Parkes Special Activation Precinct

Delivery Plan
September 2023

nsw.gov.au/rgdc

Acknowledgement of Country

We acknowledge the Wiradjuri people who are the traditional landowners of the Parkes Region. The Wiradjuri is the largest Aboriginal nation in NSW, living in Condobolin, Peak Hill, Narrandera and Griffith. There are significant populations at Leeton and smaller groups at West Wyalong, Parkes, Dubbo, Forbes, Cootamundra, Cowra and Young.

The Wiradjuri lands were signposted with scar trees and these and any other remaining artefacts will be identified and respected in the development of the Special Activation Precinct.

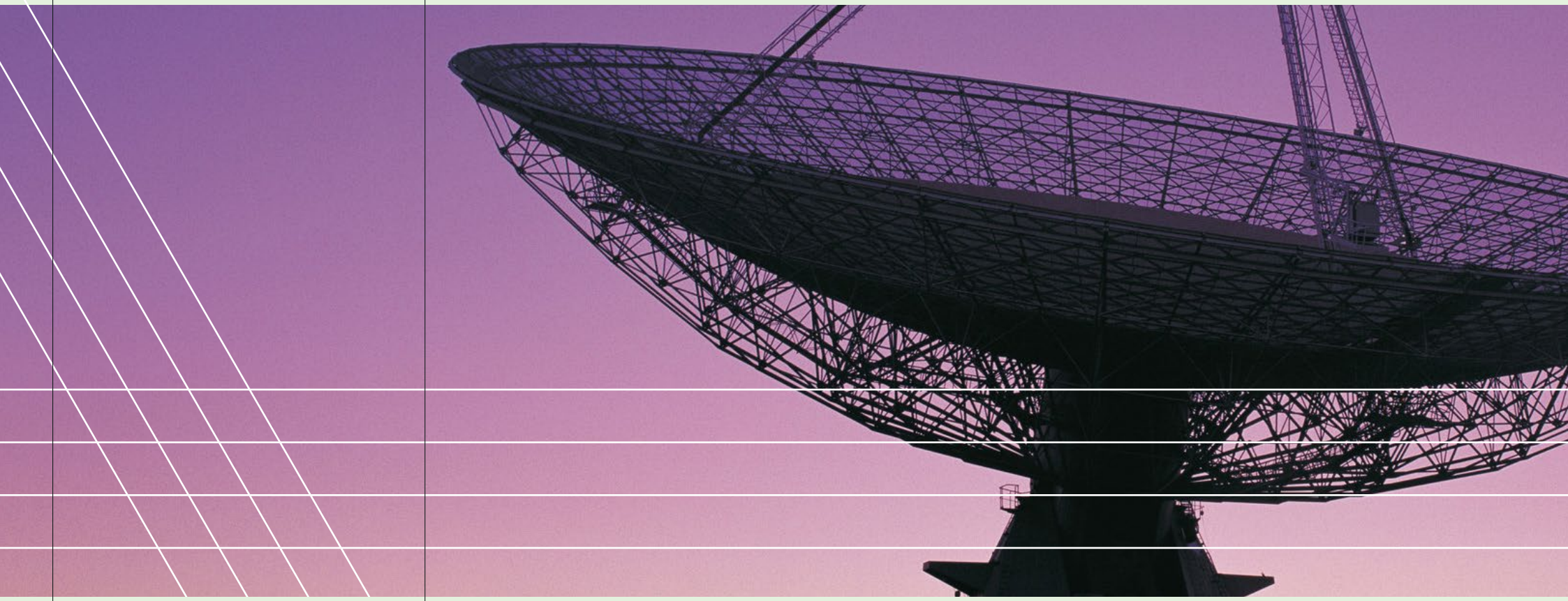
We wish to design places where Aboriginal people are socially, culturally and economically included. We also acknowledge all the Aboriginal and Torres Strait Islander families in our community and acknowledge their physical and spiritual connections to their land.

On Country
Charmaine Mumbulla, 2022

The Parkes Special Activation Precinct connects businesses with development and investment support to help them establish and grow with confidence

1

Introduction



CSIRO Radio Telescope at Parkes at twilight
Courtesy of Destination NSW

1

This section provides an overview of Special Activation Precincts, the role of a delivery plan and how to use this document.

1.1 What is a Special Activation Precinct

Special Activation Precincts are dedicated areas within regional New South Wales which have been identified by the NSW Government to become thriving business hubs. They build on each region's competitive advantages to create jobs, drive investment and business opportunities and fuel regional economic development.

Parkes township with views across the canola fields
Image courtesy of Destination NSW

Foundations for Special Activation Precincts

- Government-led studies
- Streamlined planning
- Government-led development
- Infrastructure investment
- Business Concierge

Special Activation Precincts will deliver the social and economic infrastructure, amenities and services regional communities need to enjoy happy, healthy and productive lives for generations to come.

The planning and delivery of Special Activation Precincts is underpinned by extensive environmental and infrastructure investigations which inform the master plan.

Special Activation Precincts offer streamlined planning approvals, government-funded infrastructure and business support services to reduce the time and cost of setting up business.

Special Activation Precincts offer businesses confidence with the right planning framework and infrastructure investment in place.

1.2 What is the role of Regional Growth NSW Development Corporation

> Regional Growth NSW Development Corporation will support investors and businesses, cutting red tape with simplified approval processes to enable businesses to set-up faster in Special Activation Precincts in regional NSW.

The Regional Growth NSW Development Corporation (RGDC) offers business concierge services for end-to-end development within Special Activation Precincts. RGDC's goal is to deliver commercially successful Special Activation Precincts that boost economic development and job growth in regional NSW.

Infrastructure and services are embedded upfront into the master planning process. RGDC works collaboratively with businesses to set up true triple helix partnerships, bringing together all stakeholders to achieve the Special Activation Precinct vision and aspirations.

A key component is streamlined planning which is facilitated by the Activation Precinct Certificate process. An Activation Precinct Certificate is required for all development applications or applications for a Complying Development Certificate within a Special Activation Precinct.

The Activation Precinct Certificate process is summarised in Section 1.7 of this document.

1. **Services**
   Physical and digital enabling infrastructure, utilities and services
2. **Approvals**
   Streamlined planning and environmental approvals
3. **Investment**
   Industry investment and attraction incentive packages and management
4. **Partnerships**
   Triple helix partnerships and collaboration

1.3 What is a delivery plan?

A delivery plan is a statutory document, referenced by the *State Environmental Planning Policy (Precincts-Regional) 2021* (Precincts-Regional SEPP), and is required before any development can occur within a Special Activation Precinct.

The Parkes Special Activation Precinct Delivery Plan (delivery plan) has been prepared by RGDC and must be consistent with the Parkes Special Activation Precinct Master Plan (master plan).

The delivery plan sets out criteria for applications for an Activation Precinct Certificate, including the:

- precinct design principles
- precinct revegetation strategy
- infrastructure planning and delivery
- subdivision design objectives
- assessment criteria for change of land uses and the construction of new buildings and structures.

Who will use this delivery plan?

This delivery plan will be used by:

- RGDC, the issuing authority and consent authorities to evaluate or assess development proposals and provide advice to investors
- land owners, proponents and businesses to understand development and infrastructure obligations
- the community to understand the criteria and monitoring applied to development within the precinct.

The following planning framework facilitates the streamlined planning process for Special Activation Precincts (see Section 1.7 for more detail).

We are here

Precincts-Regional SEPP 2021

- zone
- objectives
- land uses

Parkes Special Activation Precinct master plan

- vision and aspirations
- principles
- precinct-wide performance measures

Parkes Special Activation Precinct delivery plan

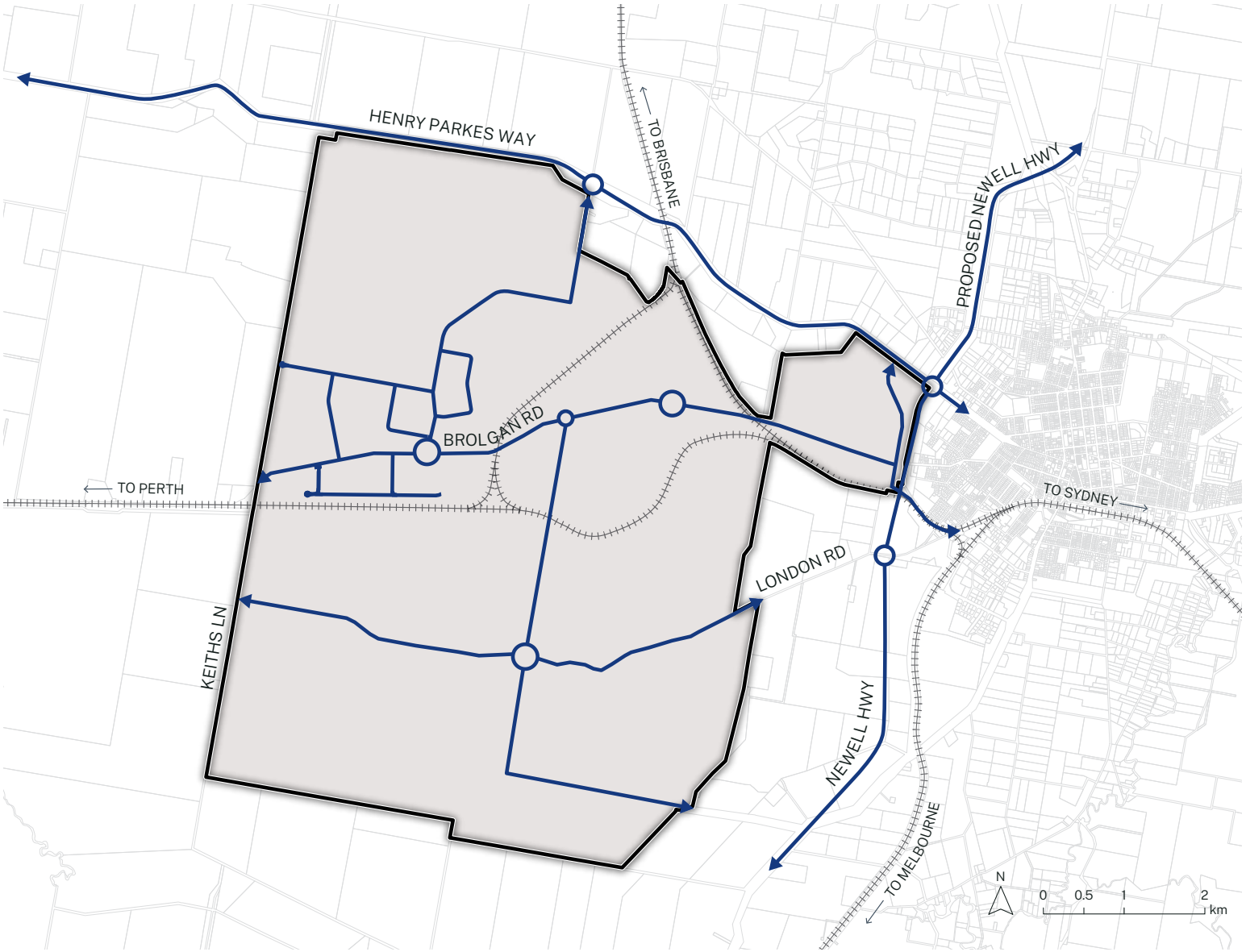
- built form and landscape design guidelines
- precinct-wide mapping
- landscape strategy
- precinct and site-based assessment criteria and solutions

Where does this delivery plan apply?

Under the Precincts-Regional SEPP, an issuing authority can only issue an Activation Precinct Certificate for land if there is a master plan and delivery plan that applies to the land concerned.

This delivery plan applies to the Parkes Special Activation Precinct (Parkes precinct).

Figure 1.1 Parkes Special Activation Precinct



How to use this delivery plan

1

Introduction (this section)

This section outlines the context for the precinct, including the broader legislative framework and sets out how this delivery plan should be navigated for development proposed within the precinct, and the process to obtain an Activation Precinct Certificate.

Read this section to understand:

- the broader legislative framework
- how to use the delivery plan
- the Activation Precinct Certification process.

2

Precinct design principles

This section sets out the overarching design outcomes for the precinct to create a high-quality business and advanced industry precinct by blending smart design, ecological sustainability, and worker and visitor amenity.

Read this section to understand:

- the overarching design outcomes and how they're aligned with the master plan guiding principles and the design considerations incorporated into the master plan's performance criteria

3

Precinct revegetation strategy

This section sets out the precinct revegetation strategy which identifies the high value biodiversity to be protected, enhanced and incorporated into the site layout and design, as well as the landscape principles for development interfacing with these areas

Read this section to understand:

- the landscape context and where the areas of biodiversity and vegetation are to inform planning and designing for your site
- the principles for protecting and enhancing areas of high biodiversity value and vegetation
- the species list when undertaking:
  - revegetation of strategic sites, corridor greening and vegetation corridor enhancements
  - landscaping on private sites.

4

Infrastructure

This section sets the context of the infrastructure needs and expectations for the precinct.

Read this section to understand:

- what enabling infrastructure is being delivered in the precinct
- the objectives and principles guiding infrastructure planning and design within the precinct
- the site specific expectations for providing infrastructure.

5

Subdivision design guidelines

This section sets the subdivision design objectives for planning a subdivision within the precinct.

Read this section to understand:

- the requirements for planning a subdivision within the precinct, including the design objectives for topography, environment, environmental hazards, design and landscaping, stormwater and drainage, accessibility and infrastructure and services.

6

Assessment criteria

This section outlines the performance criteria for evaluating whether a proposal is consistent with the master plan and delivery plan.

Read this section to understand:

- the performance-based planning approach to evaluating development proposals
- the requirements for planning and designing your site
- the evaluation requirements for development proposals to ensure it is consistent with the master plan and delivery plan.

7

Monitoring, reporting and compliance

This section sets out the monitoring, reporting and compliance program for the precinct.

Read this section to understand:

- the precinct-wide monitoring program to evaluate whether the precinct is on track to meet its targets, objectives and outcomes
- how businesses will contribute to precinct wide monitoring and reporting.

8

Mapping

This section sets out all the mapping relevant to Section 6.

Read this section:

- in conjunction with the assessment criteria for site specific development.

What parts of this delivery plan should I look at?[1]

✓ Applies → Check to determine whether the controls are triggered. For example, check Section 8 – Mapping to determine if your site has mapped biodiversity values or cultural heritage on the land, and whether the land is affected by flooding or bush fire.

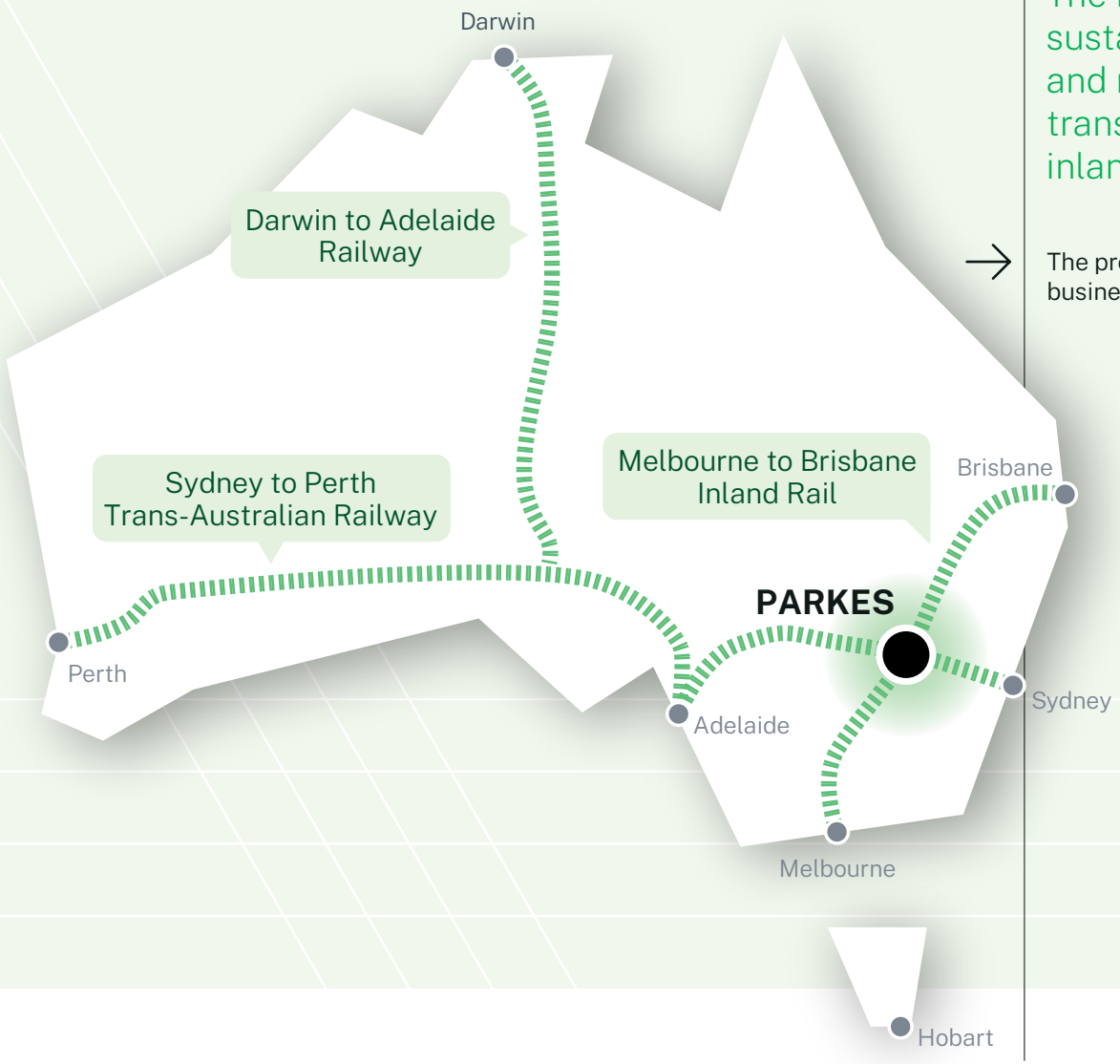
Development type[2, 3]	Section 4 Infrastucture	Section 5 Subdivision	Section 6 Assessment criteria							Section 8 Mapping
			6.1 General controls	6.2 Specific development requirements i.e. large lots (minimum 1 hectare), solar energy farms	6.3 Sustainability	6.4 Environment i.e. landscape character and visual impact, heritage, biodiversity, vegetation and riparian corridors, groundwater	6.5 Environmental hazards i.e. flood risk management, bush fire protection, managing development on contaminated land	6.6 Environmental impact management i.e. potentially hazardous and offensive development, air quality and odour, noise, biosecurity	6.7 Savings provisions	
Change of use	→		✓		✓					✓
Subdivision	✓	✓								✓
Development on a small lot (less than 1 hectare) subsequent to and consistent with a subdivision under this Delivery Plan			✓		✓					✓
Development on land identified in the intermodal and rail terminals facilities overlay	✓		✓	✓	✓			→		✓
Solar energy farm	✓		✓	✓	✓	→	→			✓
Works to or within the curtilage of a heritage item			→			✓				
Potentially hazardous development	✓		✓	✓	✓	→	→	✓		✓
Development that is a scheduled activity listed in Schedule 1 of the POEO Act	✓		✓	→	✓			✓		✓
Development that may involve emissions (i.e. air, odour, noise)	✓		✓	→	✓	→	→	✓		✓
Demolition, damage or removal of structures or buildings				→						
Out of sequence development	✓		✓	✓	✓	→	→	→		✓

1 This table is a guide only. Other parts of this delivery plan may apply than those identified, due to the scale and nature of the development proposal. The Issuing Authority will confirm applicable parts of this delivery plan as part of Step 3 – Pre-lodgement in the Activation Precinct Certification process.

2 More than one development type may apply to the development proposal. Where more than one development type applies, all applicable controls will apply.

3 Should a development proposal not be listed, the relevant parts of this delivery plan will be determined by the issuing authority.

1.4 Vision and aspirations for Parkes Special Activation Precinct



The Parkes Special Activation Precinct will be a hub of sustainability and enterprise that will enhance the local and regional community. Located at the epicentre of transport and logistics, the precinct will be a thriving inland port to national and global markets.

