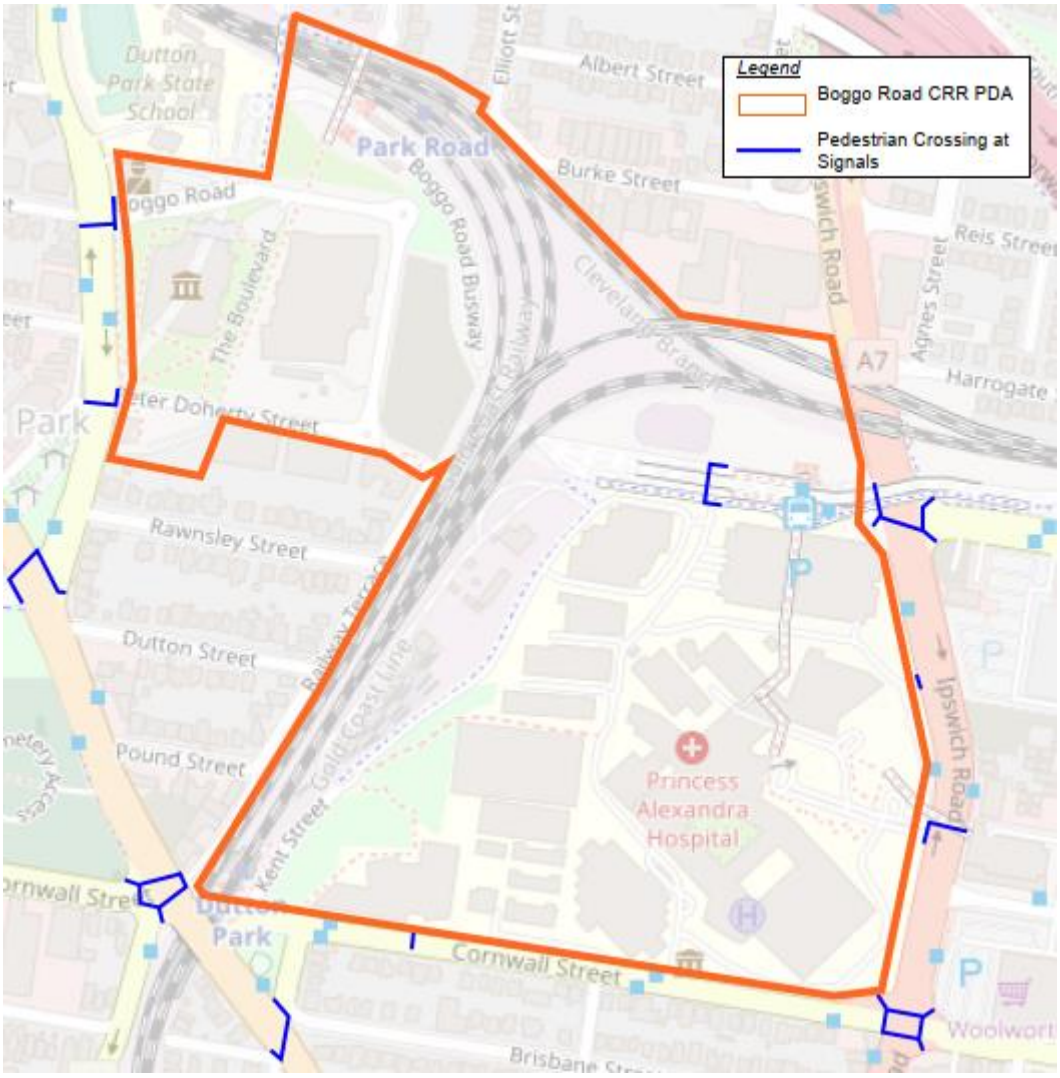


Figure 3-1: Pedestrian signalised crossings within and surrounding the Boggo Road CRR PDA

3.2.2 Pedestrian Infrastructure Provision

Pedestrian access to the Boggo Road CRR PDA is currently provided as indicated via staged, signalised crossings at:

- O'Keefe Street/Ipswich Road
- Ipswich Road/Diamantina Road East
- Ipswich Road/Alexandra Drive (the main PA Hospital entrance (Gate 3))
- Cornwall Street/Ipswich Road
- Cornwall Street/the QML Pathology Collection Centre
- Cornwall Street/Kent Street

- Annerley Road/Rusk Street/Tamar Street intersection
- Annerley Road/Cornwall Street/Noble Street/Railway Terrace
- Annerley Road/Gladstone Road
- Annerley Road/Peter Doherty Street
- Annerley Road/Boggo Road.

3.3 Cycling

At present there is a strong desire line for cyclists to travel between the UQ via the Eleanor Schonell Bridge in the west, the Veloway 1 (V1)/O'Keefe Street in the east and the CBD via the Woolloongabba Bikeway on Annerley Road. However, under existing conditions, the railway lines create a barrier in achieving east-west connectivity of the Boggo Road CRR PDA. The future introduction of the Central Bridge is fundamental to achieving accessibility outcomes, unlocking cycle network connectivity for commuters in and beyond the Boggo Road CRR PDA.

3.3.1 Cycling Infrastructure Provision

Cycling access to the Boggo Road CRR PDA is currently via:

- V1 via the Eastern Veloway (parallel to the Boggo Road Busway)
- A 3.6 m shared path along Kent Street
- Narrow footpaths/busy road along Annerley Road between Kent Street/Annerley Road and Gladstone Road/Annerley Road intersection
- Separated bike paths along Annerley Road, Gladstone Road and the Eleanor Schonell Green Bridge
- Narrow footpaths along Ipswich Road.

3.4 Road Network

Given its central location relative to the CBD, the Boggo Road CRR PDA is a hub for transport of all modes. As illustrated below in Figure 3-2, the key features of the existing Roads and PT network are:

- Major Arterial roads bounding the Boggo Road CRR PDA:
  - Ipswich Road
  - Annerley Road
  - Cornwall Street
- Neighbourhood roads within the Boggo Road CRR PDA:
  - Boggo Road
  - Joe Baker Street
  - Peter Doherty Street
  - Kent Street (partial - southern end)
- Private roads within the PAH campus. Of note in this assessment, Kent Street is partially a BCC managed neighbourhood road and Kent Street /Laundry Drive
  - On-street bus services and the Eastern Busway (mixture of medium to high frequency services to/from The UQ

- Gold Coast and Cleveland passenger rail lines
- Dutton Park to Fisherman's Island dual gauge (Freight) rail line.