The precinct offers investors, businesses and the community:

- the Central West's newest and most advanced enterprise precinct, producing high value food and manufacturing products for global and national markets
- a streamlined planning and development process
- located in Australia's first precinct aligned with the United Nations Industrial Development Organization (UNIDO) Eco-Industrial Park framework and the nation's leading circular economy precinct
- Australia's largest inland freight and logistics hub centred around Inland Rail and the Parkes National Logistics Hub
- a unique industrial and commercial setting where Universal Design, Diversity & Inclusion and Accessibility are a key consideration of the design and operation

1.5 Parkes Special Activation Precinct master plan

Pacific National Logistics Terminal

The Parkes Special Activation Precinct master plan was published by the NSW Government in June 2020. It identifies the vision and principles for the precinct, provides detailed land use provisions (by sub-precinct) and performance criteria for environmental considerations such as air quality, noise, biodiversity and water management. The Precincts-Regional SEPP requires the delivery plan be consistent with the master plan.

The master plan covers more than 4,800 hectares of land within six sub-precincts. The sub-precincts identify key land uses in line with the aspirations for the precinct including:

- freight and logistics
- value-add agribusiness
- advanced manufacturing
- resource recovery and recycling.

The precinct will feature new commercial, retail and community uses in a gateway location.

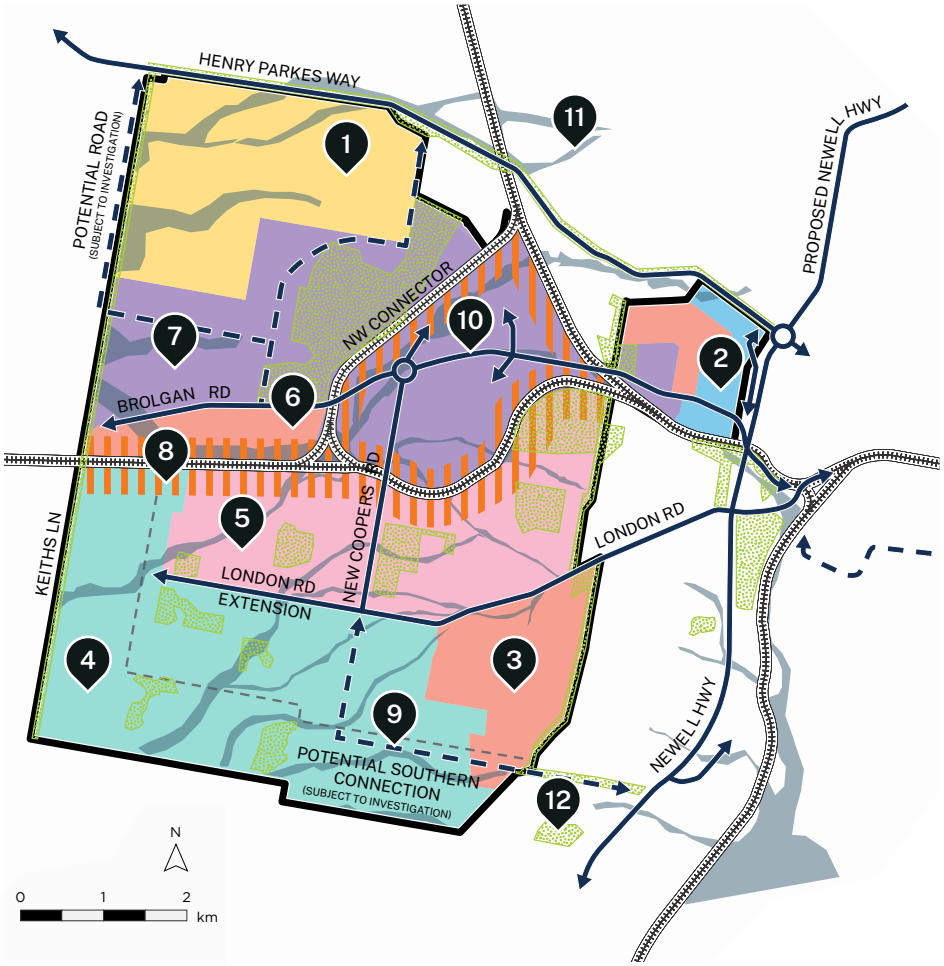
The master plan also identifies key road networks and environmental constraints and opportunities such as buffers, green infrastructure, stormwater basins and stormwater flow paths.

The investigation area has been assessed by technical experts, ecologists, engineers and, urban planners. Ongoing input and feedback from the community, landowners, businesses, and other key stakeholders also informed the master planning process.

Five principles underpin the planning for the precinct and frame the performance criteria within this delivery plan:

1	**Economic development**	The Parkes Special Activation Precinct will be an innovative precinct of enterprise and productivity supporting the creation of new jobs and economic development.
2	**Environment and sustainability**	The Parkes Special Activation Precinct will be Australia's first precinct aligned with the United Nations Industrial Development Organization (UNIDO) Eco-Industrial Park framework and the nation's leading circular economy precinct.
3	**Community**	The Parkes Special Activation Precinct will build on the Parkes National Logistics Hub and will support the long-term growth and prosperity of Parkes and the Central West region.
4	**Place and landscape**	The development of the Special Activation Precinct will protect the site's natural features and pockets of high value vegetation and paddock trees. The landscape will reflect connection to Country.
5	**Infrastructure**	The Parkes Special Activation Precinct will be the most connected regional hub in Australia. As Australia's premier inland port, the Parkes Special Activation Precinct will service the distribution of products nationally and internationally through world class infrastructure.

Figure 1.2 Parkes Special Activation Precinct master plan



Railway

1km odour buffer zone

1 **The Solar sub-precinct** recognises the significant investment already made in renewable energy generation and supports the Special Activation Precinct in becoming Australia's first UNIDO Eco-Industrial Park.

2 **The Commercial Gateway sub-precinct** will provide a transition between industry and the township of Parkes. The precinct is located on the proposed Newell Highway, offering opportunities to service local and travelling customers.

3 **The Resource Recovery and Recycling sub-precinct** is located near the centre of the site and includes the existing Westlime quarry and landfill. Co-located with the intermodal transport network, this area is ideally placed to receive and reprocess waste, championing circular economy principles as part of an Australian-first Eco-Industrial Park.

4 **The Intensive Livestock Agriculture sub-precinct** is suitable for an abattoir and other livestock value-adding businesses. This sub-precinct is located away from the Parkes township and the regional enterprise employment areas, and north of the Sydney–Perth rail line, creating a buffer for impact-generating activities.

5 **The Mixed Enterprise sub-precinct** offers flexibility for a range of uses and acts as a transition between lower impact and higher impact sub-precincts. This sub-precinct will allow for small to moderate sized land parcels depending on market demand.

6 **The Resource Recovery and Recycling sub-precinct (west)** will include the future energy from waste facility.

7 **The Regional Enterprise sub-precinct** is located at the cross-section of new and existing rail lines. It will accommodate a range of businesses including rail and road transport terminals, warehousing, advanced manufacturing and food processing businesses.

8 **The intermodal and rail terminal facility area** land adjacent to the rail line that is strategically important to preserve opportunities for rail and transport infrastructure. This is crucial to maintaining the precinct's competitive advantage as a freight and logistics hub.

9 **New roads (potential subject to investigation)** The detailed design and implementation of proposed new roads (within the precinct only) are to be determined by this delivery plan.

10 **New or upgraded trunk roads within precinct** will be delivered by RGDC or as part of private development.

11 **Stormwater flow paths** have been designed to accommodate stormwater management and detention areas which respond to a range of flooding events.

12 **High value vegetation and regeneration areas** are areas that have already been identified for preservation.

1.6 Approval pathways

The Precincts-Regional SEPP simplifies planning and approvals processes. Any development within a Special Activation Precinct must be consistent with the corresponding precinct master plan.

Many industrial and employment uses that would require a development application under the current planning framework, are intended to be undertaken as complying development within Special Activation Precincts. Complying development will not be advertised and will not require an Environmental Impacts Statement or Statement of Environmental Effects.

Numerous technical studies, investigations and strategies have informed the performance criteria in the master plan, and design guidelines and assessment criteria in the delivery plan. This has allowed for most development to be complying under the Precincts-Regional SEPP.

1.6.1 Activation Precinct Certificates

An Activation Certificate provides confirmation that a proposal is consistent with the relevant land use zoning, master plan and delivery plan. The requirement for an Activation Precinct certificate is regulated under the *Environmental Planning and Assessment (EP&A) Regulation 2021* and must accompany all applications for development consent within a Special Activation Precinct.

An Activation Precinct certificate will be issued if RGDC determines the proposed development is consistent with the master plan and delivery plan.

1.7 Activation Precinct Certification process

The Activation Precinct Certificate process provides a streamlined planning pathway for economic development to help our regions grow while providing certainty and confidence to businesses.

Business concierge

The business concierge will support streamlined and coordinated planning and environmental approvals for investors and businesses.

Through the business concierge, applicants have the option of progressing parallel environmental approvals and licences, and other approvals, licences and permits required for a proposed development.

The business concierge will also facilitate applicant's access to strategic advice and support from RGDC's in-house sustainability experts to help businesses align their operations with the sustainability objectives of the precinct and to unlock business opportunities, partnership projects and precinct benefits associated with co-locating in a precinct committed to innovation and best practice.

Applicant-driven process

Potential investors, or applicants, play a crucial role in streamlining the development approval process.

The Activation Precinct Certificate provides for investors to decide:

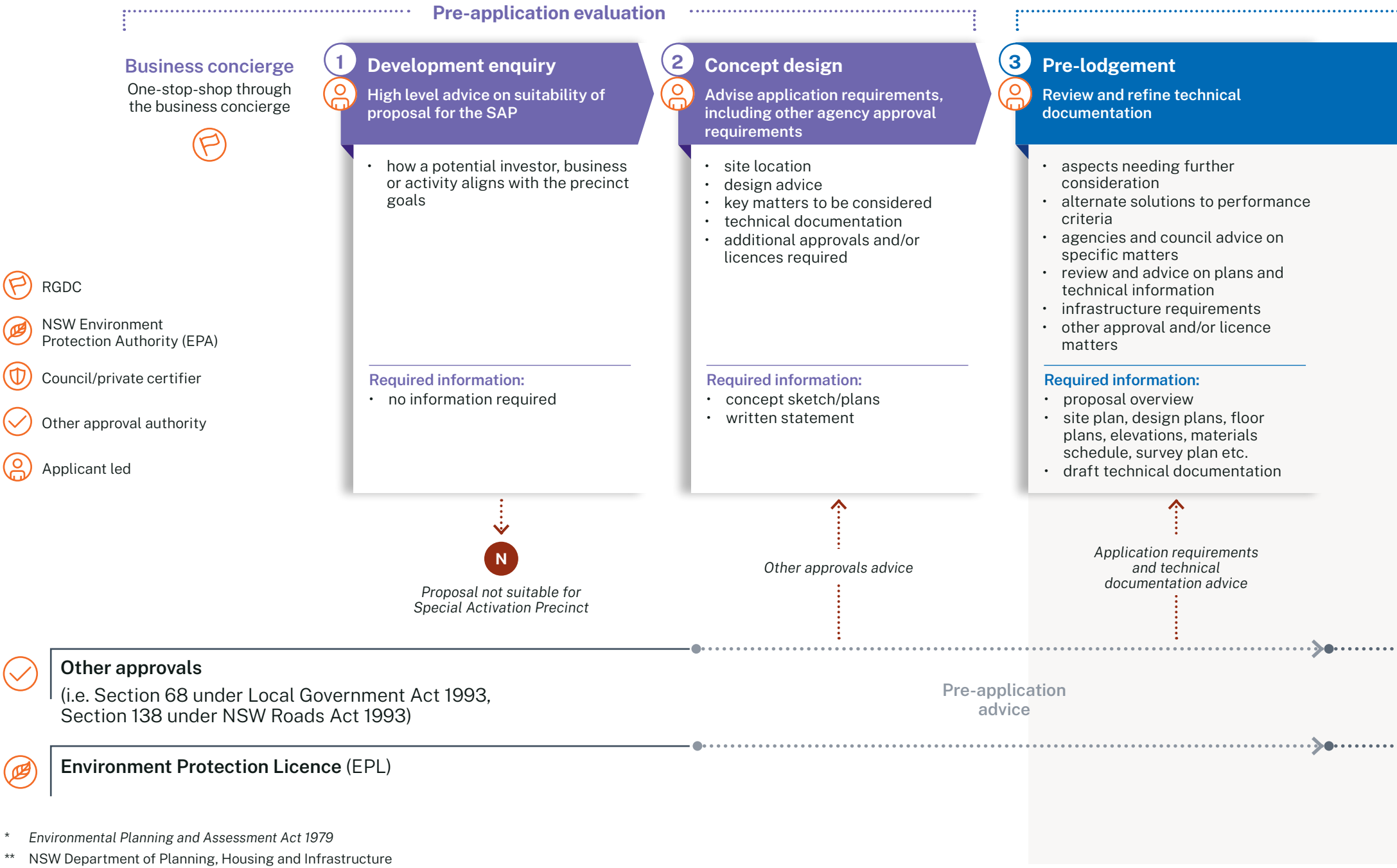
- when they will prepare any required technical documentation
- when they will lodge the application for an Activation Precinct Certificate
- whether they will seek to process other required approvals and licences in parallel with the Activation Precinct Certificate process.

The business concierge offers a coordinated service to investors to undertake additional approval and licence processes in parallel with the Activation Precinct Certificate process.

RGDC will engage with other government agencies, regulatory bodies and the local council to discuss any additional approval requirements at Step 2 – Concept design.

It will be at the investors discretion when they choose to initiate other approval and/or licence requirements.

Activation Precinct Certification process



* *Environmental Planning and Assessment Act 1979*

** NSW Department of Planning, Housing and Infrastructure

Application evaluation and determination

4 Application

Lodge application

- complete checklist
- application form
- accept application or request information
- give written notice of application to utility providers (i.e. land near electricity transmission and distribution networks, pipeline areas, and level crossings and rail corridors) for comment within 14 days

Required information:

- application form
- technical documentation

5 Evaluation and determination

30 day evaluation period commences once application is accepted

- ensure consistency with master plan and delivery plan
- on basis of submitted plans and technical documentation
- consider any submissions received from any utility providers

Activation Precinct Certificate

- 3 year currency period
- stamped and dated technical documentation attached
- may include requirements for consistency
- Corporation gives copy of APC to other agencies and council

Optional parallel assessment pathways

Information request
Evaluation period pauses

Refine for consistency
Evaluation period stops and starts again

Applicant liaises with corporation on modifications after APC issued

Lodgement and assessment

Application for development approval

Other approvals
Approval granted either unconditionally or subject to conditions

Complying Development Certificate
Lodge with council/ private certifier
Follow process under EP&A Act*

Development Application
Lodge with DPHI**.
Follow process under EP&A Act

Construction Certificate
Lodge with council /private certifier.
Follow process under EP&A Act

Environment Protection Licence
Lodge with EPA (can be lodged prior to development consent). EPL may only be granted after CDC or consent is issued.

1

Development enquiry

RGDC will provide high level advice on the suitability of the proposal for the precinct, including how the proposal aligns with the precinct goals and advice on the design and development outcomes before the development is conceptualised.

2

Concept design

RGDC will undertake a concept design evaluation and provide advice on:

- a preferred site if one is not already identified
- key matters that need consideration, including design
- advice on alternate solutions to the assessment criteria, where relevant
- technical documentation requirements
- additional approvals, licences and permits required.

RGDC will also coordinate other government agencies, regulatory bodies and local council to provide advice on the application requirements for any other approvals and/or licences that may be required.

The concept design step may involve multiple meetings and/or advice.

The information needed for the concept design evaluation includes:

- concept design plans/sketches
- written statement.

Development Specific Checklist
RGDC will advise on the Activation Precinct Certificate requirements in accordance with the relevant delivery plan. Through the business concierge, RGDC will prepare a Development Specific Checklist which sets out the application requirements and technical documentation needed for the proposed development, to support the lodgement of an application for an Activation Precinct Certificate.

3

Pre-lodgement

A pre-lodgement allows applicants to discuss their proposal with RGDC in more detail and provides the opportunity for pre-evaluation to identify where changes may be required to ensure consistency with the master plan and delivery plan.

Pre-lodgement gives all parties (i.e. RGDC, applicant and other government agencies, regulatory bodies and council) the opportunity to:

- identify design, planning or operational aspects of proposals which may need further consideration or amendment
- discuss alternate solutions to meet the performance criteria provisions
- review draft technical documentation that will be required for the formal lodgement of an application in accordance with the Development Specific Checklist
- work through any specific issues (i.e. biodiversity, flooding, stormwater constraints etc.)
- work through issues and application requirements for relevant approvals and licences.

More than one pre-lodgement may be required, and pre-lodgements may be in the form of meetings and/or written advice.

The supporting information needed for a pre-lodgement generally includes:

- proposal overview
- site plan, floor plans, elevations and sections, materials schedule, survey plan
- draft technical documentation that will be required as part of the application in accordance with the Development Specific Checklist.

4

Application

RGDC will confirm an application has been made in the approved form (against the Development Specific Checklist).

If an applicant takes a parallel approval pathway, the relevant application forms, technical documentation and fee can be progressed at the same time as their application for the Activation Precinct Certificate.

5

Evaluation and determination

An Activation Precinct Certificate will be issued for development that is consistent with the master plan and delivery plan based on submitted technical documentation.

RGDC is the issuing authority for Activation Precinct Certificates.

The Activation Precinct Certificate, confirms:

- the proposed development is consistent with the master plan and delivery plan
- the determination is based on stamped and dated technical documentation (referred to as *Activation Precinct Certificate material*)
- any requirements that must be addressed prior to an application being made for a Complying Development Certificate (i.e. the submission of an environmental management plan with RGDC).

If the issuing authority determines the development is not consistent with the master plan and delivery plan, the applicant will be given an opportunity to modify the application to ensure it complies.

An Activation Precinct Certificate is valid for three years.

Once a Certificate has been issued, relevant approvals must still be obtained. The pathways for consent to be granted are:

→ Complying Development under the *Environmental Planning and Assessment Act 1979* through the issuing of a Complying Development Certificate (from the relevant council or an accredited certifier)

→ Development Application under Part 4 of the *Environmental Planning and Assessment Act 1979.*

Complying Development

In most instances a Complying Development Certificate (Building Approval) will be required for development within a Special Activation Precinct and can be issued by either the local council or an accredited certifier.

The council or accredited certifier will evaluate and determine an application for a Complying Development Certificate in accordance with the *Environmental Planning and Assessment Act 1979 (EP&A Act)* and EP&A Regulation. Section 4.28 of the *EP&A Act* requires the council or registered certifier to consider and determine:

- whether or not the proposed development is complying development
- whether or not the proposed development complies with the relevant development standards.

A local environmental plan does not apply to land within a Special Activation Precinct.

The consent authority or the council / registered certifier will need to ensure that the proposed development, the subject of an Activation Precinct Certificate, is substantially the same as that proposed under the application for development consent or Complying Development Certificate.

Development consent must be obtained under Part 4 of the *Environmental Planning and Assessment Act 1979* where a proposed development that involves a permitted land use does not meet the criteria to be complying development under the Precincts-Regional SEPP.

Warehouse in Parkes

Timeframes

The 30-day *evaluation period* commences only when an application for an Activation Precinct Certificate is made in the form approved by RGDC and satisfies the requirements under clause 3.9(3) of the Precincts-Regional SEPP.

Neither the day on which the application for an Activation Precinct Certificate is lodged nor the following day are to be taken into consideration in calculating the number of days in the evaluation period.

RGDC may request more information. The evaluation period excludes any period between a request for additional information and the applicant's response to the information request.

Modifications to proposals

There may be circumstances when an applicant wishes to:

- make changes to their development proposal (i.e. design changes) either:
  - during the Activation Precinct Certificate evaluation and determination step;
  - between receiving an Activation Precinct Certificate and making an application for a Complying Development Certificate; and
  - during the complying development approval process; or
- seek written confirmation from the issuing authority that the development proposal the subject of an application for a Complying Development Certificate is substantially the same as the development the subject of the Activation Precinct Certificate that applies to the land.

For modifications made after an Activation Precinct Certificate is issued, the applicant will need to give written notice to the issuing authority seeking the issuing authority's confirmation that the development, as amended or modified, is substantially the same as the development proposal the subject of the Activation Precinct Certificate. An updated or new Activation Precinct Certificate would not be issued.

A new application for an Activation Precinct Certificate will be required for a modified development proposal that RGDC considers to be substantially different from the original development proposal of the original Activation Precinct Certificate.

Updated or changed Activation Precinct certificate

There may be circumstances where an applicant seeks an updated or changed Activation Precinct Certificate after the issuing authority has issued it, to:

- correct a minor error, an incorrect description or miscalculation within the Activation Precinct Certificate
- seek modifications to any requirements included as part of the Activation Precinct Certificate
- modify the Activation Precinct Certificate to reflect any amended or modified design changes to the development proposal, provided the development is substantially the same.

Any changes to the Activation Precinct Certificate should be sought prior to the applicant making an application for a Complying Development Certificate.

If an applicant seeks changes to the proposed development during the complying development process, a new Activation Precinct Certificate may be required to be issued prior to issue of Complying Development Certificate.

Environment Protection Licence

Environment Protection Licences (EPLs) are required for some development or activities. These are issued by the NSW Environment Protection Authority (EPA) under the *Protection of the Environment Operations Act 1997.*

As part of the business concierge service, RGDC will coordinate and engage with the EPA during the Activation Precinct Certificate process to ensure the proposed development satisfies requirements for an EPL.

The EPA will be engaged on EPL requirements during Step 2 – Concept design for advice on:

- requirements for the proposed development under the *Protection of the Environment Operations Act 1997*
- the application requirements for an EPL.

RGDC will also engage with the EPA on the pre-evaluation of the proposed development and draft technical documentation during Step 3 – Pre-lodgement to resolve any issues upfront to enable a decision-ready application for an EPL.

Once the development proposal and technical documentation are considered decision-ready, the applicant can apply for the EPL at the same time as an Activation Precinct Certificate.

Where possible, the EPA will assess the licence application in parallel with RGDC's evaluation for an Activation Precinct Certificate. The EPA cannot issue a licence until development consent is obtained.

Section 68 approvals

Section 68 of the *Local Government Act 1993* specifies a range of activities where approvals are required from the local council, known as 'Section 68 approvals'. Section 68 approvals are generally required where an activity is carried out on council land, assets or requires connection to local council infrastructure. Categories of activities relate to:

- temporary structures and places of public entertainment
- water supply, sewerage and stormwater work
- management of waste
- community land
- other activities as identified under Section 68.

Section 68 approvals cannot be applied for as part of the application to the council for a Complying Development Certificate.

As part of the Activation Precinct Certification process RGDC will engage with the local council to provide advice on approval requirements during Step 2 – Concept design.

The applicant will be able to make an application for a Section 68 approval when they make the application for an Activation Precinct certificate.

Section 138 approvals

Section 138 of the *NSW Roads Act 1993* requires that all activities undertaken within the local council's road reserve (or other roads authority) be approved by the relevant roads authority prior to activities being undertaken.

As part of the Activation Precinct Certificate process, RGDC will engage with the relevant roads authority to provide advice on approval requirements during Step 2 – Concept design.

An application for a Section 138 approval can be done in conjunction with the application for an Activation Precinct Certificate.

Linfox freight

Potentially hazardous and offensive development

For potentially hazardous and offensive development, the Department of Planning, Housing and Infrastructure will be engaged during Step 2 – Concept design or Step 3 – Pre-lodgement to identify whether the potentially hazardous development is low, medium or high risk, and confirm whether the proposed development will be complying development or require a development application.

For complying development involving potentially hazardous or offensive industry, RGDC will seek the approval of the Planning Secretary to issue an Activation Precinct Certificate during Step 5 – Evaluation and determination.

Other referrals and concurrences

RGDC will work with applicants to identify any requirements for referrals or concurrences as part of the Development Specific Checklist.

Additional information may need to be provided to meet the requirements of other referrals or concurrences during the Activation Precinct Certificate process.

RGDC will engage with other government agencies, regulatory bodies and the council to streamline these processes, including identifying any other referral and concurrence requirements during Step 2 – Concept design.

Freight trains in Parkes

1.8 Proposal documentation requirements

All applications for an Activation Precinct Certificate should adequately address the master plan and delivery plan requirements.

Proposals should include the following information to demonstrate consistency with the master plan and delivery plan:

What supporting documents will I need for my application?[4]

Type[5, 6]	Change of use	Subdivision	Development on a small lot (less than 1 hectare) subsequent to and consistent with a subdivision under this Delivery Plan	Development on a small lot (less than 1 hectare)	Development on a large lot (minimum 1 hectare)	Development on land identified as a Commercial Node	Rail and intermodal development	Solar energy farm	Works to or within the curtilage of a heritage item	Potentially hazardous development	Development that is a scheduled activity listed in Schedule 1 of the POEO Act	Development that may involve emissions (i.e. air, odour, noise)	Demolition, damage or removal of structures or buildings	Development in the Rural Activity Zone	Out of sequence development
Application form	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Development Specific Checklist	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Architectural plans															
Elevations and sections	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Floor plans	✓		✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓
Landscape plan	→	✓	✓	✓	✓	✓	✓	✓	→	✓	✓	✓		✓	✓
Photo montage			→	→	→	→			→						
Proposed subdivision plan		✓													
Schedule of colours, materials and finishes	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Shadow diagrams			→	→	→	→									
Site plans	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Survey plan	→	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Any other plans that demonstrate how the proposal addresses the assessment criteria	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→

Type[5, 6]	Change of use	Subdivision	Development on a small lot (less than 1 hectare) subsequent to and consistent with a subdivision under this Delivery Plan	Development on a small lot (less than 1 hectare)	Development on a large lot (minimum 1 hectare)	Development on land identified as a Commercial Node	Rail and intermodal development	Solar energy farm	Works to or within the curtilage of a heritage item	Potentially hazardous development	Development that is a scheduled activity listed in Schedule 1 of the POEO Act	Development that may involve emissions (i.e. air, odour, noise)	Demolition, damage or removal of structures or buildings	Development in the Rural Activity Zone	Out of sequence development
General															
Cost estimate report for development with a value of: • $0-$150,000: prepared by the applicant or a suitably qualified person • greater than $150,000 - $3 million: prepared by suitably qualified person • greater than $3 million: detailed cost report prepared by a registered quantity surveyor	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Owner's consent	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Party wall consent	→		→	→	→	→	→	→	→	→	→	→	→	→	→
Plan of management										✓	✓	✓			✓
Political donations and gifts disclosure statement	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Statement of environmental effects	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6.1 General controls															
Erosion and sediment control plan	→	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Geotechnical report where development: • has potential to adversely affect surrounding properties during excavation or construction of subsurface structures • involves excavation of a certain volume, within proximity to a property boundary or depth below ground level • are located on land with certain site constraints (i.e. steep slopes)	→	→		→	→	→	→	→		→	→	→		→	→
Maintenance plan for stormwater treatment	→	✓	✓	✓	✓	✓	✓	✓	→	✓	✓	✓			✓

Type[5, 6]	Change of use	Subdivision	Development on a small lot (less than 1 hectare) subsequent to and consistent with a subdivision under this Delivery Plan	Development on a small lot (less than 1 hectare)	Development on a large lot (minimum 1 hectare)	Development on land identified as a Commercial Node	Rail and intermodal development	Solar energy farm	Works to or within the curtilage of a heritage item	Potentially hazardous development	Development that is a scheduled activity listed in Schedule 1 of the POEO Act	Development that may involve emissions (i.e. air, odour, noise)	Demolition, damage or removal of structures or buildings	Development in the Rural Activity Zone	Out of sequence development
Proposed potable water and non-potable water demand and percentage to be delivered via onsite water systems	→		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓
Proposed sewer outflow requirements	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓
Stormwater drainage plan	→	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓			✓
Structural engineers report													✓		
Traffic and parking study	→	→		→	→	→	→			→	→	→		→	✓
Traffic impact assessment	→	→		→	→	→	→			→	→	→		→	✓
Voluntary planning agreement															✓
Waste management plan	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Water pollution impact assessment	→		→	→	→	→	→	→		→	→	→		→	→
6.3 Sustainability															
Confirmation of proposed building rating/certification (e.g. Green Star), if applicable	→		→	→	→	→	→	→	→	→	→	→			→
Net Zero transition plan, if applicable	→		✓	✓	✓	✓	✓	→	→		✓	✓		✓	✓
Proposed electricity demand and consumption and percentage proposed to be delivered via renewables (onsite and offsite)	✓		✓	✓	✓	✓	✓	✓	→	✓	✓	✓			✓
Identification of resource flows	✓		✓	✓	✓	✓	✓	✓	→	✓	✓	✓			✓
Commitment to alignment with the UNIDO Eco-Industrial Park Framework	✓		✓	✓	✓	✓	✓	✓	→	✓	✓	✓			✓

Type[5, 6]	Change of use	Subdivision	Development on a small lot (less than 1 hectare) subsequent to and consistent with a subdivision under this Delivery Plan	Development on a small lot (less than 1 hectare)	Development on a large lot (minimum 1 hectare)	Development on land identified as a Commercial Node	Rail and intermodal development	Solar energy farm	Works to or within the curtilage of a heritage item	Potentially hazardous development	Development that is a scheduled activity listed in Schedule 1 of the POEO Act	Development that may involve emissions (i.e. air, odour, noise)	Demolition, damage or removal of structures or buildings	Development in the Rural Activity Zone	Out of sequence development
6.4 Environment															
Aboriginal cultural heritage assessment		→		→	→	→		→	→	→	→	→		→	→
Arborist report		→		→	→	→		→	→	→	→	→		→	→
Biodiversity impact statement		→		→	→	→		→		→	→	→		→	→
Biodiversity assessment report		→		→	→	→		→		→	→	→		→	→
Groundwater management plan	→				→					→	→			→	→
Heritage impact statement	→	→		→	→	→		→	✓	→	→	→		→	→
Hydrogeological report		→			→					→	→			→	→
Species impact statement		→			→			→		→	→	→		→	→
6.5 Environmental hazards															
Bushfire safety authority														→	
Bushfire hazard assessment		→		→	→	→	→	→	→	→	→	→		→	→
Certificate confirming development conforms to relevant bushfire specifications and requirements		→		→	→	→	→	→	→	→	→	→		→	→
Contamination/remediation action plan	→	→		→	→	→	→	→		→	→	→	→	→	→
Fire safety upgrade report	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Flood risk management report	→	→		→	→	→	→	→		→	→	→		→	→
Site based flood emergency response plan	→		→	→	→	→	→	→		→	→	→		→	→

Type[5, 6]	Change of use	Subdivision	Development on a small lot (less than 1 hectare) subsequent to and consistent with a subdivision under this Delivery Plan	Development on a small lot (less than 1 hectare)	Development on a large lot (minimum 1 hectare)	Development on land identified as a Commercial Node	Rail and intermodal development	Solar energy farm	Works to or within the curtilage of a heritage item	Potentially hazardous development	Development that is a scheduled activity listed in Schedule 1 of the POEO Act	Development that may involve emissions (i.e. air, odour, noise)	Demolition, damage or removal of structures or buildings	Development in the Rural Activity Zone	Out of sequence development
6.6 Environmental impact management															
Air quality impact assessment											→	✓			
Emergency disposal and biosecurity protocol											→			→	
Odour impact assessment											→	✓			
Odour impact statement											→	✓			
Noise impact statement											→	✓			
Noise impact assessment											→	✓			
Preliminary hazard analysis										✓					

4 This table is a guide only and should be read together with Section 6. The issuing authority will prepare a Development Specific Checklist for each development proposal which will set out the specific documentation requirements.

5 More than one development type may apply to the development proposal. Where more than one development type applies, all applicable documentation requirements may apply.

6 Should a development proposal not be listed, the relevant documentation requirements will be determined by the issuing authority at the pre-lodgement stage.

Environmental management plans

Where the issuing authority requires, a site-based environmental management plan may need to be prepared by a suitably qualified person in consultation with relevant government agencies to ensure that appropriate environmental management practices are followed during a project's construction and operation. The site-based environmental management plan should identify the environmental impacts, and management activities and controls related to managing and minimising environmental issues, including how the environmental management activities and controls will be monitored and reviewed.

Depending on the nature, scale and/or location of the development proposal, environmental issues may relate to:

- flora and fauna
- rehabilitation
- noise emissions
- air quality and odour emissions
- energy efficiency and energy consumption
- water consumption
- stormwater management
- erosion and sedimentation
- flood emergency response plan
- traffic, parking and access
- waste management
- aboriginal cultural heritage
- historic heritage
- site security
- emergency disposal and biosecurity protocol
- any other matters as may be required by the master plan or delivery plan.

Where necessary, a site-based environmental management plan may be required before an application for a Complying Development Certificate is submitted. Where a development requires a development application, the site-based environmental management plan will become a condition of consent.

The requirements for the site-based environmental management plan will vary depending on the nature and scale of the proposed development.

Special Activation Precincts are about making it easier and more attractive for businesses to set up in regional NSW, create more jobs, and grow our regional engine industries such as freight and logistics, renewable energy, advanced manufacturing, agribusiness, tourism, hospitality and defence.

Aerial of Parkes

1.9 Referrals and concurrences

Proposed development may be referred to other government agencies, regulatory bodies and the council as part of the Activation Precinct Certificate process. The following referrals and concurrences may be required and should be consulted with early in the Activation Precinct Certificate process prior to making an application for an Activation Precinct Certificate:

Does the application include any aspects that need to be referred or consulted on?

If any of the following matters are relevant to the application, the application will require referral or consultation with the respective Authority.

Development	Consult with	Separate licence or approval may be required[7, 8]	Written confirmation required	Authority
Specific development				
Hydrogen development, or other renewable energy development where required	✓		✓	Safe Work NSW, Fire and Rescue NSW, the Department of Planning, Housing and Infrastructure – Industry Assessments, and the EPA
Demolition	✓	✓		Safe Work NSW
Access				
Vehicular access	✓	✓		Roads Authority under section 138 of the *Roads Act 1993*
Transport infrastructure and utilities				
Development on land that interfaces with or adjoins an existing or future transport asset	✓	✓	✓	Roads Authority or Rail Authority
Development requiring rail access	✓	✓	✓	Rail infrastructure provider
Connections to utilities and services including: a. water b. wastewater c. electrical d. telecommunications and e. other utilities and services as required such as gas, hydrogen reticulation (including future hydrogen), recycled water etc	✓	✓		Relevant utility suppliers: • Electricity supply – Essential Energy; • Gas supply – Jemena; and • Water supply – Parkes Shire Council • Sewerage and drainage – Parkes Shire Council under section 68 of the Local Government Act 1993
Development with trade waste	✓	✓		Council or the Department of Planning, Housing and Infrastructure
Development within 20 metres of a pipeline corridor	✓	✓	✓	Pipeline Operator
Development near electricity transmission and distribution networks	✓	✓	✓	Electricity Supply Authority
Signage within 250 metres of a classified road	✓	✓	✓	Roads Authority

Development	Consult with	Separate licence or approval may be required[7, 8]	Written confirmation required	Authority
Heritage				
Development cannot avoid impacts to Aboriginal cultural heritage	✓	✓	✓	Heritage NSW
Works proposed to be carried out on or within the curtilage of an item listed on the State Heritage Register	✓	✓	✓	Heritage NSW
Carrying out works on a local heritage item	✓	✓	✓	Parkes Shire Council
Biodiversity, vegetation and riparian corridors				
Clearing native vegetation not approved under biodiversity certification	✓	✓	✓	Department of Climate Change, Energy, the Environment and Water – Biodiversity, Conservation and Science Directorate under the *Biodiversity Conservation Act 2016*
Reduced setbacks to riparian corridors	✓	✓	✓	NSW Office of Water
Groundwater				
Development within 750 metres of an existing registered bore for stock, domestic, irrigation and/or water supply use	✓	✓	✓	NSW Office of Water
Bushfire protection				
Development of bushfire prone land for a special fire protection purpose	✓	✓		Bushfire safety authority will be required in accordance with section 100B of the *Rural Fires Act 1997*
Environmental impact management				
Potentially Hazardous and Offensive Development	✓	✓	✓	Department of Planning, Housing and Infrastructure
Development that is a scheduled activity under the POEO Act	✓	✓		NSW Environment Protection Authority
Intensive agriculture, waste disposal or resource management facilities and any other development that may impact on biosecurity	✓	✓	✓	Department of Primary Industries

Generally, it will be at the applicant's discretion when they choose to initiate the other approval and/or licence requirements.

Where possible, other approvals and licences may be able to be assessed in parallel with RGDC's evaluation of the application for an Activation Precinct Certificate. However, there may be limitations on when an approval or licence may be able to be determined and issued. For instance, the NSW EPA cannot issue a licence until development consent is obtained.

In some instances, an approval may also need to be obtained prior to the determination of an application for an Activation precinct Certificate. For example, the Planning Secretary must provide approval to RGDC to be able to issue an Activation Precinct Certificate for potentially hazardous or offensive industry.

7 The relevant authority will provide advice as part of consultation early in the Activation Precinct Certification process on whether an approval will be required.

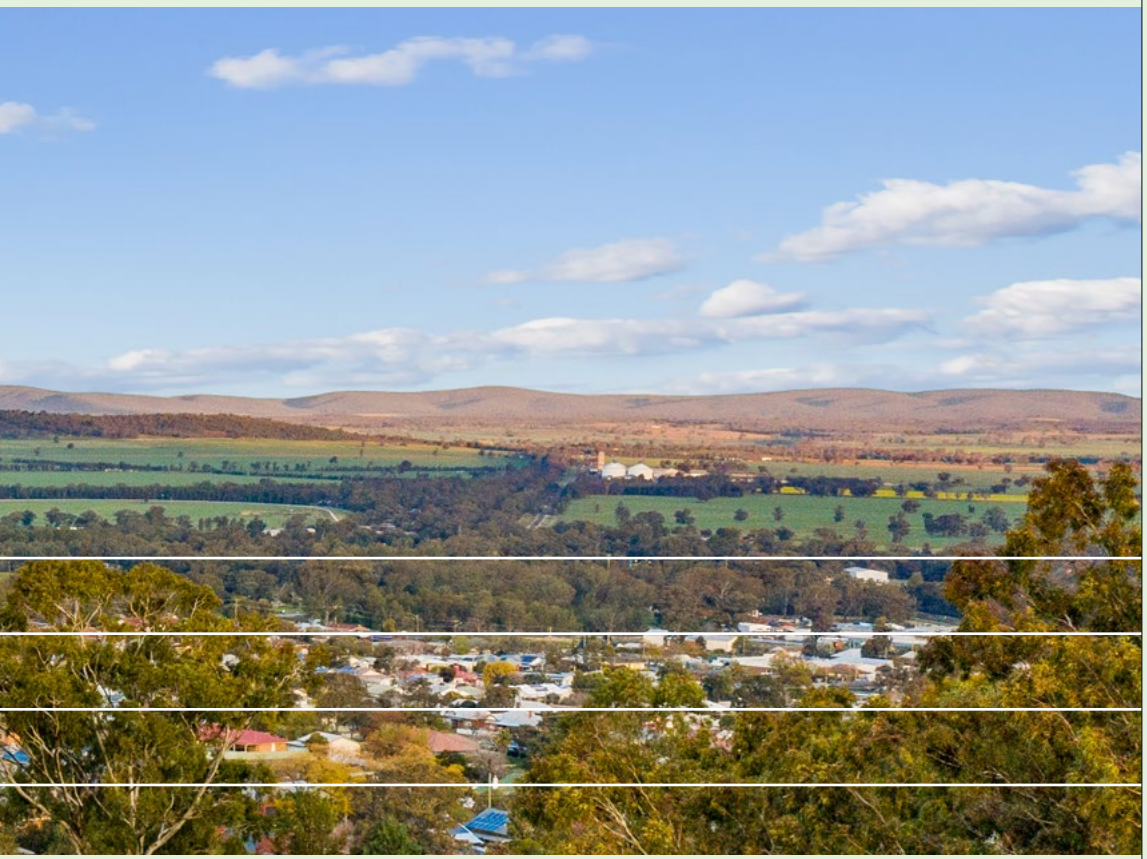
8 Advice will be provided as part of consultation with relevant authorities on whether any other approvals and/or licences will need to be obtained.

2

Precinct design principles

Parkes township with views across the canola fields
Image courtesy of Destination NSW

2



These precinct design principles outline the overarching design outcomes for the precinct.

The precinct design principles provide the opportunity to support the continued economic growth of the Parkes region by creating a true inland port, encouraging opportunities for new industries and job creation as well as setting an international benchmark for eco-industrial development.

Chapter 2 – precinct design principles, is made up of the following sections:

2.1 Understanding the context of the Parkes Special Activation Precinct

Understanding the existing character of the precinct including its landforms, vegetation, items of cultural importance and vistas and views both within and from surrounding locations.

2.2 Precinct design principles

Overarching design outcomes for the precinct aligned with the master plan guiding principles and the design considerations which have been incorporated into its performance criteria.

2.3 Character Statements

Establish the vision and objectives for development within each of the sub-precincts

2.1 Understanding the context of the precinct

The Parkes Special Activation Precinct (Parkes precinct) is located 3 kilometres west of the Parkes township and currently covers an area of approximately 4,800 hectares and was the first Special Activation Precinct announced for regional NSW. It aims to bring together planning and investment to create up to 3,000 jobs across a range of industries including:

- Freight and logistics
- Resource recovery (recycling)
- Renewable energy
- Advanced manufacturing
- Value-added agriculture.