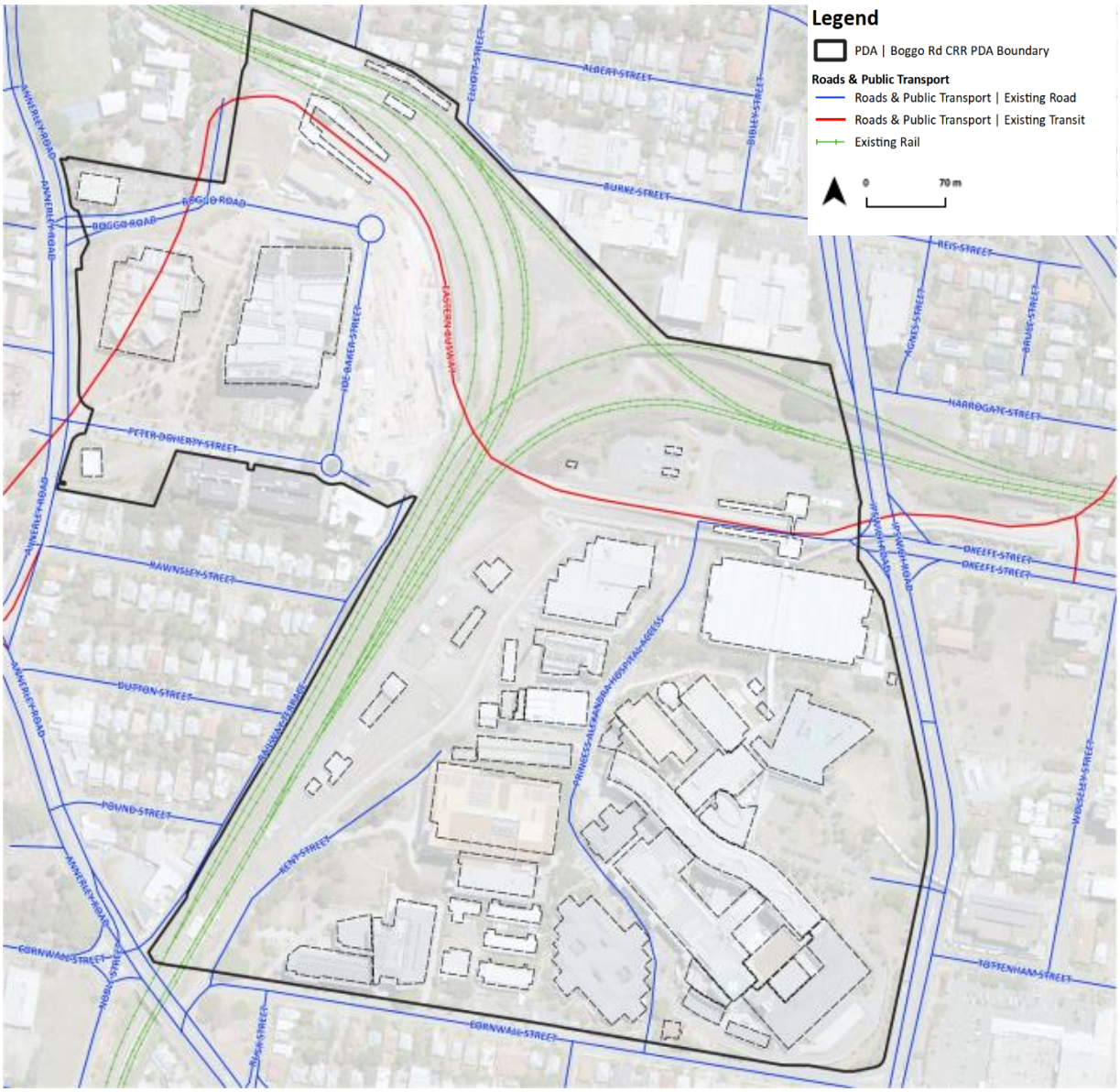


Figure 3-2: Existing Roads and PT within and surrounding the Boggo Road CRR PDA

3.5 Existing Public Transport Patronage

PT journeys involve pedestrian legs either between stops or to origins or destinations and are therefore an important component of the AT assessment. Within the existing context of the Boggo Road CRR PDA, a significant number of transfers occur between Boggo Road Busway and Park Road Rail Station, as well as trips to and from the PAH and Ecosciences Building from either Park Road or Dutton Park Rail Stations and Boggo Road and PAH Busway Stations. As detailed in Table 3-1 below, transfers between Park Road and Boggo Road total more than 10,000 passengers over a typical day, cementing the Boggo Road CRR PDA as a transport hub. Refer to Attachment F for detailed information.

Table 3-1: Existing PT Transfers (Source: TransLink Ticketing Data 2019)

PT Station	Daily Totals		
	Boarding	Alighting	Transfers
Park Road Rail Station	15,702	18,686	11,298
Boggo Road Busway Station	12,926	13,289	10,661
PAH Busway Station	6,760	6,910	394
Dutton Park Rail Station	4,283	3,692	79

4 Network Upgrades

4.1 Modelling Methodology

The future year trips for the Boggo Road CRR PDA were applied to a future year (2041) SIDRA Network models for Annerley Road and Ipswich Road separately. The modelling process has assessed the roads, PT & AT network connections and internal road network layout, in order to inform the longer-term infrastructure requirements necessary to support the anticipated future development in the Boggo Road CRR PDA. The following approach was presented to and agreed in principle by stakeholders (BCC/TMR/MSH/PAH) and summarised as follows:

- Gather data from existing resources and stakeholders including both planning reports and roads, PT & AT existing and future demands
- Identify gaps and risks for the gathered data
- Identify constraints (gaps/deficiencies) and opportunities for the roads, PT & AT existing and planned network including proposed designs
- Calculation of background traffic growth factors to be applied to future year (2041) scenarios
- Calculation of the potential new trips generated by the proposed development scenarios by stages, for the AM and PM peak periods
- Apply the delta (positive or negative differences) of the trips from the development scenarios, compared to the future year (2041)
- Modelling the development scenarios in SIDRA, allowing the distribution of development vehicle trips onto the road network by utilising existing (2021) AM and PM demand patterns. This included applying the BCC Road Planning Note long term recommended upgrades as the assumed future year (2041) base upgrades.
- Assess the impact, if any, of queues and delays at intersections and apply upgrades as appropriate, noting Council's DSS contained in Part 4 – LGIP of BCC's City Plan 2014 sets the following benchmark:
  - (iv) the off-peak operation of the road network provides a Level of Service (LoS) C
  - (v) the peak period operation of the road network provides a LoS C, except where the road network is highly constrained and the use of alternative modes of transport in these areas is anticipated in the mode share targets stated in Map C3 Transport Network DSS Mode Share Targets
- The modelling of pedestrians and cyclists is focussed around pedestrian crossings at key intersections using SIDRA. A pathway LoS assessment using a target of LoS C for typical commuter peaks was completed.

4.2 Future Network Opportunities and Treatments

4.2.1 Roads and Public Transport

The proposed Roads and PT Network Plan (RPTNP) for the Boggo Road CRR PDA are delivered via a staged approach as appended in Appendix A.

The following are of key interest from a Roads and PT infrastructure perspective:

- Stage 1 (2020 - 2025):
  - BGO-RD-01 – Kerbside allocation and carriageway width modification on Boggo Road and Joe Baker Street (Delivery by CRR TSD)
  - BGO-RD-02 – Kerbside allocation and carriageway width modification on Peter Doherty Street (Potential delivery by others)
  - BGO-RD-03 – Two-way 4.25m vehicle lanes noting kerbside allocations to be resolved by BCC and RIS (Delivery by CRR RIS)
  - BGO-INT-06 – Intersection of Peter Doherty Road and Annerley Road – Provision of separated bicycle crossings on all legs of signalised intersection and tie into BGO-AT-03 works which is linked to BGO-AT-03 under the Active Transport Network Plan (Potential delivery by others).
- Stage 2 (2025 – 2026):
  - No Roads or PT upgrades are proposed as part of this stage.
- Stage 3 (2027 – 2031):
  - BGO-RD-04a – Two-way 3.3 m lanes for vehicles and cyclists – cycle street (Potential delivery by R-01 & R-02 developers – with R-01 & R-02).
- Stage 4 (2032 – 2041):
  - BGO-RD-04b –Two-way 3.3 m vehicle lanes (Potential delivery by others – with PAH-07 & PAH-10)
  - BGO-RD-04c –Two-way 3.3 m vehicle lanes (Potential delivery by others – with PAH-07 & PAH-10)
  - BGO-RD-05a –Two-way 3.3 m vehicle lanes (Potential delivery by others – with PAH-07 & PAH-10)
  - BGO-RD-05b –Two-way 3.3 m vehicle lanes (Potential delivery by others – with PAH-07 & PAH-10)
  - BGO-INT-01 – Intersection of Annerley Road and Noble Street (Potential Delivery by others):
    - New right turn lane from Annerley Road to Railway Terrace
    - Widening on both directions for provision of on-road cycle lanes
  - BGO-INT-02 – Intersection of Cornwall Street and Ipswich Road (Potential Delivery by BCC - Road Planning Notes / LGIP):
    - Widening of the northbound carriageway of Ipswich Road near Cornwall Street to three (3) lanes and provision of on-road cycle lanes
    - Widening of the eastbound carriageway of Cornwall Street near Ipswich Road to three (3) lanes and provision of on-road cycle lanes
    - A second right turn from Ipswich Road to Cornwall Street introduced
    - A short right turn lane from Cornwall Street to Ipswich Road introduced
    - Potential closure of the westbound bus jump lane across Ipswich Road along Cornwall Street

- BGO-INT-03 – Intersection of Alexandra Drive and Ipswich Road (Potential Delivery by others):
  - Lengthening of existing right turn lane from Ipswich Road to Alexandra Drive (PAH)
  - A new left turn lane from Ipswich Road to Alexandra Drive (PAH)
  - Widening on both directions of Ipswich Road for provision of on-road cycle lanes
- BGO-INT-04 – Intersection of O'Keefe Street and Ipswich Road (Potential Delivery by others):
  - A second right turn from Ipswich Road to O'Keefe Street introduced
  - Widening on both directions for provision of on-road cycle lanes
- BGO-INT-05 – Intersection of Diamantina Road East and Ipswich Road (Potential Delivery others):
  - Widening in both directions of Ipswich Road for provision of on-road cycle lanes
  - Additional short right turn lane southbound on Ipswich Road into Diamantina Road East
  - Provision of pedestrian crossing on southern leg of signalised intersection.

4.2.2 Active Transport

The proposed AT Network Plan (ATNP) for the Boggo Road CRR PDA are delivered via a staged approach as appended in Appendix B.

The following are of key interest from an AT infrastructure perspective:

- Stage 1 (2020 - 2025):
  - BGO-AT-01 – Central Bridge, between Peter Doherty Street and the Eastern Veloway (Delivery by CRR TSD)
  - BGO-AT-02 – At grade footpath (and zebra crossing at Kent Street) from BGO-VT-02 to Kent Street (Delivery by CRR TSD)
  - BGO-AT-03 – Dedicated on-road 3.0 m cycle path, between the Central Bridge and the intersection of Peter Doherty Street / Annerley Road (Potential delivery by others) which is linked to BGO-INT-06 under the Roads and PT Network Plan
  - BGO-AT-04 – Off road separated 2.5 m cycle path, 0.5 m buffer, 2.0 m pedestrian path on the western side, and 4.0 m pedestrian path on the eastern side, along the BCC land tenure from Annerley Road to the TRI driveway – desired outcome is for PNCP connection as discussed in Section 2.3 noting exact dimensions to be resolved between BCC and CRR RIS (Delivery by CRR RIS)
  - BGO-AT-16 – Interstation footpath between CRR Boggo Road Station and existing Boggo Road Busway/Park Road Rail Stations (Delivery by CRR TSD)
  - BGO-VT-01 – Vertical Transport Lift and Stairs near Joe Baker Street (Delivery by CRR TSD)
  - BGO-VT-02 – Vertical Transport Lift and Stairs near R-01 (Delivery by CRR TSD)
- Stage 2 (2025 – 2026):
  - BGO-AT-10 – Pedestrian Arcade Transition connecting the Central Bridge to Joe Baker Street through future development site E-01 (Potential delivery by E-01 developers – with E-01)
  - BGO-AT-12 – Off road separated 2.5 m cycle path and footpath at minimum of 2.5 m adjacent potential outside dining and retail (Potential delivery by E-04 developers – with E-04).
- Stage 3 (2027 – 2031):
  - BGO-AT-05a – 1.5 m pedestrian paths to both sides and cycle street in the interim between BGO-AT-04 and BGO-AT-06a which includes BCC Land Tenure. The northern end includes a new turning head and boom gate to allow only service vehicles onto AT-06a which is strictly back-of-house servicing in the interim (Potential delivery by R-01 & R-02 developers – with R-01 & R-02)
  - BGO-AT-06a – Delivery of ultimate AT form to western side of this Laundry Drive segment - Off road separated 2.5 m cycle path, 0.5 m buffer, 2.5 m pedestrian path (Potential delivery by R-01 & R-02 developers – with R-01 & R-02)
  - BGO-AT-07a – Elevated podium level walkway through future development sites R-01 and R-02, between BGO-VT-02 and BGO-AT-07b. Opportunity to deliver in 2031 if R-01 and R-02 buildings are co-timed. Alternative access arrangements are Kent Street via VT-02 during construction. (Potential delivery by R-01 & R-02 developers – with R-01 & R-02)
  - BGO-AT-07b – Elevated bridge connection between future development site R-02 and VT-03. Opportunity to deliver in 2031 if R-01 and R-02 buildings are co-timed. Alternative access arrangements are Kent Street via VT-02 during construction. (Potential delivery by R-01 & R-02 developers – with R-01 & R-02)