Agricultural industries remain the highest employer in the Parkes region. The precinct creates a significant opportunity to support the agricultural industries in areas such as food production, packaging and logistics.

The precinct is highly accessible by road and rail to Australia's major cities and sea ports.

The Parkes precinct will take advantage of its location at the only junction of Australia's two rail spines, the Inland Rail and the Trans-Australia Railway. The National Logistics Hub is also located within the precinct, providing suppliers access to 80 per cent of Australia's markets within 12 hours by road or rail.

The existing and largely rural setting is undulating, creating opportunities on each site to capture views, utilise flatter areas, minimise the cut and fill required, and ensure the building location meets not only functional needs but is also aesthetic to the rural character of the area.

The intent of the precinct is to reference the existing rural landscape character and create simple, contemporary buildings to add to the precinct's sustainable character.

Many sites possess existing natural features that are to be retained and protected including significant stands of vegetation, ecologically rich biodiversity zones, culturally significant trees and natural features, hill tops, rocky outcrops and drainage lines.

Much of the precinct exists on largely cleared rural farmland with small patches of isolated native vegetation occurring over approximately 3.5 per cent of the precinct. Two corridors provide connectivity through the precinct to areas of higher quality habitat as well as additional tracks of vegetation located along the roadside.

The Wiradjuri people have been the traditional owners of the Parkes region for over 40,000 years. Culturally significant places for the Wiradjuri people are located in the precinct including hills and rocky outcrops, campsites and scarred trees.

Transport logistics at Masterpet facility
Image supplied by Pet Care Kitchen, Parkes NSW

2.2 Precinct design principles

Precinct design principles will guide development outcomes to ensure the precinct builds on the rural identity of Parkes by transitioning developable land into a new and thriving enterprise hub, taking advantage of both existing and future rail corridors.

1

Optimise investment return through smart design, siting and clustering of like-minded businesses that can benefit from access to the only junction of Australia's two rail spines

This will be achieved by:

- Providing a range of lot sizes that are functional, flexible.
- Encouraging building design and siting to support a range of operational requirements of industries and businesses.
- Supporting first movers by providing early infrastructure and support to immediately realise value-add outcomes to their businesses.
- Creating circular economy opportunities across the precinct including early mover expansion of services and for closed loop processing development.
- Future proofing the later stages of the precinct so business can leverage the opportunities for new industries in agriculture, freight and logistics, manufacturing, energy and resource recovery and transport to co-locate.
- Incorporating universal design in the delivery of infrastructure, communications and services.

2

Recognise and celebrate the precinct's history, landscape values and connection between the land and the Wiradjuri people

This will be achieved by:

- Embedding Aboriginal planning, design principles and cultural knowledge in delivery to ensure the precinct has a 'sense of place'.
- Managing aspects that relate to Wiradjuri Country in consultation with Aboriginal people to preserve culturally significant areas.
- Retaining and preserving Aboriginal heritage sites, in particular hills and rocky outcrops, culturally significant vegetation and artefacts as part of a layered system of experiences to increase stewardship and awareness.
- Sharing Country to keep important places open for all to use and benefit from.
- Incorporating Wiradjuri design elements into the design of buildings and landscaping, and the public domain:
  - so they can be localised and specific in context to the connection to Country
  - where they can be appreciated by all
  - so they highlight the spiritual and practical significant elements of the land such as rivers, mountains, swamp lands, forest and plains.
- Providing a system of landscaping and wayfinding that celebrates the stories of local people and historic uses of the precinct.

3

Ensure an active and connected place

This will be achieved by:

- Developing a network of high-amenity pedestrian and cycling linkages along key streets, roads and other places within the precinct that are safe for all users and encourage active transport.
- Incorporating universal design and accessibility requirements to allow access for all people, including those with accessibility needs.
- Incorporating passive recreational areas at strategic locations in keeping with design themes of the precinct.

4

Develop landscape, streets and places that integrate green infrastructure and are climate resilient

This will be achieved by:

- Integrating climate resilience, water, bioenergy and waste cycle management and ecologically sustainable development principles across the precinct.
- Designing landscapes that incorporate plants and materials that are suited to the local climatic conditions and that are robust and resilient to the longer-term effects of climate change.
- Designing to maximise microclimate opportunities, including solar access during winter and shading in summer.
- Designing and siting development to avoid or mitigate the risk from natural hazards to people, property and infrastructure.
- Acknowledging the role green infrastructure has in mitigating the impacts of climate change, stormwater management, and biodiversity and habitat protection.
- Creating and strengthening green infrastructure areas through the retention of vegetation communities and paddock trees.

5

Protect, promote and enhance the biodiversity and environmental values across the precinct and create a strong connection to place

This will be achieved by:

- Identifying, protecting and strengthening existing vegetation communities by incorporating them into landscaped areas, vegetated setbacks and streetscapes.
- Acknowledge environmentally sensitive areas to build an understanding and appreciation amongst all who use and visit the precinct.
- Providing meaningful connection of the travelling stock reserve and other environmental areas for the movement and sustainability of flora and fauna.
- Responding to the rural setting, natural topography and natural features of the precinct
- Promoting development in visually sensitive locations to make a positive contribution to the views into the precinct.

6

Designing for form to follow function and to support sustainable operations

This will be achieved by:

- Ensuring building design and site layout is functional to support the unique operational requirements of industries and businesses in the precinct.
- Providing an attractive and visually interesting built form that engages with the natural site characteristics and streetscape.
- Utilising sustainable building products and integrated renewable energy generation systems.
- Ensuring all designs create seamless and accessible community links between precincts, transport hubs, key infrastructure, community facilities and residential development.

Desired Future Character

Sub-precinct	Vision	Objectives
Parkes Enterprise	Support a wide range of compatible land uses and industries such as freight and logistics, advanced manufacturing and agribusiness.	• Encourage development that aligns with eco-industrial precinct principles and presents circular economy opportunities. • Encourage development that will optimise and leverage from the existing rail infrastructure. • Encourage a diverse range of industries, including higher intensity industrial activities and manufacturing industries. • Discourage use that would be impacted by noisy and offensive industry or result in additional sensitive receivers.
Intensive Livestock Agriculture	Provide a dedicated area for intensive livestock activities, such as a large abattoir and other livestock value adding and processing businesses, where impacts can be managed.	• Encourage suitable development where impacts to sensitive receivers are minimised. • Support co-location of supporting businesses. • Encourage opportunities for land uses that activate land with minimal impact in the interim until such time as adequate utilities are available, such as solar farms. • Encourage a range of compatible, low impact supporting uses to activate the sub-precinct. • Discourage development that would introduce sensitive receivers potentially impact by the sub-precinct.
Solar	To attract and encourage development for solar energy production in the appropriate location.	• Encourage development where sufficient infrastructure is established. • Protect existing native vegetation and Aboriginal cultural heritage values. • Development to enhance native vegetation and protect visual amenity.
Resources and Recycling	Provide dedicated areas for essential waste and resource recovery that allows for a variety of new recycling and reprocessing industries. Dedicate an area with direct rail access that enables an energy from waste facility, along with recycling and repurposing uses, that champions circular economy principles. This will form a key component of a true eco-industrial precinct.	• Support development that minimises impacts on sensitive receivers and other areas within the precinct. • Encourage development with good transport connections and utilise existing rail infrastructure for development adjacent land. • Encourage land uses which are compatible with Parkes Shire Council land fill facility. • Encourage co-location of uses that can facilitate a circular economy. • Discourage development that would introduce sensitive receivers potentially impact by the sub-precinct.

Sub-precinct	Vision	Objectives
Commercial Gateway	The desired future character of the sub-precinct is defined by supporting the future land uses of the Parkes Special Activation Precinct and the Parkes bypass. The sub-precinct should not detract from the existing Parkes Central Business District.	• To encourage uses that support the growth of the precinct, such as childcare, training and education centres, and small-scale food and drink premises, where it does not compromise or conflict with other desired land uses • Support well designed and articulated built form • Encourage complementary and supportive of commercial and business development within the precinct • Discourage land uses that would compete with the Parkes Central Business District, such as specialised retail and neighbourhood shops • Discourage uses that do not make valuable use of the sub-precinct's positioning, such as solar farms or offensive development • Provide amenities to service the Parkes by-pass such as highway service centres and associated uses • Co-locate light industries and supporting small-scale industrial activities
Mixed Enterprise	Provide for a wide range of employment uses, such as agribusinesses, manufacturing, recycling businesses and general industries and enterprise. Provide opportunities for development that requires moderate to larger lots with moderate impacts.	• Encourage development that utilises circular economy principles and linkages between business within the precinct. • Encourage development which generates large local employment opportunities. • Support development that takes advantage of direct access to rail infrastructure for land adjacent to rail infrastructure.

3

Precinct revegetation strategy

Artists impression showing Primary Gateway
Courtesy of Spackman Mossop Michaels

3

The precinct revegetation strategy seeks to develop a unique and distinctive precinct identity, which reflects Parkes' rural character while promoting and strengthening ecological resilience and conservation values.

The strategy identifies opportunities for revegetation of high value riparian areas, ecological corridors and recommends finer grain landscape treatments and planting strategies for freight corridors, gateway thresholds and public spaces.

3.1 Aims

The precinct revegetation strategy provides the landscape strategy for the precinct and:

- **identifies the priorities** for conservation, restoration and enhancement of biodiversity, vegetation and riparian corridors in the landscape, and establishes principles for development and management which will help to complement and enhance the landscape character
- **provides the green infrastructure plan** to support ecological function and provide amenity through biophilia along road reserves and infrastructure corridors
- **details specific landscape requirements**, planting typologies and corresponding species list.

3.2 Biodiversity, vegetation and riparian corridors

3.2.1 Biodiversity and vegetation character

Much of the precinct exists on largely cleared rural farmland with small patches of isolated native vegetation occurring over approximately 3.5 per cent of the precinct.

Approximately 375 ha of native vegetation occurs within the precinct with larger higher condition areas occurring in the centre of the site adjacent to Millers Lookout Road and to north of Brolgan Road. Three larger patches also occur to the south of the Brolgan Road and the railway surrounded by agricultural land.

Two corridors that provide connectivity through the precinct to areas of higher quality habitat were identified, including:

- from Henry Parkes Way, within proximity to Brolgan Road and down Keiths Lane to riparian vegetation associated with Goobang Creek. This vegetation connects remnant vegetation to the north-east and south-west through the precinct.
- South of the railway line and through the Travelling Stock Route (TSR). This connects vegetation to the north of Brolgan Road to riparian vegetation associated with Goobang Creek.

Additional tracks of vegetation are located along the roadside in areas adjacent to Henry Parkes way to the north of the investigation area and along Keiths Lane.

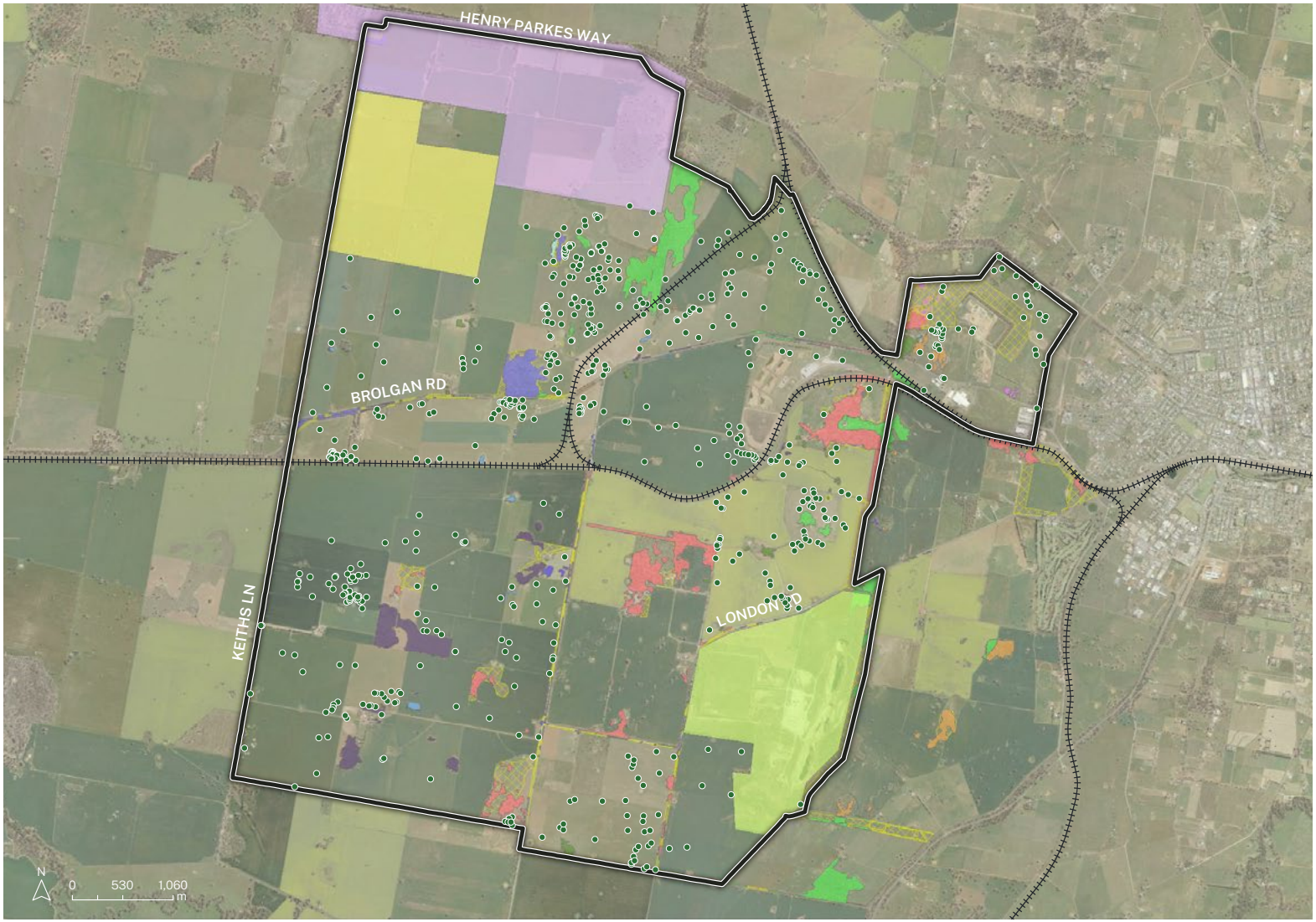
The Plant Community Types within the precinct are:

PCT 70: White Cypress Pine woodland	on sandy loams in central NSW wheatbelt
PCT 76: Western Grey Box tall grassy woodland	on alluvial loam and clay soils in the NSW South Western Slopes and Riverina Bioregions
PCT 82: Western Grey Box – Poplar Box – White Cypress Pine tall woodland	on red loams mainly of the eastern Cobar Peneplain Bioregion
PCT 201: Fuzzy Box Woodland	on alluvial brown loam soils mainly in the NSW South Western Slopes Bioregion
PCT 267: White Box – White Cypress Pine – Western Grey Box shrub/grass/forb woodland	in the NSW South Western Slopes Bioregion
PCT 276: Yellow Box grassy tall woodland	on alluvium or parna loams and clays on flats in NSW South Western Slopes Bioregion.

Figure 3.1 Vegetation types

The master plan requires that areas of high-ecological value and Tier 1 and 2 trees are not to be removed. The only exception is for unavoidable tree loss as part of the delivery of streets, utilities or stormwater infrastructure by the Development Corporation or a Public Authority.

Figure 3.1 below identifies vegetation types and paddock trees considered to be areas of high-ecological value and Tier 1 and 2 paddock trees for the purposes of this plan.



3.2.2 Watercourse character

The precinct is located within the Lachlan River catchment. No permanent waterways exist within the precinct with the closest waterway being Ridgey Creek located to the west and Goobang Creek to the south.

No river or streams occur within the site. Several disconnected ephemeral drainage lines are located in the precinct, however these occur in highly modified agricultural and cropping land and do not have riparian vegetation associated with them. Due to the lack of defined permanent watercourses and riparian vegetation within the precinct setbacks or buffers are not required.

3.2.3 Landscape principles

The revegetation principles described below represent the overarching outcomes for biodiversity, vegetation and riparian corridors for the precinct.

1

Protect remaining areas of native vegetation and scattered trees and improve their condition

1.1 Retain and protect existing areas of remnant vegetation, including Tier 1 and Tier 2 scattered trees, by incorporating these into site landscape design

1.2 Threatened ecological communities including Inland Grey Box Woodland, Fuzzy Box Woodland and White Box - Yellow Box - Blakely's Red Gum Grassy Woodland (both woodland and derived native grassland areas) and other native vegetation are to be avoided during design and retained where possible

1.3 Maintain and improve condition of remnant vegetation through weed control and subsequent monitoring to inform management plans.

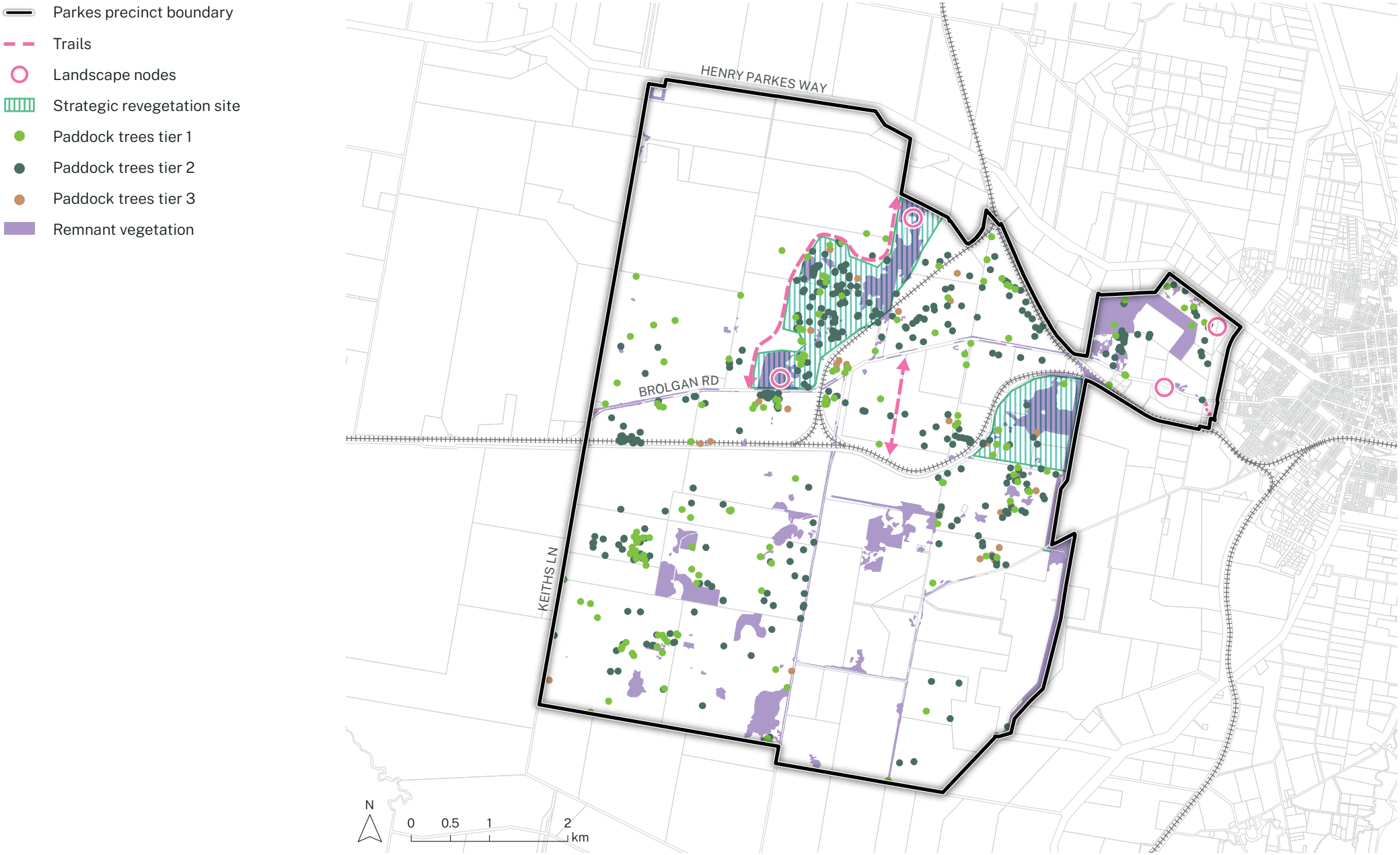
2

Create habitat corridors

2.1 Define new vegetated and landscaped areas that may form a green corridor or vegetation corridor on the site or provide additional connectivity to existing vegetated areas

2.2 Reflect the plant community types of the precinct as well as climate ready species and assist broader efforts to enhance habitat connectivity and biodiversity values across the precinct in accordance with Figure 3.2.

Figure 3.2 Biodiversity and revegetation



3.3 Green infrastructure

Public realm landscape treatments need to be a considered design response taking into account locational and environmental factors, particularly resilience against a changing climate, robustness and cost effectiveness for maintenance.

The green infrastructure plan aims to create a strong and responsive sense of place for the precinct. Site-based landscaping in the precinct will be complemented by precinct wide green infrastructure.

3.3.1 Green infrastructure principles

The landscape and urban design principles define a vision where the precinct will be a place where:

- everyone is welcome to visit, participate, work and play
- there is a distinctive sense of place, through high quality precinct gateways, landscapes, streets, roads, public spaces and parks; respecting and incorporating cultural heritage
- environmental qualities are embraced.

Water sensitive design

Maximise landscape hydration through water sensitive urban design (WSUD).

- Climate appropriate and responsive landscape methods are employed to reduce water use.
- Maximise landscape hydration through water sensitive urban design (WSUD). WSUD underpins design including:
  - species selection and planting types are designed to minimise irrigation beyond establishment.
  - capturing and storing water is key to the success of any vegetation establishment and recycled water will be used for deep watering in the warmer months.
- New development should utilise WSUD interventions including raingardens.
- Swales detention/retention ponds and constructed wetlands to assist plant establishment and ensure stormwater is treated before re-entering natural waterways and groundwater systems.

Resilience

Select plant species that are suited to local climate and soil conditions and can adapt to future climate and natural hazards.

- Planting combinations should be endemic and diverse. This will enhance existing biodiversity and promote resilience in the landscape.
- Plants can be selected to provide food and shelter for local and migrating wildlife, contributing to ecological/fauna resilience.
- Ecological/fauna resilience.

Wayfinding

Use feature planting, materiality and scale to indicate one's location within the precinct.

- Distinct planting typologies will create unique areas within the precinct, allowing people to orientate themselves and distinguish between differing parts of the precinct.
- Endemic feature plant species can be used en-masse in keynote areas to create striking thresholds and entry points.

Shade

Strengthen shade amenity throughout the precinct.

- Tree planting will lower ambient temperatures, mitigate urban heat island effect and offer respite from high summer temperatures.
- Attractive and healthy tree planting will attract investment and contribute to the overall wellbeing of precinct workers and visitors.
- Tree planting, particularly on the western side of buildings, contributes to the creation of cooler microclimates in and around buildings.

Built form

Utilise new and existing built form to support green infrastructure.

- New development can capture rainwater from rooftops, and greywater from internal building usage, for the purposes of landscape irrigation.
- Built form elements should adopt biophilic design principles to help lower ambient temperatures, reduce energy consumption and costs, and contribute to employee wellbeing.

Maintenance

Design green infrastructure with the aim of reducing maintenance requirements.

- Select appropriate plant species whose size, form and growth supports the intended scale and function of the planting area.
- Adopt an informal, naturalistic planting style to align with a maintenance regime that does not require constant pruning and mowing for it to appear attractive.
- Carefully design and arrange elements to maximise efficiencies when maintaining green infrastructure.
- Ensure that the plants are protected from competing wildlife by using physical barriers
- Monitor the establishment of the vegetation periodically. In cases where the vegetation does not establish, re-plant the vegetation.

Character

Express the local character of Parkes through the selection of plants, materials, signage and wayfinding devices.

- Endemic plant species can be used to express the unique natural environment of the region
- Rural character, agricultural history and rich Wiradjuri culture should be expressed through signage, wayfinding and material choices.

Parkes town centre

Roundabout construction

3.3.2 Green infrastructure framework

Streets provide the natural framework to connect all parts of the Parkes Special Activation Precinct. Intensive landscape features are incorporated into key intersections, gateways and entry driveways to ensure a strong identity and connection to the Parkes township and to reflect the strong commitment of the precinct to sustainability and the environment. All other areas will reflect the landscape of the Parkes region.

The Parkes precinct is centred on the 'infrastructure spine' of Brolgan Road. Other local access roads and driveways will be required as the precinct develops. Street design applies to the entire road corridor to create green infrastructure and biodiversity connections for an integrated and environmentally sustainable outcome.

Street design will reinforce the rural character of the precinct and the rich cultural history and Wiradjuri nation.

No on-street parking is proposed within the precinct given the size of lots and the rural character of the precinct.

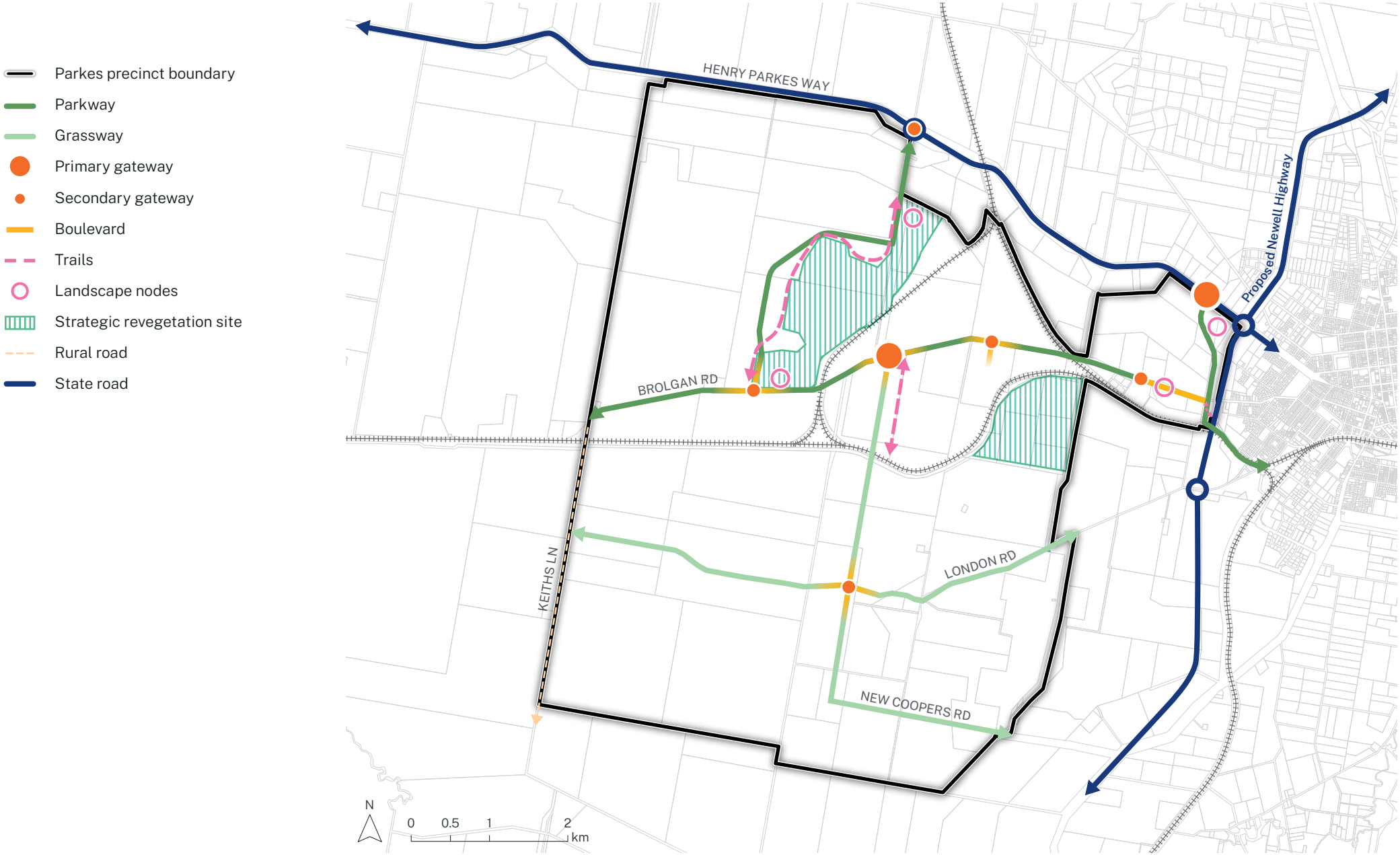
Gateways are main entry points to the Parkes Special Activation Precinct. Gateways feature structured and formal tree planting, using mature stock for immediate impact. Understorey landscaping is a mixture of irrigated, formal gardens in high traffic areas and non-irrigated dryland grasslands. Signage and wayfinding elements are also a key feature in gateways.

The following green infrastructure network has been identified where landscape treatments will contribute to the overall aesthetic and ecological function of the wider Parkes precinct:

- primary gateways
  - roundabouts
  - Hartigan Avenue
- secondary gateways
- embankments
- boulevards
- parkways
- grassways
- local roads
- local road adjacent open space.
- biodiversity protection and revegetation.

The green infrastructure plan for the precinct is shown on Figure 3.3.

Figure 3.3 Green infrastructure plan



3.3.3 Landscape treatments

Landscape treatments for the different feature areas and roads are provided in Table 3.12. Some treatments are newly defined while other concepts describe elements that can be retrofitted to existing roads and infrastructure so these spaces better reflect the precinct design principles.

These landscape treatments should be applied when carrying out works at the feature areas and roads within the precinct.

Softscape treatment pallets are also included that are strongly linked to the context of the site.

All landscape treatments have included water sensitive design principles and include:

- organic mulch in garden beds 10cm deep. Mulch should be maintained for first five years to manage weed and increase water retention
- water-wise species selection with irrigation required using recycled water only during the establishment period (typically up to a year). Following establishment period, no further irrigation would be required.

Table 3.1: Landscape treatments

Type	Applies to	Description
Primary gateways (roundabouts)	Principle entry points to the Parkes precinct includes roundabouts at Brolgan Road and New Coopers Road	• Central roundabout features swathes of native grasses and shrubs, set in amongst bands of compacted granite gravels in different hues. Landscaping should include formal native species, grasses (pot size: 75mm tubestock and plant density: 4 plants /m^2) and groundcovers (pot size: 200mm and plant density: 800mm centres) at the centre of the roundabouts. • Large mature tree species with a pot size of 45L to include Eucalyptus species such as *Eucalyptus camuldulensis* (River Red Gum), *Eucalyptus microcarpa* (Western Grey Box), *Eucalyptus populnea* (Bimbil Box). • A series of totems which form vertical elements which create a grand entrance feature, framed by formal plantings of deciduous trees, which acknowledge the town of Parkes and creates seasonal colour. • The approach median islands feature patterns which reflect local Aboriginal emblems and artwork. • The approach roadside areas feature informal groupings of large Fuzzy Box woodland tree species (*Eucalyptus microcarpa, Eucalyptus conica*) with an understorey of bands of associated native grasses, as well as a series of low, repeated gabion walls using locally sourced stone. • The primary gateway also makes allowance for Parkes Special Activation Precinct signage and wayfinding, including along the shared use path through consultation with Transport for NSW to ensure appropriate safety criteria are achieved. • Surrounding areas should include revegetation with remnant woodland species (as outlined in section 3.4.1.1). • Spacing requirements: Trees 1 tree/22m^2, average Groundcover is based on four plants per m^2 with larger species (i.e. *Lomandra longifolia*) needing larger spaces and smaller species (i.e. *Wahlenbergia communis*) planted more densely.

Table 3.1: Landscape treatments continued

Type	Applies to	Description
Primary gateways (Hartigan Avenue)	Principle entry points to the Parkes precinct includes Hartigan Avenue	• A series of feature corten steel walls, with integrated landscaped mounds, planted with native grasses. • Fuzzy Box woodland forms the basis of the landscape species selection in locations surrounding the embankments and Newell Highway overpass, including large mature trees of *Eucalyptus conica* as the primary species with scattered *Eucalyptus melliodora* and *Eucalyptus microcarpa*. • Avenue plantings of Jacaranda trees (pot size: 75L) will occur as part of the Transport for NSW works. Future plantings by RGDC/ Council will focus on fill plantings between those existing to create clusters, utilising a mixture of common and mixed trees species. • Spacing requirements: Trees 1 tree/22m^2, average Groundcover is based on four plants per m^2 with larger species (i.e. *Lomandra longifolia*) needing larger spaces and smaller species (i.e. *Wahlenbergia communis*) planted more densely (grasses 75mm tubestock and groundcovers 200mm pot size). • Note: Hartigan Avenue Primary Gateway treatments to be completed by RGDC/ Council following completion of Parkes bypass project subject to further consultation with TfNSW).
Secondary gateways	Secondary entry points to the precinct	• Designed to provide consistency with the primary gateways as well as memorable experiences in the precinct. • Features an avenue of Western Grey Box and Fuzzy Box woodland trees – *Eucalyptus microcarpa* (Western Grey Box), *Eucalyptus melliodora* (Yellow Box) and *Eucalyptus conica* (Fuzzy Box) with planting of smaller, deciduous trees (representing the Parkes character) on either side of the junctions. • A series of gabion walls and feature local woodland shrubs and grasses and other native species to create a strong sense of place. It also provides opportunities for local artwork, signage and wayfinding. • Spacing requirements: Trees 1 tree/22m^2 (45L pot), shrubs 1 per 8m (pot size: 75mm tubestock), average Groundcover (G) is based on four plants per m^2 with larger species (i.e. *Lomandra longifolia*) needing larger spaces and smaller species (i.e. *Wahlenbergia communis*) planted more densely (grasses 75mm tubestock and groundcovers 200mm pot size)
Embankments	Areas where bridges are proposed, to separate road from rail on Brolgan Road and New Coopers Road	• Design concept is based on the White Cypress Pine woodland (*Callitris glaucophylla*) and associated lower level species, in swathes and bands dependent on the embankment locations. Other woodland species will be appropriate elsewhere. • Planting approach should respond to the slope and soil conditions, including requirements for any retaining structures. • Spacing requirements: Trees 1 tree/20m^2 (200mm pot), average Groundcover is based on four plants per m^2 with larger species (i.e. *Lomandra longifolia*) needing larger spaces and smaller species (i.e. *Wahlenbergia communis*) planted more densely (grasses 75mm tubestock and groundcovers 200mm pot size).

Table 3.1: Landscape treatments continued

Type	Applies to	Description
Boulevards	Connector between the gateways	• Design concept is based on an avenue of large, mature trees of *Eucalyptus conica* (Fuzzy Box) and *Brachychiton populneus* (Kurrajong). • Landscaped areas consists of Western Grey Box woodland species including grasses and groundcovers. • Colourful feature ribbon consisting of native shrubs: *Corea reflexa, Grevillea rosmarinifolia, Callistemon* "Little John" or locally endemic *Eremophila* spp. (Emu Bush) and *Myoporum* species. • Spacing requirements: Trees 20m spacing (pot size: 100L), shrubs 1 per 8m, average Groundcover is based on four plants per m^2 (grasses 75 mm tubestock, groundcover 200mm pot).
Parkways	Main treatment for Brolgan Road	• An avenue of large mature trees including *Eucalyptus melliodora* (Yellow Box), *Eucalyptus conica* (Fuzzy Box) and *Eucalyptus microcarpa* (Western Grey Box). • Understorey of native shrub and grass species as listed in section 3.4.1. • Concept includes opportunity for planting of a ribbon of colourful species. This should consist of local endemic native species, including shrubs such as *Eremophila* and *Myoporum* species or groundcover species such as *Xerochrysum viscosum* (Sticky Everlasting), *Dianella revoluta* (Blue Lily), *Solanum esuriale* (Quena). • Drainage swale: – vegetated with endemic, dryland grass species including *Carex inversa* (Knobby Sedge) and *Carex appressa* (Tall Sedge) – minimum of 3m wide on both sides of roadway. • Spacing requirements: Trees (pot size: 5L bags), Groundcover average 3 plants/m^2 (pot size: 75mm tubestock).
Grassways	Main treatment for all other roads	• Design concept is based on informal scattered trees consisting of tree species which are based on the prevailing plant community type (Section 3.2.1). • Landscaped areas consists of the same requirements details above. • Spacing requirements: plant density: 2 plants/m^2 (pot size: 75mm tubestock); hydromulch with groundcover species on embankments.
Local roads	Local roads	• See Grassway treatment
Local roads (adjacent open space)	Local roads adjacent open space	• See Parkway treatment
Biodiversity focussed revegetation	• Corridor Greening • Revegetation areas for protection and enhancement of native vegetation	• Biodiversity-focused revegetation planting includes revegetation of strategic sites, corridor greening, vegetation corridors protection and enhancements. • Species lists have been tailored and curated, characteristic species of the relevant plant community type, and species endemic to the wider Parkes region. • Species palates and densities are provided in Section 3.4.1 specific to each plant community type.

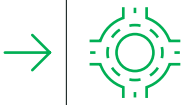
3.3.4 Landscape concept designs

The green infrastructure concept designs reinforce strong links to the adjacent environmental areas that contains protected vegetation areas and Tier 1 and Tier 2 paddock trees for retention. Where possible, the concept design ideas enhance and improve the biodiversity qualities while maximising access, views and its relationship to the industrial development at its edge. The following section provides landscape concept designs for feature areas and the roads within the precinct.

3.3.4.1 Primary gateways

Primary gateways are the principle entry points to the Parkes precinct. These express the landscape and urban design vision and principles and create a defining and memorable experience while entering and exiting the precinct. There are two types of primary gateways – roundabouts and Hartigan Avenue.

Note the Primary Gateway treatment for Henry Parkes Way and Hartigan Avenue are not part of the Newell Bypass works undertaken by Transport for NSW. These public realm elements will be implemented by RGDC/Council, following completion of the bypass work in consultation with Transport for NSW.



Primary gateway – roundabouts

Large roundabouts are required to enable heavy vehicles to navigate turns and access the Parkes Special Activation Precinct, and will be located at Brolgan Road and New Coopers Road.

Figure 3.4 illustrates the primary gateway – roundabouts concept plan for Brolgan Road and New Coopers Road junction. The primary gateway – roundabouts seeks to create an immersive experience for people in cars as well as people walking and cycling, expressing the character, cultural history and biodiversity of the Parkes landscape.

Primary gateway – Hartigan Avenue

Hartigan Avenue is the primary southern gateway from the town of Parkes and passes under the new Newell Highway bypass.

The embankments and approach road express the character, cultural history and biodiversity of the broader Parkes landscape.

The Hartigan Avenue works form part of future works outside of the scope of those of the Newell Highway Bypass by Transport for NSW and will be implemented by RGDC/Council.

Embellishment of this gateway is to be undertaken by RGDC/Council in consultation with Transport for NSW following completion of the bypass project.

Figure 3.4 Primary gateway roundabout treatment

3.3.4.2 Secondary gateways

Secondary gateways are the secondary entry points within the Parkes Special Activation Precinct, expressing the landscape and urban design vision and principles. These gateways are designed to provide consistency with the primary gateways, as well as memorable experiences within the precinct.

As key connection points, the junctions create a threshold for turning vehicles which are slowing down, as well as orientation for wayfinding.

Each secondary gateway features an outer avenue of Western Grey Box tall woodland trees – *Eucalyptus microcarpa*, and plantings of smaller, deciduous trees (representing the Parkes character) on either side of the intersection.

The concept plan includes a series of gabion walls and feature Western Grey Box tall woodland shrubs and grasses to create a strong sense of place. It also provides opportunities for local artwork, signage and wayfinding.