  - BGO-AT-08 – Potential elevated passenger interchange and pedestrian connection between the Boggo Road CRR and Busway Stations, Park Road Station and Elliot Street. (Potential delivery by others, timing to be determined)
  - BGO-VT-03 – Vertical Transport Lift and Stairs near TRI building (Potential delivery by others).
- Stage 4 (2032 – 2041):
  - BGO-AT-05b – Off road separated 2.5 m cycle path, 0.5 m buffer, 2.0 m pedestrian path on the western side, 2.0 m pedestrian path on the eastern side, along the BCC Land Tenure between BGO-AT-04 and BGO-AT-05c (Potential delivery by others – with PAH-07 & PAH-10)
  - BGO-AT-05c – Off road separated 2.5 m cycle path, 0.5 m buffer, 2.5 m pedestrian path on the western side, pedestrian path to the eastern side (width to be resolved based on future PAH service requirements), between BGO-AT-05b and BGO-AT-06b. (Potential delivery by others – with PAH-07 & PAH-10)
  - BGO-AT-06b – Delivery of ultimate AT form to eastern side of Laundry Drive section – 4.25 m pedestrian path between BGO-AT-05b and BGO-AT-06b. (Potential delivery by others – with PAH-07 & PAH-10)
  - BGO-AT-06c – Typical 4.25 m pedestrian paths to both sides. (Potential delivery by others – with PAH-07 & PAH-10)
  - BGO-AT-09 – Potential elevated link between VT-02 and PAH Main Building, connection and feasibility to be resolved (Potential delivery by others – with PAH-02, PAH-07 & PAH-10)
  - BGO-AT-11a – Potential uplift of existing shared path (Potential delivery by others, timing to be determined)
  - BGO-AT-11b – Potential uplift of existing rail overpass (Potential delivery by others, timing to be determined)
  - BGO-AT-13 – Pedestrian path enhancements (Potential delivery by others – With PAH-01 & PAH-08)
  - BGO-AT-14 – Pedestrian path enhancements (Potential delivery by others – With PAH-02, PAH-03 & PAH-07)
  - BGO-AT-15 – Pedestrian path enhancements (Potential delivery by others – With PAH-03)
  - BGO-AT-17 – Pedestrian path enhancements (Potential delivery by others – With E-06).

4.4 Potential Future Internal Network and Cross Sections

Kent Street/Laundry Drive is the primary internal road infrastructure that has been identified as requiring an upgrade as part of future development as part of the Boggo Road CRR PDA. Prior to the declaration of the Boggo Road CRR PDA, Kent Street served as the public access road to the TRI and PACE building carparks, becoming a private road (PAH) from a boom gate which currently services back-of-house facilities for PAH. These services and servicing arrangements, buildings, land tenures, and geometry restrictions form the basis of constraints on Kent Street/Laundry Drive.

At the time of writing, the Kent Street boom gate has been removed to allow one-way northbound circulation of general traffic to accommodate CRR TSD Construction activities.

In future, Kent Street will be required to support proposed future development sites R-01 and R-02 as well as potential future PAH Buildings TRI2.0, PACE3, PAH-07, and PAH-03, with potential demolition of the existing Laundry (building 55) and support services buildings 61 and 62. Therefore, the design principles for Kent Street are that a two-way cross-section be achieved up to Laundry Drive in the interim with minimal land take in order to service R-01/R-02 sites, with opportunities to expand to ultimate cross sections in Stage 4 with the removal of existing buildings which are constraining this outcome from being achieved earlier.

Whilst the final form and tenure of Kent Street is still to be resolved, the Boggo Road CRR PDA outcome recommended for the internal streets are for shared, slow speed street environments promoting calmer, people focused streets while allowing circulation within the Boggo Road CRR PDA to the major PT station (Dutton Park Station) for drop off/pick up, and access the PAH and future developments. The urban design treatment of this street should utilise best practice urban design e.g. continuous footpaths where pedestrians have the natural priority and the surface treatment is more footpath than it is road.

Example of possible cross sections are shown in Figure 4-1, Figure 4-2 and Figure 4-3. Figure 4-4 provides an example of a shared zone for the interaction between RD-02, RD-04 & RD-05 as well as AT-03, AT-05 & AT-06. For further guidance regarding the future design intent for the Kent Street corridor, refer to the following:

- Kent Street Movement Corridor, as referenced in the Boggo Road CRR PDA draft proposed development scheme
- Draft Kent Street Movement Corridor Guideline, which provides supporting material to the Boggo Road CRR PDA draft proposed development scheme

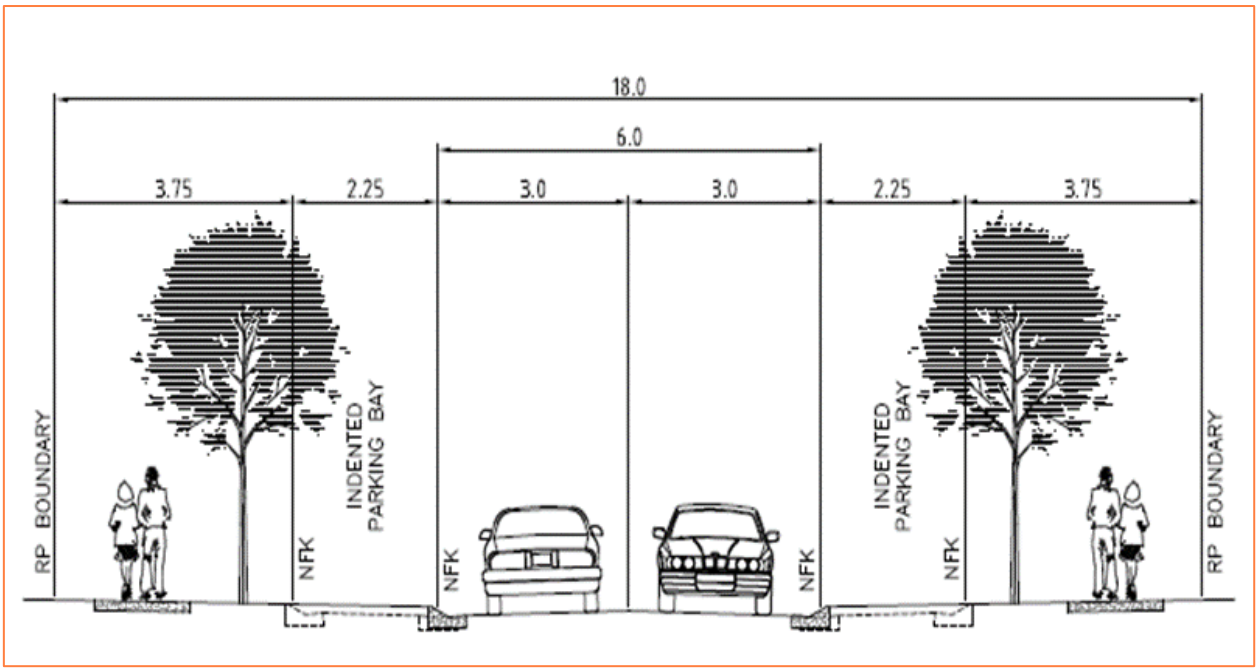


Figure 4-1: Council Typical Example – Neighbourhood Road (City Plan – BSD1021)