Figure 3.5 Secondary gateway treatment

3.3.4.3 Embankments

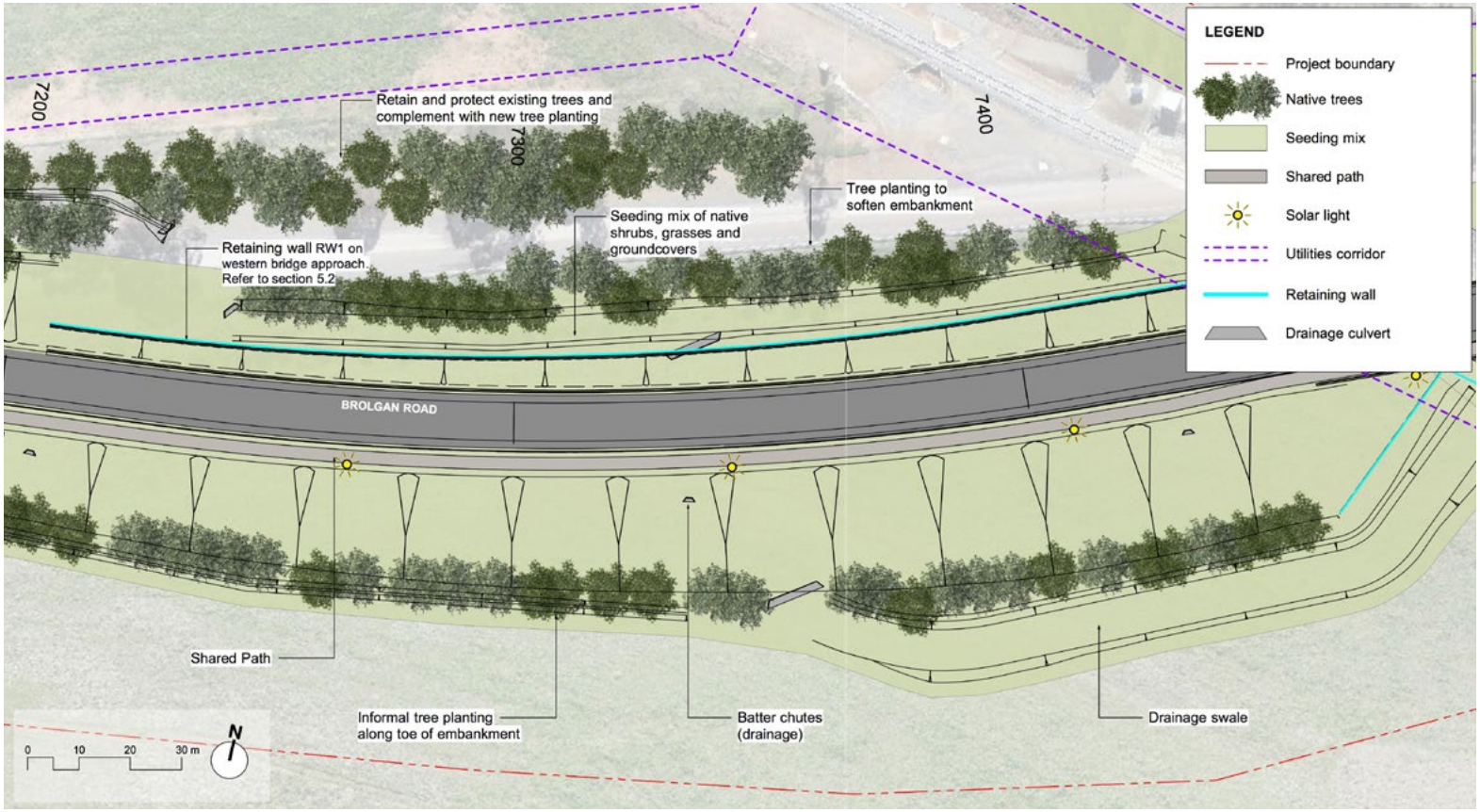
Embankments are located throughout the Parkes Special Activation Precinct and provide additional opportunities to reinforce the importance of the Parkes biodiversity and habitat. Embankments reinforce the landscape and urban design vision and create memorable experiences within the precinct.

Embankments have been created as a result of proposed bridges to separate road from rail on Brolgan Road and New Coopers Road.

From certain locations the new bridges will be quite prominent and present an opportunity to express the Parkes landscape character, building on the prevailing ecology in the locations of the bridges.

The final designs for the embankments will consider the final road design and bridge plans.

Figure 3.6 Embankment treatment



3.3.4.4 Boulevards

Boulevards are important to the presentation of the Parkes Special Activation Precinct as the connectors between the gateways. Boulevards form the key streetscapes for visitors, staff and customers to the precinct.

Boulevards are located throughout the Parkes Special Activation Precinct and provide additional opportunities to reinforce the importance of the local biodiversity and habitat, reinforcing the vision and creating memorable experiences within the precinct.

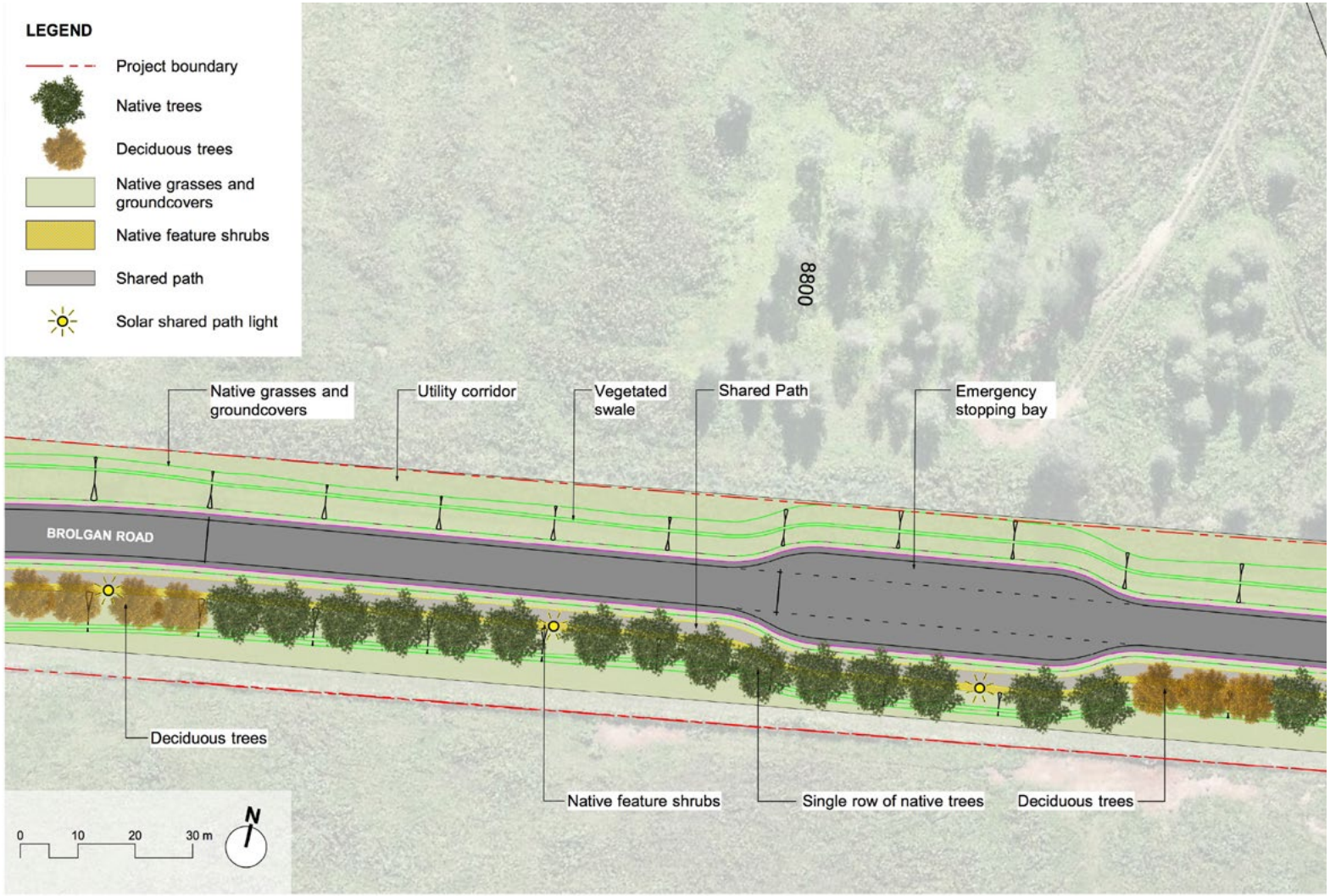
Boulevards are the highest quality streetscapes in the Parkes Special Activation Precinct. They focus on impact, experience and quality interfaces.

The focus on formality is to reinforce developing a precinct character, while allowing for entrances to new developments to feature formal landscaped primary street frontages.

Key landscaping features include:

- shared use path (bitumen spray sealed, 2.5m side with 0.5m shoulder on both sides)
- lighting
  - Regulatory/ smart street lighting at intersections and junctions
  - solar lighting (with sensors and controllers) along shared use path
  - feature lighting to selected trees (with controller for timing)
- street furniture
  - wayfinding signage
  - benches, bus shelters, bus stop/s recycling and rubbish bins, bollards and bicycle racks.

Figure 3.7 Boulevard treatment



3.3.4.5 Parkways

Brolgan Road is considered a Parkway and connects different sub-precincts. It forms the main spine of the precinct and creates a sense of arrival.

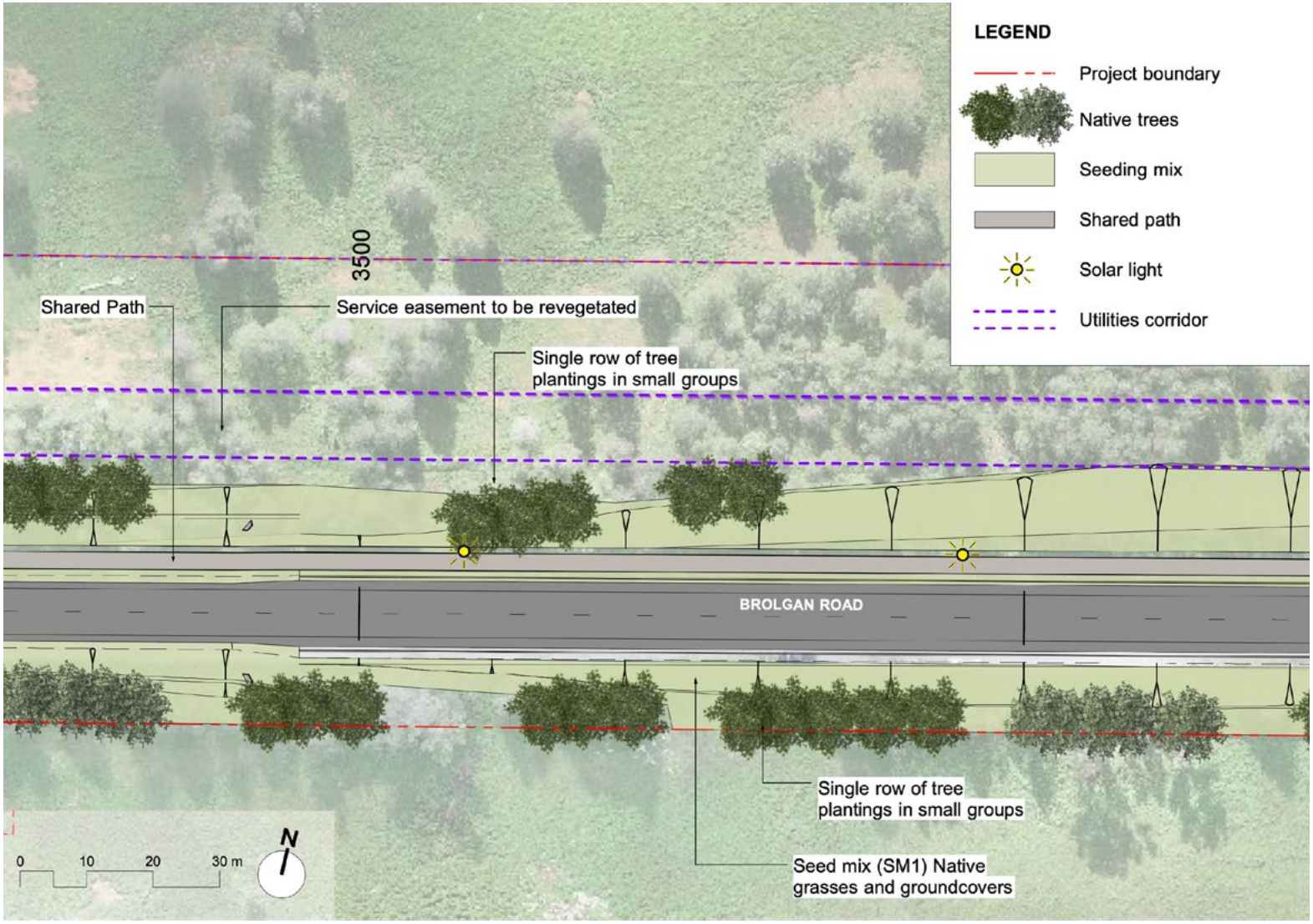
This main connection interfaces with numerous sub-precincts, including the Regional Enterprise sub-precinct and the Resource Recovery and Recycling sub-precinct (shown in Figure 4.1 below), and should provide a visitor experience to transition through the precinct.

The focus on formality reinforces the precinct character, while allowing for entrances to new developments to feature formal landscaped primary street frontages.

Key landscaping features include:

- shared use path (bitumen spray sealed, 2.5m side with 0.5m shoulder on both sides), enabling separation from heavy and local traffic movements and encourages safe active transport
- lighting
  - intersection and junctions – regulatory/smart street lighting
  - solar lighting (with sensors and controllers) along shared use path
  - feature lighting to selected trees (with controller for timing).

Figure 3.8 Parkway treatment



3.3.4.6 Grassways

Grassways form the main treatment for all other roads within the Parkes precinct. A grassway is an informal treatment, reflecting the rural character of the wider precinct.

This informal and sustainable landscape treatment reinforces a rural character and allows new developments to feature formal landscaping at primary street frontages.

3.3.4.7 Local roads

The local roads should have a grassway treatment, the focus being on informal and sustainable landscape treatments while reinforcing the rural character of the region and the prevailing vegetation characteristics.

The local roads should provide room for truck access to sites.

A footpath is included on at least one side of the road with grassland verge/swale planting and native shade trees. Services are suggested to be located underneath the footpath to avoid tree planting. Drainage is into a swale.

A grassway treatment allows for new developments to feature more formal street front landscape, signage and entry thresholds.

No on-street parking is provided on local roads. All parking required in the precinct should be provided onsite.

3.3.4.8 Local road adjacent open space

Local roadways adjacent to open space or a revegetation area should be considered for a Parkway treatment with potential for a 30-40 metre road reserve width. In addition to the roadway footpath the cross-section below also illustrates the recreational trail (three metres bitumen shared path) as an edge to the revegetated landscape buffer zone.

No on-street car parking is provided for in local roads adjacent to open space.

Ladysmith, Coopers Road, Parkes
Future Mixed Enterprise sub-precinct - Stage 2

3.4 Planting palates

All site landscaping should integrate with the site's natural features and landscape and, where possible, retain existing areas of remnant vegetation.

Species lists are available and should be used when undertaking:

- revegetation of strategic sites, corridor greening, rehabilitation of vegetation corridors, protection and enhancements
- landscaping on private sites.

The species lists have been prepared based on:

- biodiversity assessments undertaken during the master planning of the precinct
- analysis of characteristics of NSW South Western Slopes bioregion and Lower Slopes subregions
- Plant Community Types descriptions in Bionet Vegetation Database
- NSW Mitchell Landscapes typologies.

The species list includes a number of species that are reflective of the existing natural environment in the precinct as well as climate ready species. The nominated species are designed to maximise opportunities for biodiversity and habitat creation, as well as ensure the use of plants suited to the region's climate and soil types.

Figure 3.1 shows the locations of the different types of vegetation in the precinct. Proponents should analyse their sites against this plan to assess which plant lists are suitable for their site.

Species planting palates are provided in this section for biodiversity-focused revegetation and landscaping.

Each type of planting is described in detailed below.

3.4.1 Biodiversity focussed revegetation

Biodiversity-focused revegetation planting includes revegetation of strategic sites, corridor greening, vegetation corridors protection and enhancements.

Species lists have been tailored and curated, characteristic species of the relevant plant community type, and species endemic to the wider Parkes region. Plant community types within the precinct are grassy woodlands and include:

Species	Details
White Cypress Pine woodland	on sandy loams in central NSW wheatbelt
Western Grey Box tall grassy woodland	on alluvial loam and clay soils in the NSW South Western Slopes and Riverina Bioregions
Western Grey Box – Poplar Box – White Cypress Pine tall woodland	on red loams mainly of the eastern Cobar Peneplain Bioregion
Fuzzy Box Woodland	on alluvial brown loam soils mainly in the NSW South Western Slopes Bioregion
White Box – White Cypress Pine – Western Grey Box shrub/grass/forb woodland	in the NSW South Western Slopes Bioregion
Yellow Box grassy tall woodland	on alluvium or parna loams and clays on flats in NSW South Western Slopes Bioregion.

3.4.1.1 Species for revegetation

White Cypress Pine woodland (PCT 70) is unique to other recorded plant community types in the Parkes precinct due to few taller eucalypts present; occurring on flat alluvial plains, and low rises within the central and western portions of the precinct area.

White Cypress woodland is dominated by stands of *Callitris glaucophylla* on alluvial floodplain and sandy loam

Trees

- *Callitris glaucophylla* (White Cypress Pine)
- *Casuarina cristata* (Belah)
- *Allocasuarina luehmannii* (Bulloak)
- *Eucalyptus microcarpa* (Western Grey Box)

Shrubs

- *Dodonaea viscosa* (Hopbush)
- *Maireana enchylaenoides* (Wingless Bluebush)
- *Hakea tephrosperma* (Hooked Needlewood)
- *Myoporum montanum* (Waterbush)
- *Acacia decora* (Showy Wattle)
- *Acacia deanei* (Dean's Wattle)

Grasses and groundcovers

- *Austrostipa scabra* (Speargrass)
- *Austrodanthonia eriantha* (Hill Wallaby Grass)
- *Aristida jerichoensis var. subspinulifera* (Wiregrass)
- *Calotis cuneifolia* (Burr Daisy)
- *Einadia nutans subs. nutans* (Climbing Saltbush)
- *Enteropogon acicularis* (Windmill Grass)
- *Sida corrugata* (Corrugated Sida)
- *Vittadinia dissecta var. dissecta* (New Holland Daisy)
- *Chloris truncata* (Windmill grass)
- *Elymus scaber* (Curly Windmill Grass)

Western Grey Box tall grassy woodland (PCT 76) is dominated by Western Grey Box trees and is associated with floodplain areas, slopes and undulating lower/mid slopes. It has a sparse middle strata and dense grassy understorey with a diversity of native grasses.

Western Grey Box on alluvial loam, grassy understorey (moderate quality) and showing evidence of damage to middle and lower strata from grazing

Trees

- *Eucalyptus microcarpa* (Western Grey Box)
- *Allocasuarina luehmannii* (Buloke)

Shrubs

- *Atriplex semibaccata* (Australian Saltbush)•
- *Acacia hakeoides* (Hakea Wattle)
- *Acacia buxifolia subsp. Buxifolia* (Box-leaf Wattle)
- *Bursaria spinosa subsp. spinosa* (Sweet Bursaria)
- *Acacia oswaldii* (Umbrella Wattle)
- *Santalum acuminatum* (Quandong)
- *Dodonaea viscosa* (Wedge-leaved Hop-bush)

Grasses and groundcovers

- *Poa sieberiana* (Snow Grass)
- *Dianella porracea* (Pale Flax Lily)
- *Lomandra filiformis subsp. coriacea* (Wattle Mat-rush)
- *Themeda australis* (Kangaroo Grass)
- *Asperula conferta* (Common Woodruff)
- *Wahlenbergia gracilis* (Australian Bluebell)
- *Carex inversa* (Knob Sedge)
- *Einadia nutans subsp. nutans* (Climbing Saltbush)
- *Paspalidium constrictum* (Knottybutt Grass)
- *Sida corrugata* (Corrugated sida)
- *Rytidosperma caespitosum* (Ringed Wallaby Grass)
- *Elymus scaber* (Wheatgrass)
- *Enchylaena tomentosa* (Ruby Saltbush)
- *Atriplex semibaccata* (Creeping Saltbush)
- *Convolvulus erubescens* (Pink Bindweed)

Western Grey Box – Poplar Box – White Cypress Pine tall woodland (PCT 82) is a mix of eucalypt and pine species dominated by the Western Grey Box in areas. The Inland Grey Box is a threatened ecological community and can be found on rocky slopes and alluvial plains across the precinct.

Vegetation along Brolgan Road

Trees

- *Eucalyptus microcarpa* (Western Grey Box)
- *Eucalyptus populnea subsp. bimbil* (Bimble Box)
- *Brachychiton populneus subsp. populneus* (Kurrajong)

Shrubs

- *Acacia hakeoides* (Hakea Wattle)
- *Geijera parvifora* (Wilga)
- *Eremophila glabra* (Tar Bush)
- *Myoporum montanum* (Waterbush)
- *Eremophila mitchellii* (False Sandalwood)
- *Dodonaea viscosa* (Wedge-shaped Hop-bush)
- *Acacia deanei* (Dean's Wattle)

Grasses and groundcovers

- *Elymus scaber var. scaber* (Wheatgrass)
- *Austrostipa verticillata* (Bamboo Grass)
- *Austrostipa scabra* (Rough Spear Grass)
- *Austrodanthonia caespitosa* (Wallaby Grass)
- *Wahlenbergia communis* (Tufted Bluebell)
- *Calotis cuneifolia* (Purple Burr-daisy)
- *Dianella porracea* (Riverine Flax-lily)
- *Goodenia hederacea ssp. hederaceae* (Goodenia)
- *Glycine tabacina* (Variable Glycine)
- *Vittadinia cuneata var. hirsuta* (Vittadinia)
- *Sida corrugata* (Corrugated Sida)
- *Digitaria brownie* (Cotton Panic Grass)
- *Calotis lappulaceae* (Yellow Burr-daisy)

Fuzzy Box woodland (PCT 201) occurs near the floodplain and has a tall, grassy, woodland structure with dominant Fuzzy Box upper canopy trees. Some areas are endangered.