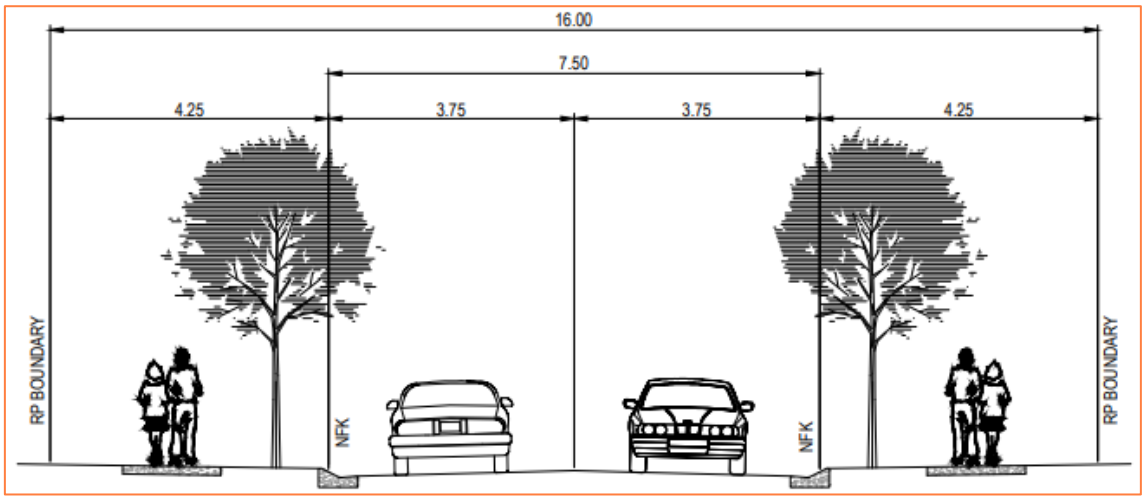


Figure 4-2: Council Typical Example with No Parking – Neighbourhood Road (City Plan – BSD1021)

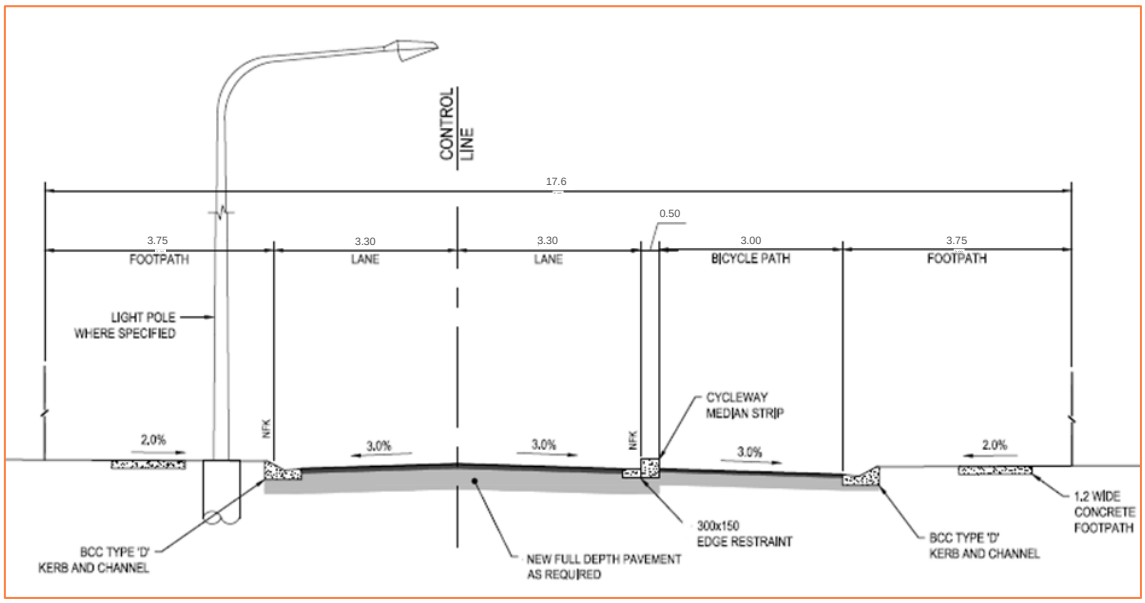


Figure 4-3: Possible Cross Section with no Parking and Separated Bicycle Facility (17.6 m)

Figure 4-4: Shared Zone Example – Drachten, Netherlands

5 Conclusions and Recommendations

There are existing constraints for pedestrian and cyclist movement within the Boggo Road CRR PDA including:

- The existing Rail Corridor (Precinct 2) creates a barrier for AT permeability
- PAH and CRRDA planning interfaces including permeability to the new CRR Station
- Accessibility, connections and entrances to the Boggo Road CRR PDA from Annerley Road and Dutton Park Station.

BCC, TMR and PAH/MSH have identified the opportunity for a number of these issues to be addressed with the redevelopment of the developable land in the Boggo Road CRR PDA.

Overall, the proposed ATNP offers many opportunities to ameliorate the existing issues for pedestrian and cyclist connectivity. Whilst constraints such as the Kent Street back-of-house services may constrain the network is the medium term, the overarching goals for the AT network within the Boggo Road CRR PDA over the course of its development are to provide:

- Central Bridge to fill the missing link in the PCN
- A safe and efficient connection between the new CRR Station and existing Boggo Road Busway and Park Road Rail Station
- Resolution to the desire lines within and surrounding the PAH providing a more permeable Boggo Road CRR PDA
- Activation of underutilised streetscapes, and development of internal precinct streetscapes to enhance liveability and connectivity.

To address the existing road challenges, it is recommended that trunk road upgrades proposed are as follows:

- Kerbside allocation and carriageway width modification as per CRR TSD Scope
- Kerbside allocation and carriageway width modification as per CRR RIS Scope
- Peter Doherty Street kerbside allocation and carriageway width modification to accommodate potential on-road cycle paths
- Interim and ultimate cross section modifications to Kent Street
- Ultimate cross section of Laundry Drive following the future redevelopment of Building 55
- Short right turn lane from Annerley Road to Railway Terrace introduced
- Lengthening of existing right turn lane from Ipswich Road to Alexandra Drive (PAH)
- A short left turn lane from Ipswich Road to Alexandra Drive (PAH) introduced
- Widening of the northbound carriageway of Ipswich Road near Cornwall Street to three (3) lanes
- Widening of the eastbound carriageway of Cornwall Street near Ipswich Road to three (3) lanes
- A second right turn from Ipswich Road to Cornwall Street introduced
- A short right turn lane from Cornwall Street to Ipswich Road introduced
- Closure of the westbound bus jump lane across Ipswich Road along Cornwall Street
- A second right turn from Ipswich Road to O'Keefe Street introduced

Lastly, carparking rates recommended for are as follows to promote higher AT and PT mode share as per Table 5-1.

Table 5-1: Adopted Carparking Rates

Use	Carparking Rates – Maximum number of spaces
Uses other than multiple dwelling, parking station, rooming accommodation and short-term accommodation (which are separately identified below)	**Boggo Road knowledge and innovation Precinct 1:** • 1 space per 100m^2 gross floor area (GFA) **Princess Alexandra Hospital Precinct 3 – Area A (refer Figure 2-3):** • 1 space per 300m^2 gross floor area (GFA) **Princess Alexandra Hospital Precinct 3 – Area B (refer Figure 2-3):** • 0.5 spaces per bed plus 0.8 spaces per staff for Hospital • 1 space per 200m^2 gross floor area (GFA) for uses other than Hospital.
Multiple dwelling	• 0.5 space per 1-bedroom dwelling • 1 space per 2-bedroom dwelling • 1.5 spaces per 3-bedroom dwelling • 2 spaces per 4 and above bedroom dwelling • 1 visitor space for every 20 dwelling units • Parking may be provided in tandem spaces where 2 spaces are provided for 1 dwelling • At least 50% of visitor parking is provided in communal areas, and not in tandem with resident parking.
Rooming accommodation, and Short-term accommodation	• 0.25 spaces per room

Appendix A **Roads and Public Transport Infrastructure Elements Plans**

Boggo Road Cross River Rail Priority Development Area
Future Infrastructure Network Plan
Roads and Public Transport - Stage 1 (2020 - 2025) (Indicative)

Legend

- Boggo Road CRR PDA Boundary
- CRR TSD and CRR RIS Delivery Area

Road Projects (Stage 1)

- Road Intersection Upgrade (Stage 1)
- Road Corridor (Stage 1)

PDA - Development Sites (by Stage & Year) (Indicative Only)

- Stage 1 (TSD & RIS) (2020 - 2025)
- Stage 2 (2025 - 2026)
- Stage 3 (2027 - 2031)
- Stage 4 (2032 - 2041)
- Existing Buildings

Transport - Road, Transit

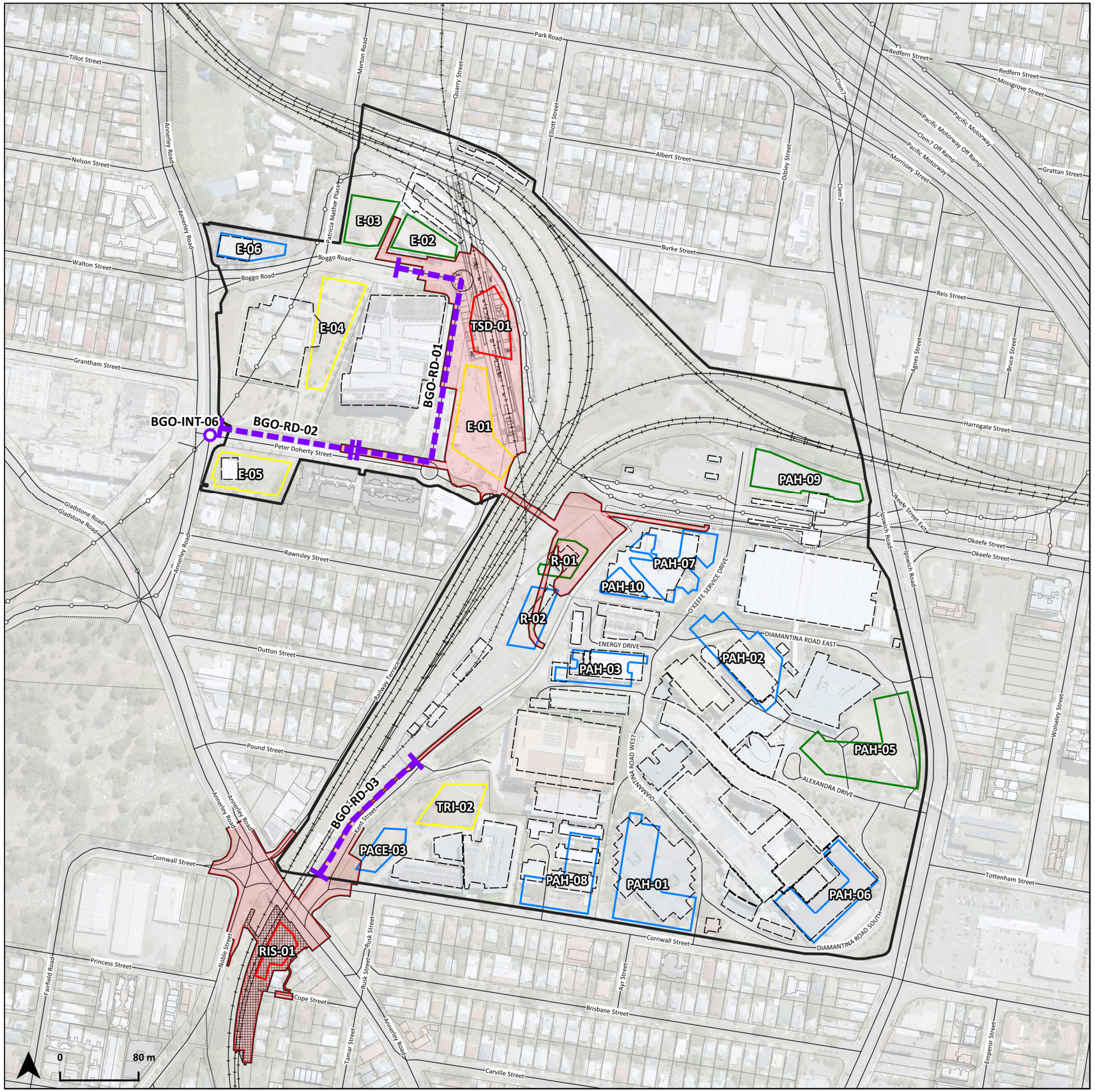
- Road
- Busways
- Tracks, Paths & Malls

Existing Rail

- Operational
- CRR Alignment
- CRR TSD Boggo Road Station
- CRR RIS Dutton Park Station

Property - DCDB

- Base Lot



NOTE:
Future PDA potential development opportunity sites and staging are conceptual and indicative only for infrastructure network analysis purposes.

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Data Sources
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CROSSRIVERRAIL

Boggo Road Cross River Rail Priority Development Area
Future Infrastructure Network Plan
Roads and Public Transport - Stage 2 (2025 - 2026)
(Indicative)

Legend

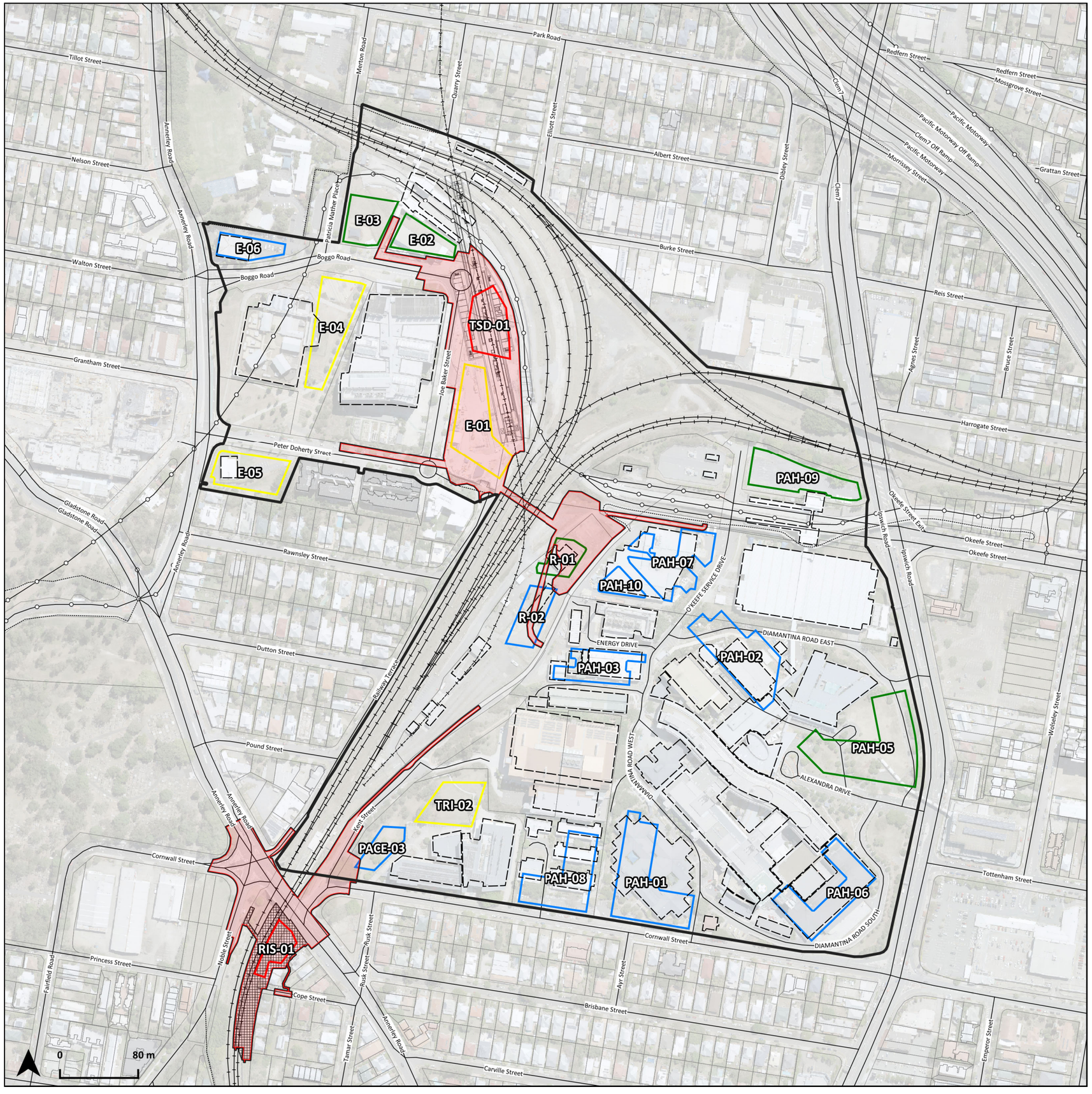
- Boggo Road CRR PDA Boundary
- CRR TSD and CRR RIS Delivery Area

PDA - Development Sites (by Stage & Year) (Indicative Only)
- Stage 1 (TSD & RIS) (2020 - 2025)
- Stage 2 (2025 - 2026)
- Stage 3 (2027 - 2031)
- Stage 4 (2032 - 2041)
- Existing Buildings

Transport - Road, Transit
- Road
- Busways
- Tracks, Paths & Malls

Existing Rail
- Operational
- CRR Alignment
- CRR TSD Boggo Road Station
- CRR RIS Dutton Park Station

Property - DCDB
- Base Lot



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Data Sources
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Disclaimer
While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, this map contains data from a number of sources - no warranty is given that the information contained on this is free from error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

CROSSRIVERRAIL

Boggo Road Cross River Rail Priority Development Area
Future Infrastructure Network Plan
Roads and Public Transport - Stage 3 (2027 - 2031) (Indicative)