A patch of tall grassy woodland within grazing area

Trees

- *Eucalyptus conica* (Fuzzy Box)
- *Eucalyptus microcarpa* (Western Grey Box)
- *Eucalyptus melliodora* (Yellow Box)

Shrubs

- *Acacia deanei* (Green Wattle)
- *Maireana enchylaenoides* (Wingless Bluebush)
- *Maireana microphylla* (Small-leaved Bluebush)
- *Dodonaea viscosa* (Wedge-shaped Hop-bush)
- *Acacia implexa* (Hickory Wattle)
- *Cassinia aculeata* (Dolly Bush)

Grasses and groundcovers

- *Austrostipa scabra subsp. scabra* (Speargrass)
- *Austrodanthonia setacea* (Small-flowered Wallaby Grass)
- *Themeda australis* (Kangaroo Grass)
- *Carex appressa* (Tall Sedge)
- *Bulbine semibarbata* (Leek Lily)
- *Calotis cuneifolia* (Burr-daisy)
- *Vittadinia cuneata* (Fuzzweed)
- *Wahlenbergia luteola* (Bluebell)
- *Chloris truncata* (Windmill Grass)
- *Sida corrugata* (Corrugated Sida)
- *Einadia hastata* (Beery Saltbush)
- *Aristida ramosa* (Purple Wire Grass)
- *Dianella revoluta var. revoluta* (Blueberry Lily)
- *Xerochrysum viscosum* (Sticky Everlasting)
- *Bothriochloa macra* (Red Grass)

White Box – White Cypress Pine – Western Grey Box shrub/forb woodland grows on upper slopes and hill crests in the central and eastern areas of the precinct. Some patches of this woodland are endangered and critically endangered. This vegetation includes taller canopy trees and a grassy understorey.

Top: vegetation on rocky ground
Bottom: close up of White Box leaves

Trees

- *Eucalyptus albens* (White Box)
- *Eucalyptus melliodora* (Yellow Box)
- *Eucalyptus microcarpa* (Western Grey Box)

Shrubs

- *Eremophila longifolia* (Emubush)
- *Maireana microphylla* (Small-leaved Bluebush)
- *Acacia decora* (Showy Wattle)
- *Grevillea floribunda* (Seven Dwarfs Grevillea)
- *Indigofera australis* (Austral Indigo)
- *Dodonaea viscosa* (Wedge-shaped Hop-bush)
- *Acacia implexa* (Hickory Wattle)
- *Cassinia aculeata* (Dolly Bush)
- *Indigofera australis* (Australian Indigo)

Grasses and groundcovers

- *Austrostipa densiflora* (Foxtail Spear-grass)
- *Bothriochloa macra* (Red Legs)
- *Austrostipa bigeniculata* (Kneed Spear-grass)
- *Austrostipa scabra subsp. Scabra* (Rough Speargrass)
- *Chloris truncata* (Windmill Grass)
- *Enteropogon acicularis* (Windmill Grass)
- *Lomandra filiformis subsp. Coriacea* (Wattle Mat-rush)
- *Brachyscome multifida var. multifida* (Cut-leaved Daisy)
- *Chrysocephalum apiculatum* (Common Everlasting)
- *Atriplex semibaccata* (Australian Saltbush)
- *Goodenia pinnatifida* (Cut-leaf Goodenia)
- *Eremophila debilis* (Winter Apple)
- *Vittadinia cuneata var. cuneata* (Fuzzweed)
- *Wahlenbergia communis* (Tufted Bluebell)
- *Wahlenbergia luteola* (Bluebell)
- *Xerochrysum viscosum* (Sticky Everlasting)
- *Dianella revoluta var. revoluta* (Blueberry Lily)
- *Lomandra multiflora* (Many-flowered Mat-rush)
- *Cymbonotus refractus* (Barbed Wire Grass)

Yellow Box Grassy tall woodland is located on the flat floodplain to the west of the Parkes Special Activation Precinct with a grassy woodland structure and dominant Yellow Box trees.

Moderate condition Yellow Box Grassy tall woodland

Trees

- *Eucalyptus melliodora* (Yellow Box)
- *Eucalyptus blakelyi* (Blakely's Red Gum)
- *Eucalyptus bridgesiana* (Apple Box)

Shrubs

- *Acacia decora* (Showy Wattle)
- *Acacia deanei subsp. deanei* (Green Wattle)
- *Maireana microphylla* (Small-leaved Bluebush)
- *Acacia implexa* (Hickory Wattle)
- *Acacia paradoxa* (Kangaroo Thorn)

Grasses and groundcovers

- *Austrostipa scabra subsp. falcata* (Rough Speargrass)
- *Austrostipa bigeniculata* (Kneed Speargrass)
- *Chloris truncata* (Windmill Grass)
- *Carex inversa* (Knob Sedge)
- *Vittadinia cuneata* (Fuzzweed)
- *Goodenia pinnatifida* (Scrambled Eggs)
- *Austrodanthonia auriculata* (Lobed Wallaby Grass)
- *Calotis cuneata var. cuneata* (Blue Burr Daisy)
- *Sida corrugata* (Corrugated Sida)

Derived tussock grassland. This vegetation type contains native grasses in moderate condition in a variety of landscapes that have been previously cleared. The grasses are considered 'disturbance tolerant' and can grow within a variety of landscape along with different species. Some areas are endangered and critically endangered and therefore worthy of consideration in site landscaping.

Derived tussock grassland

Shrubs (scattered only)

- *Alectryon oleifolius subsp. canescens* (Western Rosewood)
- *Brachychiton populneus* (Kurrajong)
- *Callitris glaucophylla* (White Cypress Pine)

Grasses and groundcovers

- *Aristida behriana* (Bunch Wiregrass)
- *Austrostipa scabra* (Speargrass)
- *Bothriochloa macra* (Redgrass)
- *Enteropogon acicularis* (Windmill Grass)
- *Paspalidium constrictum* (Knottybutt Grass)
- *Rytidosperma species* (Wallaby species)
- *Convolvulus erubescens* (Blushing Bindweed)
- *Rumex brownii* (Swamp Dock)
- *Sida corrugata* (Corrugated sida)
- *Solanum esuriale* (Quena)
- *Wahlenbergia communis* (Tufted Bluebell)

3.4.1.2 Planting densities

Planting densities and other biodiversity values listed in Table 3.2 are based on the community condition benchmarks (plus 20 per cent for planting densities) for the listed biodiversity target published by the Department of Planning and Environment on the Vegetation Classification Database (2022) for the NSW South Western Slopes IBRA region. An additional 20 per cent has been added for each stratum to planting densities to account for an 80 per cent survival rate of plantings. All plant community types are grassy woodlands with low density of shrub layer. Other biodiversity values including fallen timber, hollows and leaf litter have been included to inform supplementary habitat augmentation.

Table 3.2 Biodiversity targets, planting densities and other biodiversity values

Biodiversity target	Planting density per ha			Other biodiversity values
	Trees	Shrubs	Groundcover	
Floodplain Transition Woodlands				
PCT 70: White Cypress Pine woodland	90	120	24000	Length of fallen timber: 490/Ha Hollows: 30/Ha Litter: 65%
PCT 76: Western Grey Box tall grassy woodland				
PCT 82: Western Grey Box – Poplar Box – White Cypress Pine tall woodland				
Western Slopes Grassy Woodland				
PCT 201: Fuzzy Box Woodland	90	90	36000	Length of fallen timber: 410/Ha Hollows: 40/Ha Litter: 55%
PCT 267: White Box – White Cypress Pine – Western Grey Box shrub/grass/forb woodland				
PCT 276: Yellow Box grassy tall woodland				

3.4.2 Landscape planting palates

Landscaped areas create a distinctive, memorable experience for users.

The planting palette includes a number of species that are reflective of the existing natural environment in the precinct as well as climate ready species. This applies to:

- formal entry thresholds
- street interfaces
- car parks
- transition areas
- side and rear of buildings
- along fences
- other small open space areas for visitors and staff within developments.

The following table outlines the preferred plant species to be used for landscaping planting within the precinct.

Table 3.3: Preferred plant species

Scientific name	Common name	Endemic
Native trees		
Agonis flexuosa	Willow Myrtle	
Allocasuarina luehmannii	Bulloak	✓
Allocasuarina verticillata	Drooping She-Oak	✓
Angophora floribunda	Apple Box	
Brachychiton populneus	Kurrajong	✓
Brachychiton rupestris	Bottle Tree	
Callistemon salignus	Pink Tip Willow Bottlebrush	
Callistemon viminalis	Drooping Bottlebrush	
Callitris endlicheri	Black Cypress Pine	✓
Callitris glaucophylla	White Cypress Pine	✓
Casuarina cristata	Bellah	✓
Corymbia ficifolia	Red Flowering Gum	
Eucalyptus albens	White Box	✓
Eucalyptus blakelyi	Blakely's Red Gum	✓
Eucalyptus bridgesiana	Apple Box	✓
Eucalyptus caesia 'Silver Princess'	Gungurru	
Eucalyptus cladocalyx	Nana	
Eucalyptus conica	Fuzzy Box	✓
Eucalyptus leucoxylon	Yellow Gum	✓
Eucalyptus melliodora	Yellow Box	✓
Eucalyptus microcarpa	Western Grey Box	✓
Eucalyptus populnea	Bimbil Box	✓
Eucalyptus scoparia	Willow Gum	

Table 3.3: Preferred plant species continued

Scientific name	Common name	Endemic
Eucalyptus sideroxylon	Mugga Ironbark	✓
Eucalyptus steedmanii	Steedman's Mallee	
Eucalyptus torquata	Coolgardie Gum	
Eucalyptus viridis	Green Mallee	✓
Gejeira parviflora	Wilga	✓
Grevillea robusta	Silky Oak	✓
Pittosporum angustifolium	Butterbush	✓
Native shrubs		
Acacia buxifolia	Box-lead Wattle	✓
Acacia cardiophylla	Wyalong Wattle	✓
Acacia cultriformis	Golden Glow Wattle	✓
Acacia dealbata subsp.		
dealbata	Silver Wattle	✓
Acacia deanei	Dean's Wattle	✓
Acacia decora	Showy Wattle	✓
Acacia hakeoides	Hakea Wattle	✓
Acacia implexa	Hickory Wattle	✓
Acacia paradoxa	Kangaroo Thorn	✓
Alectryon oleifolius subsp. canescens	Western Rosewood	✓
Boronia megastigma	Brown Boronia	
Bothriochloa macra	Red Grass	✓
Brachyscome sp.	Cut-leaf Daisy	✓
Callistemon Compacta 'Captain Cook'	Weeping bottlebrush	
Callistemon 'Endeavour'	Bottlebrush	
Callistemon 'Harkness'	Bottlebrush	

Table 3.3: Preferred plant species continued

Scientific name	Common name	Endemic
Callistemon 'Kings Park Special'	Bottlebrush	
Callistemon 'Little John'		
Callistemon 'Reeve's Pink'		
Callistemon citrinus	Crimson Bottlebrush	
Callistemon viminalis	Drooping Bottlebrush	
Cassia artemisioides	Silver Cassia	✓
Cassia eremophila	Desert Cassia	
Cassinia aculeata	Dolly Bush	✓
Correa reflexa	Native Fuchsia	✓
Darwinia citriodora	Lemon Scented Myrtle	
Dianella porracea	Pale Flax Lily	✓
Dodonaea viscosa	Giant Hop Bush	✓
Eremophila glabra	Tar Bush	✓
Eremophila longifolia	Emu Bush	✓
Eremophila mitchellii	False Sandalwood	✓
Eremophila sp.	Emu Bush	✓
Eriostemon myoporoides	Long-leaf Wax Flower	✓
Geijera parviflora	Wilga	✓
Grevillea 'Canberra Gem'	Grevillea	
Grevillea 'Honey Gem'	Grevillea	
Grevillea 'Ivanhoe'	Grevillea	
Grevillea juniperina	Juniper-leaf Grevillea	
Grevillea 'Robyn Gordon'	Grevillea 'Robyn Gordon' cultivar	
Grevillea 'Sandra Gordon'	Grevillea 'Sandra Gordon' cultivar	
Grevillea 'Scarlet Sprite'	Grevillea 'Scarlet Sprite' cultivar	

Table 3.3: Preferred plant species continued

Scientific name	Common name	Endemic
Grevillea floribunda	Seven Dwarfs Grevillea	✓
Grevillea rosmarinifolia	Rosemary Grevillea	
Hakea multilineata	Grassleaf Hakea	
Hakea tephrosperma	Hooked Needlewood	✓
Hardenbergia	Happy Wanderer	✓
Helichrysum ramosissimum	Yellow Buttons	✓
Indigofera australis	Australian Indigo	✓
Kunzea baxteri	Kunzea	
Leptospermum flavens 'Cardwell'	Tea Tree	
Maireana enchylaenoides	Wingless Bluebush	✓
Maireana microphyalla	Small-leaved Blue Bush	✓
Melaleuca bracteata 'Revolution Green'	Honey Myrtle	
Melaleuca bracteate 'Revolution Gold'	Honey Myrtle	
Melaleuca hypericifolia	Red Flowering Paperbark	
Myoporum montanum	Waterbush	✓
Native ground cover		
Anigozanthos sp.	Kangaroo Paws	
Aristida behriana	Bunch Wiregrass	✓
Aristida jerichoensis var. subspinulifera	Wiregrass	✓
Aristida ramosa	Purple Wire Grass	✓
Atriplex semibaccata	Australian Saltbush	✓
Austrodanthonia auriculata	Lobed Wallaby Grass	✓
Austrodanthonia caespitosa	Wallaby Grass	✓
Austrodanthonia eriantha	Hill Wallaby Grass	✓
Austrodanthonia setacea	Small-flowered Wallaby Grass	✓

Table 3.3: Preferred plant species continued

Scientific name	Common name	Endemic
Austrostipa bigeniculata	Kneed Speargrass	✓
Austrostipa densiflora	Foxtail Spear-grass	✓
Austrostipa scabra	Speargrass	✓
Austrostipa verticillata	Bamboo Grass	✓
Bothriochloa macra	Red Legs	✓
Brachyscome multifida	Cut-leaved Daisy	✓
Bulbine semibarbata	Leek Lily	✓
Calotis cuneifolia	Burr Daisy	✓
Calotis lappulaceae	Yellow Burr-daisy	✓
Carex appressa	Tall Sedge	✓
Carex inversa	Knob Sedge	✓
Chloris truncata	Windmill grass	✓
Chrysocephalum apiculatum	Common Everlasting	✓
Convolvulus erubescens	Blushing Bindweed	✓
Cymbonotus refractus	Barbed Wire Grass	✓
Dianella porracea	Riverine Flax-lily	✓
Dianella revoluta	Lily	✓
Digitaria brownii	Cotton Panic Grass	✓
Einadia hastata	Berry Saltbush	✓
Einadia nutans subsp. nutans	Climbing Saltbush	✓
Elymus scaber	Curly Windmill Grass	✓
Enteropogon acicularis	Windmill Grass	✓
Eremophila debilis	Winter Apple	✓
Glycine tabacina	Variable Glycine	✓

Table 3.3: Preferred plant species continued

Scientific name	Common name	Endemic
Goodenia hederacea ssp. hederaceae	Goodenia	✓
Goodenia pinnatifida	Scrambled Eggs	✓
Grevillea 'Bronze Rambler'	Grevillea	
Hardenbergia violaceae	Happy Wanderer	✓
Isolepis nodosa	Knobby Club Rush	
Kennedia coccinea	Coral Vine	
Lomandra filiformis	Mat Rush	✓
Lomandra multiflora	Many-flowered Mat-rush	✓
Myoporum parvifolium	Creeping Boobialla	
Paspalidium constrictum	Knottybutt Grass	✓
Pennisetum alopecuroides	Fountain Grass	
Poa labillardierei	Native Tussock Grass	✓
Poa sieberiana	Grey Tussock Grass	✓
Rumex brownii	Swamp Dock	✓
Rytidosperma sp.	Wallaby Grass	✓
Sida corrugata	Corrugated Sida	✓
Solanum esuriale	Quena	✓
Themeda triandra	Kangaroo grass	✓
Vittadinia cuneata	Vittadinia	✓
Vittadinia dissecta var. dissecta	New Holland Daisy	✓
Wahlenbergia communis	Tufted Bluebell	✓
Wahlenbergia luteola	Bluebell	✓
Xerochrysum viscosum	Sticky Everlasting	✓

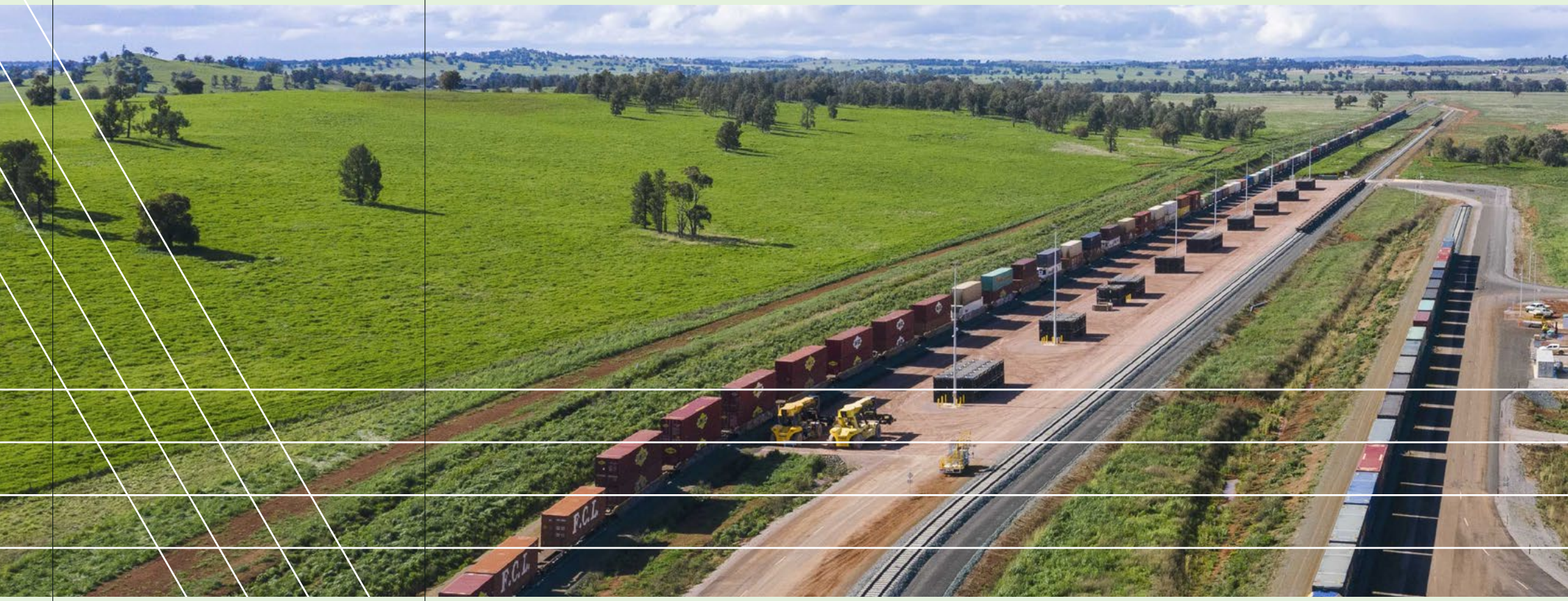
Table 3.3: Preferred plant species continued

Scientific name	Common name	Endemic
Exotic trees and shrubs		
Acer x freemanii 'Jeffersred'	Maple	
Acer negundo 'Elsrijk'	Maple	
Fraxinus ornus 'Meczek'	Claret Ash	
Gleditsia tricanthos var. inermis 'Sunburst'	Honey Locust	
Lagerstromia fauriei x L.fauriei 'Natchez'	Crepe Myrtle	
Lagerstromia fauriei x L.fauriei 'Sioux'	Crepe Myrtle	
Lagerstromia fauriei x L.fauriei 'Tuscarora'	Crepe Myrtle	
Murraya paniculata	Murraya, Mock Orange (shrub)	
Pyrus calleryana 'Capital'	Ornamental Pear	
Pyrus calleryana 'Chanticleer'	Ornamental Pear	
Zelkova serrata 'Schmidtlow' Wireless	Japanese Elm Wireless	

Shared cycle and walkway in Parkes

4

Infrastructure



Aerial view of railway in Parkes

4

This section provides an overview of the precinct enabling infrastructure and the principles for planning and designing infrastructure for a proposed development.