Legend

- Boggo Road CRR PDA Boundary
- CRR TSD and CRR RIS Delivery Area

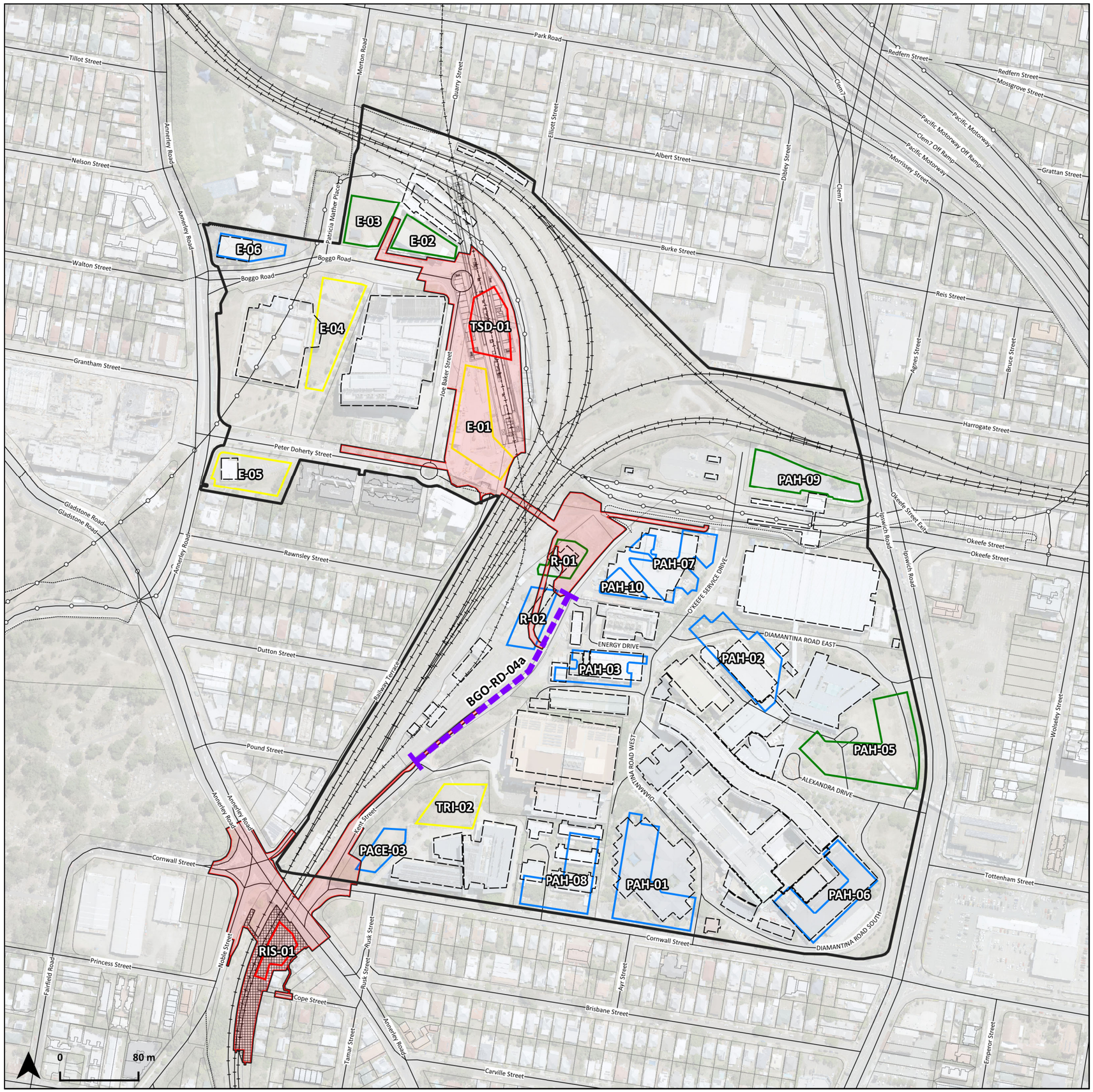
Road Projects (Stage 3)
- Road Corridor (Stage 3)

PDA - Development Sites (by Stage & Year) (Indicative Only)
- Stage 1 (TSD & RIS) (2020 - 2025)
- Stage 2 (2025 - 2026)
- Stage 3 (2027 - 2031)
- Stage 4 (2032 - 2041)
- Existing Buildings

Transport - Road, Transit
- Road
- Busways
- Tracks, Paths & Malls

Existing Rail
- Operational
- CRR Alignment
- CRR TSD Boggo Road Station
- CRR RIS Dutton Park Station

Property - DCDB
- Base Lot



NOTE:
Future PDA potential development opportunity sites and staging are conceptual and indicative only for infrastructure network analysis purposes.

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Data Sources
QLD Government 2021, Brisbane City Council 2021, Urban Utilities 2020

CROSSRIVERRAIL

Boggo Road Cross River Rail Priority Development Area
Future Infrastructure Network Plan
Roads and Public Transport - Stage 4 (2032 - 2041 / Ultimate) (Indicative)

Legend

- Boggo Road CRR PDA Boundary
- CRR TSD and CRR RIS Delivery Area

Road Projects (Stage 4)

- Road Intersection Upgrade (Stage 4)
- Road Corridor (Stage 4)

PDA - Development Sites (by Stage & Year) (Indicative Only)

- Stage 1 (TSD & RIS) (2020 - 2025)
- Stage 2 (2025 - 2026)
- Stage 3 (2027 - 2031)
- Stage 4 (2032 - 2041)
- Existing Buildings

Transport - Road, Transit

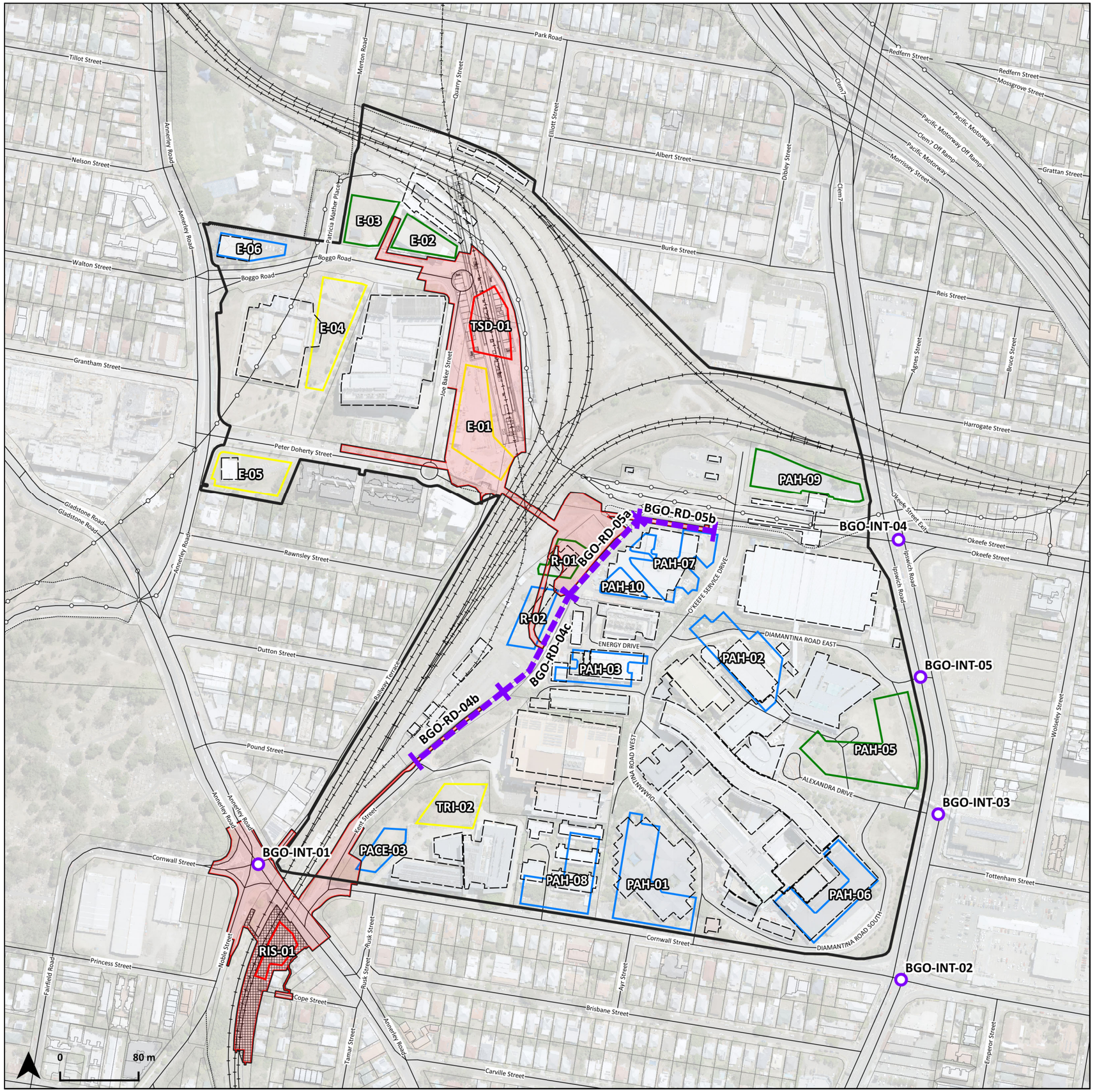
- Road
- Busways
- Tracks, Paths & Malls

Existing Rail

- Operational
- CRR Alignment
- CRR TSD Boggo Road Station
- CRR RIS Dutton Park Station

Property - DCDB

- Base Lot



NOTE:
Future PDA potential development opportunity sites and staging are conceptual and indicative only for infrastructure network analysis purposes.

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Data Sources
QLD Government 2021, Brisbane City Council 2021, Urban Utilities 2020

CROSSRIVERRAIL

Appendix B **Active Transport Infrastructure Elements Plans**

Boggo Road Cross River Rail Priority Development Area
Future Infrastructure Network Plan
Active Transport - Stage 1 (2020 - 2025) (Indicative)

Legend

- Boggo Road CRR PDA Boundary
- CRR TSD and CRR RIS Delivery Area

Active Transport Projects (Stage 1)

- Vertical Transport Upgrade (Stage 1)
- Active Transport Link (Stage 1)
- Active Transport Link (TSD)

PDA - Development Sites (by Stage & Year) (Indicative Only)

- Stage 1 (TSD & RIS) (2020 - 2025)
- Stage 2 (2025 - 2026)
- Stage 3 (2027 - 2031)
- Stage 4 (2032 - 2041)
- Existing Buildings

Transport - Road, Transit

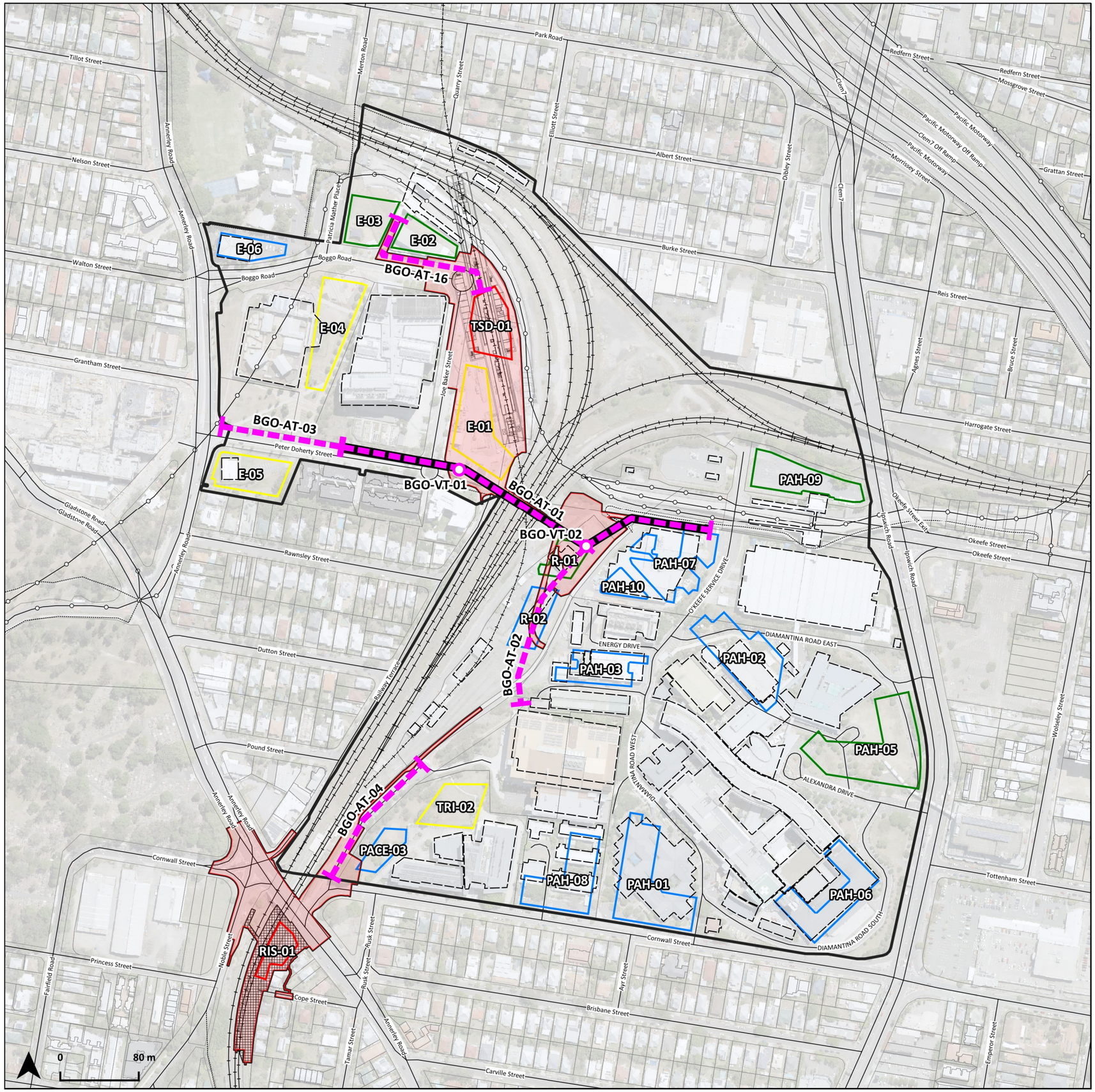
- Road
- Busways
- Tracks, Paths & Malls

Existing Rail

- Operational
- CRR Alignment
- CRR TSD Boggo Road Station
- CRR RIS Dutton Park Station

Property - DCDB

- Base Lot



NOTE:
Future PDA potential development opportunity sites and staging are conceptual and indicative only for infrastructure network analysis purposes.

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Data Sources
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CROSSRIVERRAIL

Boggo Road Cross River Rail Priority Development Area
Future Infrastructure Network Plan
Active Transport - Stage 2 (2025 - 2026) (Indicative)

Legend

- Boggo Road CRR PDA Boundary
- CRR TSD and CRR RIS Delivery Area

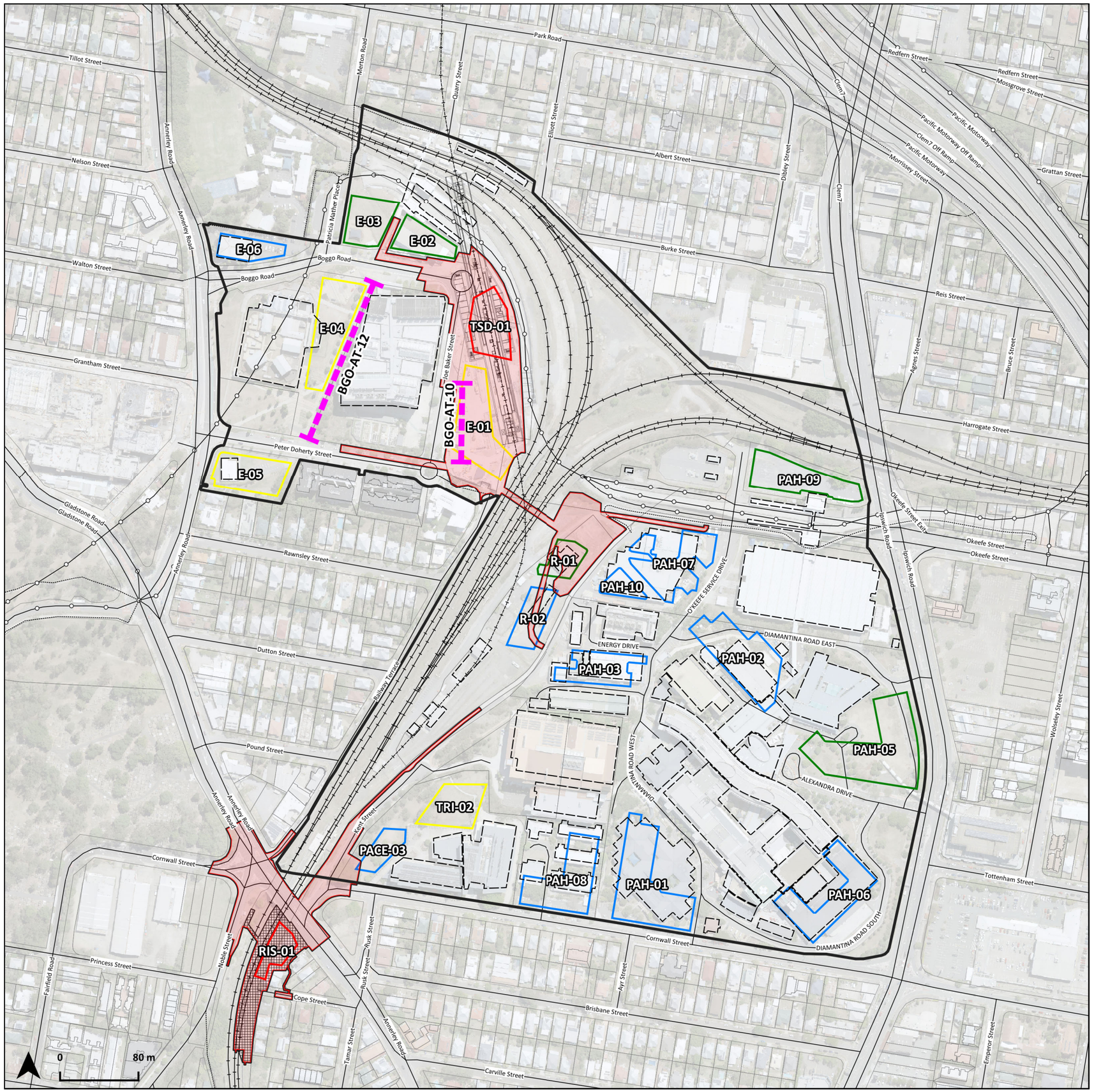
Active Transport Projects (Stage 2)
- Active Transport Link (Stage 2)

PDA - Development Sites (by Stage & Year) (Indicative Only)
- Stage 1 (TSD & RIS) (2020 - 2025)
- Stage 2 (2025 - 2026)
- Stage 3 (2027 - 2031)
- Stage 4 (2032 - 2041)
- Existing Buildings

Transport - Road, Transit
- Road
- Busways
- Tracks, Paths & Malls

Existing Rail
- Operational
- CRR Alignment
- CRR TSD Boggo Road Station
- CRR RIS Dutton Park Station

Property - DCDB
- Base Lot



NOTE:
Future PDA potential development opportunity sites and staging are conceptual and indicative only for infrastructure network analysis purposes.

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Revision: 03
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Data Sources
QLD Government 2021, Brisbane City Council 2021, Urban Utilities 2020

CROSSRIVERRAIL

Boggo Road Cross River Rail Priority Development Area
Future Infrastructure Network Plan
Active Transport - Stage 3 (2027 - 2031) (Indicative)

Legend

- Boggo Road CRR PDA Boundary
- CRR TSD and CRR RIS Delivery Area

Active Transport Projects (Stage 3)

- Vertical Transport Upgrade (Stage 3)
- Active Transport Link (Stage 3)

PDA - Development Sites (by Stage & Year) (Indicative Only)

- Stage 1 (TSD & RIS) (2020 - 2025)
- Stage 2 (2025 - 2026)
- Stage 3 (2027 - 2031)
- Stage 4 (2032 - 2041)
- Existing Buildings

Transport - Road, Transit

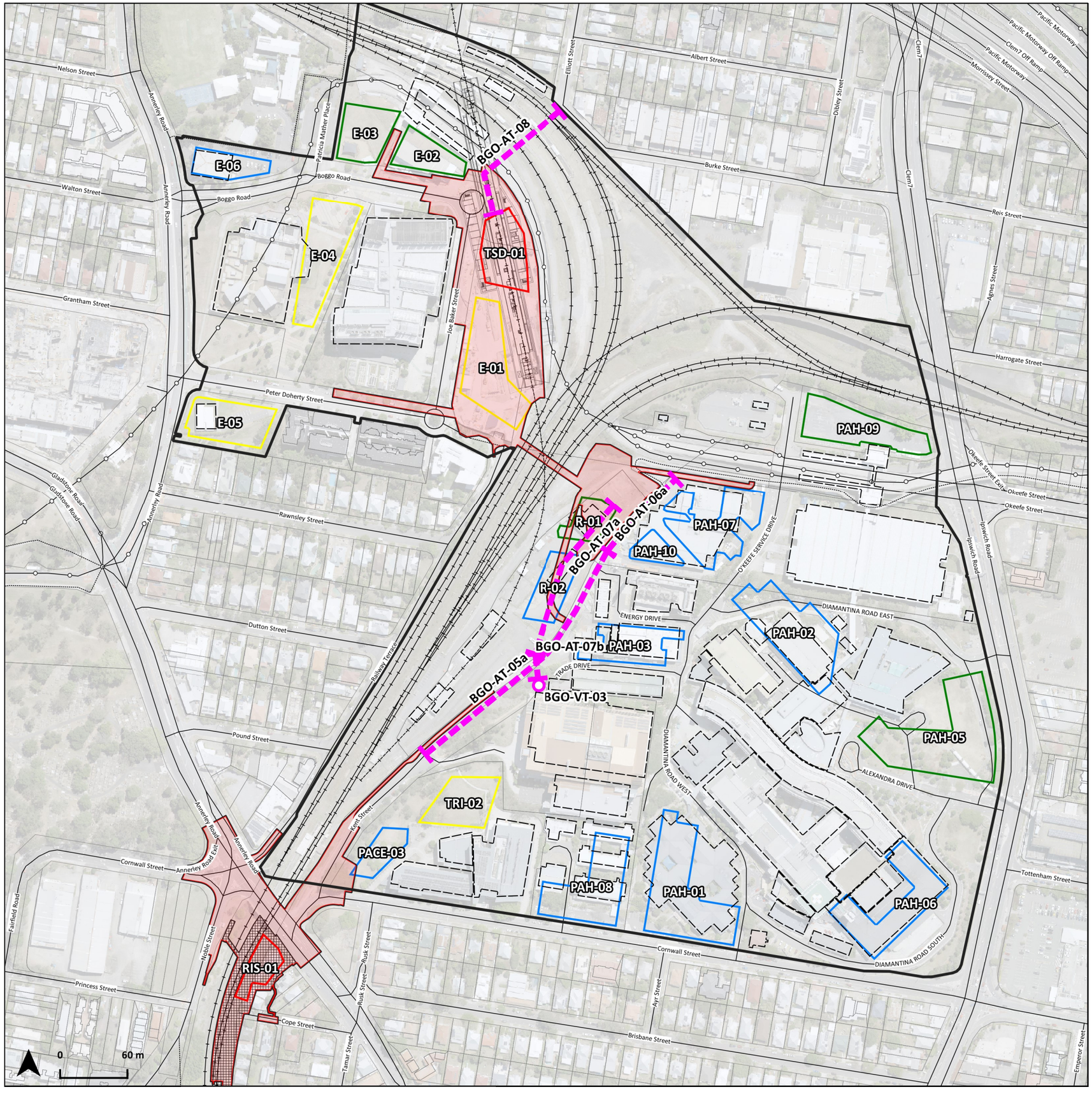
- Road
- Busways
- Tracks, Paths & Malls

Existing Rail

- Operational
- CRR Alignment
- CRR TSD Boggo Road Station
- CRR RIS Dutton Park Station

Property - DCDB

- Base Lot



NOTE:
Future PDA potential development opportunity sites and staging are conceptual and indicative only for infrastructure network analysis purposes.

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Data Sources
QLD Government 2021, Brisbane City Council 2021, Urban Utilities 2020

CROSSRIVERRAIL

Boggo Road Cross River Rail Priority Development Area
Future Infrastructure Network Plan
Active Transport - Stage 4 (2032 - 2041 / Ultimate) (Indicative)

Legend

- Boggo Road CRR PDA Boundary
- CRR TSD and CRR RIS Delivery Area

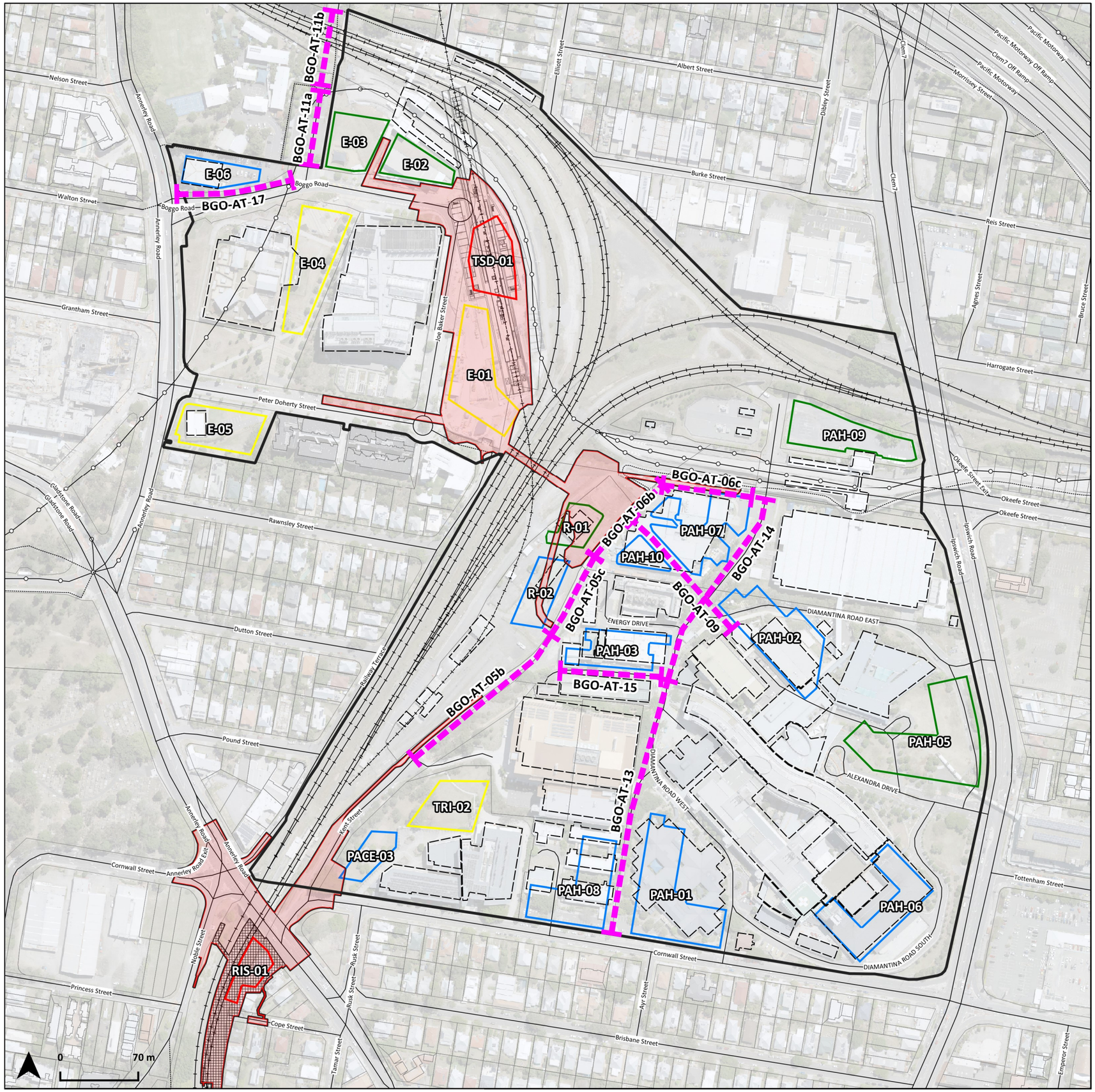
Active Transport Projects (Stage 4)
- Active Transport Link (Stage 4)

PDA - Development Sites (by Stage & Year) (Indicative Only)
- Stage 1 (TSD & RIS) (2020 - 2025)
- Stage 2 (2025 - 2026)
- Stage 3 (2027 - 2031)
- Stage 4 (2032 - 2041)
- Existing Buildings

Transport - Road, Transit
- Road
- Busways
- Tracks, Paths & Malls

Existing Rail
- Operational
- CRR Alignment
- CRR TSD Boggo Road Station
- CRR RIS Dutton Park Station

Property - DCDB
- Base Lot



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Future PDA potential development opportunity sites and staging are conceptual and indicative only for infrastructure network analysis purposes.

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Data Sources
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