It applies to infrastructure projects, subdivisions and development.

Timely planning and delivery of infrastructure is essential in supporting development and facilitating growth of businesses within the Parkes Special Activation Precinct.

Chapter 4 outlines the obligations and considerations for the planning, designing and delivery of infrastructure within the Parkes Special Activation Precinct. It identifies the:

4.1 Precinct enabling infrastructure

Infrastructure within the Parkes Special Activation Precinct is envisaged to be provided on a staged basis, with some infrastructure constructed on an interim basis with provision for later upgrade as needed.

A high-level overview of the enabling infrastructure is provided based on the master plan.

4.2 Infrastructure design principles

Principles for planning and designing infrastructure projects, subdivisions and development:

i) **main roads and utilities infrastructure** for the precinct will be designed and constructed in accordance with the following standards and requirements of the parties (where applicable) Parkes Shire Council, Transport for NSW (TfNSW), Australian Rail Track Corporation (ARTC), Jemena (Gas), Essential Energy (EE) and Transgrid

ii) **any infrastructure for a subdivision** is to be carried out to Parkes Shire Council standards and requirements

iii) **any roads and utilities within a lot** will be to Parkes Shire Council/EE/ Jemena standards and requirements.

This section should also be read in conjunction with other national, state and local regulatory standards and guidelines for a complete picture of the requirements to successfully deliver infrastructure within the precinct.

Rail infrastructure in Parkes

4.1 Precinct enabling infrastructure

The staging and delivery of infrastructure across the precinct will be flexible and responsive to the timing of growth and land take up. RGDC is delivering infrastructure for the precinct to create opportunities, initially within the central and northern portion of the Special Activation Precinct, connecting with other regional infrastructure projects, such as the Newell Highway Bypass.

Regional infrastructure typically services the precinct as a whole and extends across all or part of the Parkes Special Activation Precinct. It will be planned and coordinated by RGDC and delivered either RGDC, utility providers or State agencies, or as a joint venture with private landowners or developers.

This form of infrastructure may include:

- upgrades of existing roads and provision of new road infrastructure, including roads, culverts, bridges, intersections, street lighting and other civil structures as required (including provision for integrated active and public transport)
- rail sidings and associated infrastructure
- provision of utilities, including water (including storages), sewerage (including a future treatment plant on the western side of the Precinct, if needed), recycled water, stormwater, gas, electrical, and telecommunications networks
- provision within the road reserve utility corridor for additional utility services, including emerging technologies
- connections for future energy generation facilities (e.g. solar/ hydrogen/waste from energy)
- electrical substations to allow for connections from generation facilities to the main grid
- allowance for behind the meter connections between businesses
- stormwater management basins (to manage stormwater quantity and quality)
- multi-purpose green infrastructure corridors, including those associated with tributaries of Goobang Creek for environmental, cultural and surface water flow/flood conveyance purposes with associated shared trails.

Asset	Early enabling works	Future enabling works
Roads and drainage (including main carriageway, street lighting, local transverse and longitudinal drainage)	• Brolgan Road Upgrade (7.3 km) (Commenced 2021, Due for completion late 2023), including: – shared user path – street lighting at intersections – roundabout at Brolgan and New Cooper Road • New Collector Road – Hartigan Avenue to Henry Parkes Way	• Brolgan Road – four lanes when traffic demands exceed two lane capacity – four way intersection on Brolgan Road with north/south connector stubs for future internal roads • London Road upgrade • North-South Connector Road (Brolgan Road to London Road) • North South Connector Road (Brolgan Road to Henry Parkes Way) • Relocation of Coopers Road (referred to as New Coopers Road) • Ring road route formed by Brolgan Road, New Coopers Road and London Road
Road bridges and culverts	• Brolgan Road Bridges (over rail)	• North-South Connector Road (over rail)
Rail/intermodal facilities	N/A	• Additional rail siding for a future 'open access' terminal, located on either north or south side of the main line (a 50m provision has been made in the precinct plan for this purpose).
Utilities – potable water (connection to existing town water and new water storage)	• Precinct water network will be supplied from the existing Parkes Shire Council water supply network (Barton Street Reservoirs, off Ted Parker Circuit) via the existing DN300 pipe network until either: – new 3.5ML potable water storage supplied from the existing Parkes network is maximised (DN300 pipe capacity) or – system peak day demand exceeds system storage or – water treatment plant capacity is exceeded • The early works water distribution pipeline will be aligned with the Brolgan Road reserve.	• Additional potable water storage tanks to be provided as demand is identified. Additional treatment capacity at the existing WTP (operated by Parkes Shire Council), or a new WTP in the SAP will be required when demands warrant.
Utilities – recycled water	• Recycled water feed initially to be sourced from the existing Parkes Shire Council recycled water network • Provision for recycled water distribution within road corridor	• Recycled water feed sourced from the precinct sewage treatment plant • Provision for recycled water distribution conduits within road corridor of future road upgrades
Utilities – sewerage	• Hybrid gravity/low pressure sewer system with associated rising mains and pump station	• Amplify wastewater treatment plant capacity when threshold reached • Sewer pump stations (SPS) as required • Rising mains as required
Utilities – gas	• Extension of the gas pipeline from Coopers Road to Keiths Lane • Gas distribution network within utility corridor associated with new roads and road upgrades	• Gas distribution network within utility corridor associated with new roads and road upgrades

Asset	Early enabling works	Future enabling works
Utilities – hydrogen	• Provision for future hydrogen distribution conduits within Brolgan Road service corridor	• Provision for future hydrogen distribution conduits within service corridors
Utilities – electricity	• Underground High Voltage (11 kV) cables along Brolgan Road. • 45 MVA (11kV/132kV) substation connecting existing Transgrid 132 kV substation to the north-west of the Precinct. • Electrical transmission and distribution infrastructure to connect to existing facilities.	• Expand 45MVA substation to 100MVA
Utilities – telecommunications	• Relocation of existing NBN fibre as part of Brolgan Road upgrade works • Installation of optic fibre within roadside and trunk utility corridor conduits	• Installation of optic fibre where required within roadside and trunk utility corridor conduits
Regional stormwater basins	• Decentralised system of detention and water quality features, constructed on an as needs basis	• Decentralised system of detention and water quality features, constructed on an as needs basis
Green infrastructure	N/A	• Quarry to Creek Green + Ochre Grid

4.1.1 Early enabling works and envisaged future enabling works

In general, new infrastructure should expand from existing assets and networks. As such, development across the precinct will occur from east to west. The growth of the precinct will largely radiate from the central spine of Brolgan Road.

The early enabling works, being the upgrade of Brolgan Road, are the initial commitment from RGDC, with completion targeted for 2024.

The envisaged future enabling works provide a logical guiding framework for future stages of development. It is expected that future enabling works will need to respond to new opportunities and evolve in response to government and business investment, and local and global market demand in coming years, as the Parkes Special Activation Precinct develops in its entirety.

RGDC will ensure both the early and future enabling works are planned, designed and constructed in accordance with relevant standards from federal, state, and local authorities and service providers. RGDC (or other entity as relevant and noted in Section 4.1.3) will deliver the infrastructure in stages.

4.1.2 Infrastructure in advance of enabling works

The precinct will respond to emerging needs and demands. Proposals in the precinct not directly benefiting from Early Enabling Works (out of sequence development) will be considered where the infrastructure appropriately contributes to the precincts infrastructure networks. Variations may be considered where there is demand for a proposal and the delivery is possible in terms of:

- capacity of the network and branch infrastructure
- cost effectiveness of delivering other enabling infrastructure needed to support the out-of-sequence development
- ability and willingness of parties to contribute to the cost of the infrastructure.

4.1.3 Infrastructure by others

Related infrastructure works by others that has recently been completed, is in construction or planned within and around the Precinct includes:

Rail
Inland Rail - North-west rail connection – ARTC

Rail
Inland Rail - Parkes to Narromine Upgrade – ARTC Road – Newell Highway Upgrade - Parkes Bypass – Transport for NSW Telecommunications – Fibre rollout along Brolgan Road alignment

Telecommunications
expansion of Fixed wireless service - NBN

Gas
gas take-off from the main Parkes pipeline (operated by APA) along Brolgan Road - Jemena (3.5 km long, 110 mm diameter, 210 kPa pipeline with a nominal capacity of 1 TJ/d).

The Newell Highway Upgrade - Parkes Bypass works by Transport for NSW will include an extension of Hartigan Avenue to the west of the bypass, running through the Commercial Gateway sub-precinct. Access to the precinct will be clearly signposted. Future access to the precinct from the Parkes Bypass will be via the Condobolin Road roundabout and will be clearly signposted. The existing access to the precinct from Brolgan Road will be maintained for the duration of the construction of the Parkes Bypass.

4.2 Infrastructure design principles

Precinct design principles will guide planning projects, subdivision and development across the precinct.

Local infrastructure specifically suits a single development, allotment or subdivision and includes:

- **Roads, pedestrian and cycle ways** – required to service new development, including new road connections, property access driveways and linkages
- **stormwater management** – on site stormwater detention, with an objective to ensure flows are detained to pre-development peak flows , to be provided within a site along with works to connect the outlet to the precinct stormwater systems
- **electricity supply/connections** – including internal and external works to connect the precinct infrastructure to existing substations
- **telecommunications** – including internal and external works to connect to the precinct networks
- **wastewater networks** - including internal and external works to connect to the precinct infrastructure
- **potable water networks** – including internal and external works to connect to the precinct infrastructure
- **gas** – pipeline that allows for connection into the existing and future precinct network.

Infrastructure within the Parkes Special Activation Precinct will be based on the following principles:

- recognition of and site-specific design for local conditions and constraints (see table)
- design for infrastructure that is installed with a regularly adopted design life should be able to withstand the projected effects of climate change, including extreme heat, fire, drought and flood commensurate with the adopted design life.

Table 4.1 Constraints

Constraints	Details
Natural hazards	• wide range of meteorological conditions can be experienced – the locality is within a drought-prone area but some portions are also subject to local stream flooding from gullies that flow to Ridgey Creek (that flows generally southwards along the western border of the Precinct) and Goobang Creek (that flows westwards along the southern border of the Precinct) and overland flow flooding (see Chapter 8). These hazards will alter with climate change. • bushfire – there are mapped bushfire prone areas within the Precinct (see Chapter 8). This has implications for design with respect to materials selection as well as ensuring that evacuation can safely occur.
Soils	The geology of the region is Quaternary alluvium and the soils are generally red to brown loam and clayey soils (including soil landscapes, Brolgan Plain and Goobang in the west and south and Parkes in the east). The soil types have implications for infrastructure construction and design. The soils are highly erodible and subject to seasonal waterlogging (WSP, 2019). The Brolgan Plain landscape is known to present a foundation hazard (King, 1998[1]). The soils within the region are also known to include naturally occurring asbestos (as was identified during excavation works for the Newell Highway upgrade by Transport for NSW).
Topography	The Precinct is largely characterised by gently undulating plains that slope to the west/south-west at grades of 2 – 5% (WSP, 2019), with high points in the central area.
Vegetation	The Precinct contains stands of vegetation to be retained in conservation zones (see Chapter 3).

[1] King, D.P. 1998, Soil Landscapes of the Forbes 1:250 000 Sheet Report - Department of Land & Water Conservation

4.2.1 Roads and road sections

Roads and road sections in the Parkes Special Activation Precinct will be based on the following principles:

- all roads to accommodate PBS Level 2 (max length 26m) Design Vehicle and PBS Level 3 (max length 36.5m) Check Vehicle
- roundabouts to be mountable where required
- road levels for sub-arterial and collector roads to be set at or above the 1%Annual Exceedance Probability (AEP) flood level. Road levels for local access and rural roads should be set at or above the 5%AEP flood level
- landscaping to include appropriate setback from the edge of the travel lane for non-frangible vegetation (and to maintain sight lines)
- all roads within or adjacent to identified bushfire prone land are to be provided with suitable clearances from vegetation
- subdivisions in locations that are adjacent to identified bushfire prone land are laid out to provide for roads along the edge of bushfire prone land and vegetation
- pavement design takes into consideration the high centripetal axle loads expected where there are large truck turning movements
- make use of suitable recycled materials (where available) for either the road pavement select material zone (SMZ) or the shared use path pavement
- grade separated crossings across all rail crossings to allow for double stacking of containers and meet safety requirements and ARTC requirements
- works on classified roads are generally limited to intersection upgrades and landscape treatments. These works are to be undertaken in consultation with Transport for NSW
- individual site layouts will provide clear lines of sight for entry points
- public transport stops with shoulder widening will be integrated into road verges in appropriate locations and are to link efficiently with the existing network
- intersection design will incorporate the provision of utilities set back where future upgrades are anticipated
- pedestrian and cycle networks link key hubs and facilities across the precinct.
- Vehicle pick ups/setdowns should provide seamless, predictable and safe locations with appropriate lighting, seating, lines of sight and kerbless pick up.

Map 8.5 shows the road hierarchy for the enabling works as well as related road upgrades (such as the Newell Highway bypass).

Billabong Creek, Parkes

Table 4.2 Road standards for existing roads and roads to be upgraded as part of the infrastructure within the precinct

Road name	Road classification	Target design speed (km/h)	Number of lanes	Minimum widths (m)			Shared user path width	Kerb type	Underground corridor
				Road reserve	Carriageway (including shoulder)	Verge (typical)			
Brolgan Road	Distributor/ Sub-arterial (Parkway)	80	2	40-50	11	4 m, 1.5m	2.5m	Kerb and gutter/ Table drain	3.5 -10 m
New Coopers Road	Collector	60	2	40	10	4 m, 1.5m	2.5m	Kerb and gutter/ Table Drain	3.5 -10 m
London Road Extension	Collector	100	2	36	10	4 m, 1.5m	2.5m	Table drain	3.5 -10 m
NW Connector Road	Collector	60	2	36	10	4 m, 1.5m	2.5m	Table drain	3.5 -10 m

Table 4.3: Requirements for other roads within the precinct

Road name	Road classification	Target design speed (km/h)	Number of lanes	Minimum widths (m)			Shared user path width	Kerb type
				Road reserve	Carriageway (including shoulder)	Verge (typical)		
Hartigan Avenue	Sub-arterial	80	2	36	10	6,6	-	Kerb and gutter
Local roads (other than Commercial Gateway)	Local access	50	2	36	16	10,10	2.5m	Table drain
Local Roads (Commercial Gateway sub-precinct	Local access	50	4 (2 travel lanes and 2 parking lanes)	31	16	6,6	2.5m	Kerb and gutter
Rural	Rural	80	2	29	9	10, 10	-	-

Figure 4.1 Distributor road typical section (Brolgan Road)

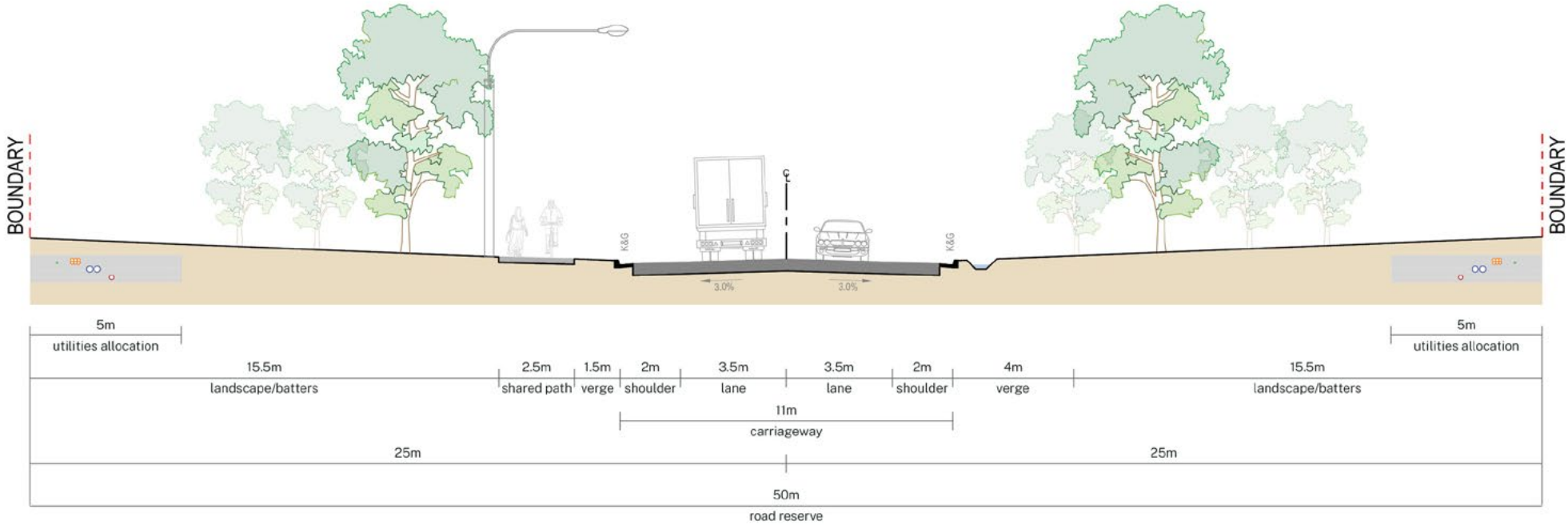


Figure 4.2 Sub-arterial road typical section (Hartigan Avenue)

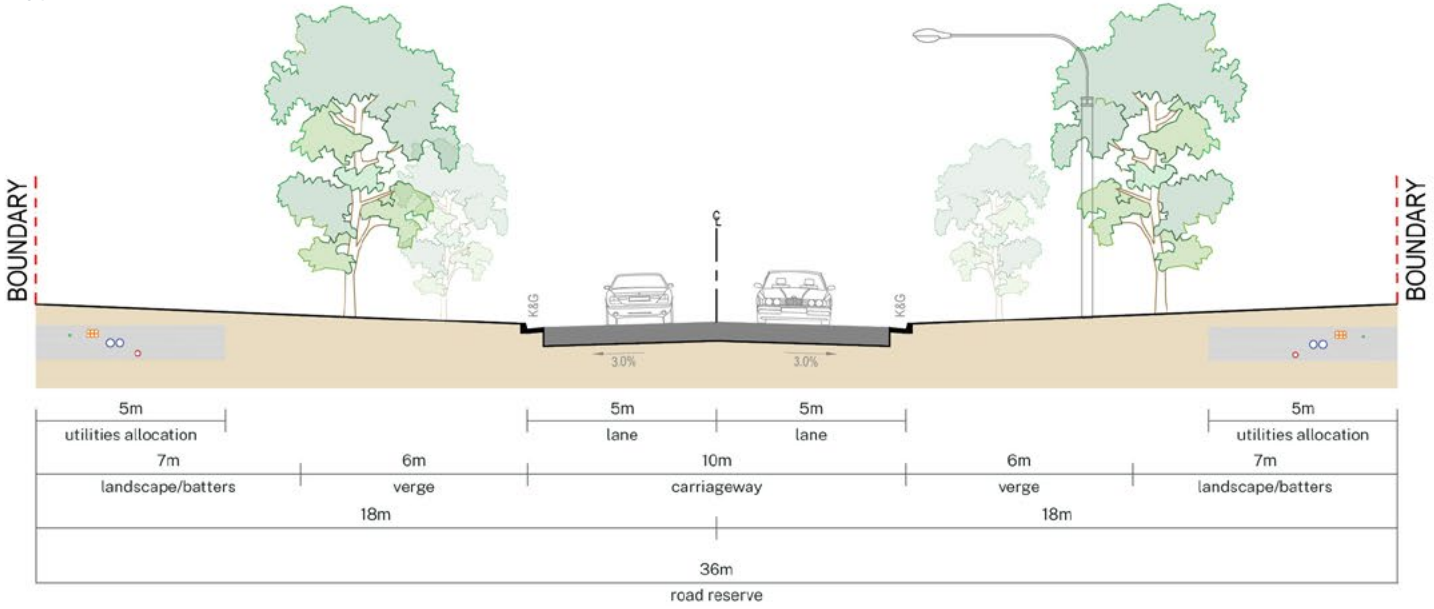


Figure 4.3 Collector road typical section (New Coopers Road, London Road extension, NW connector road)

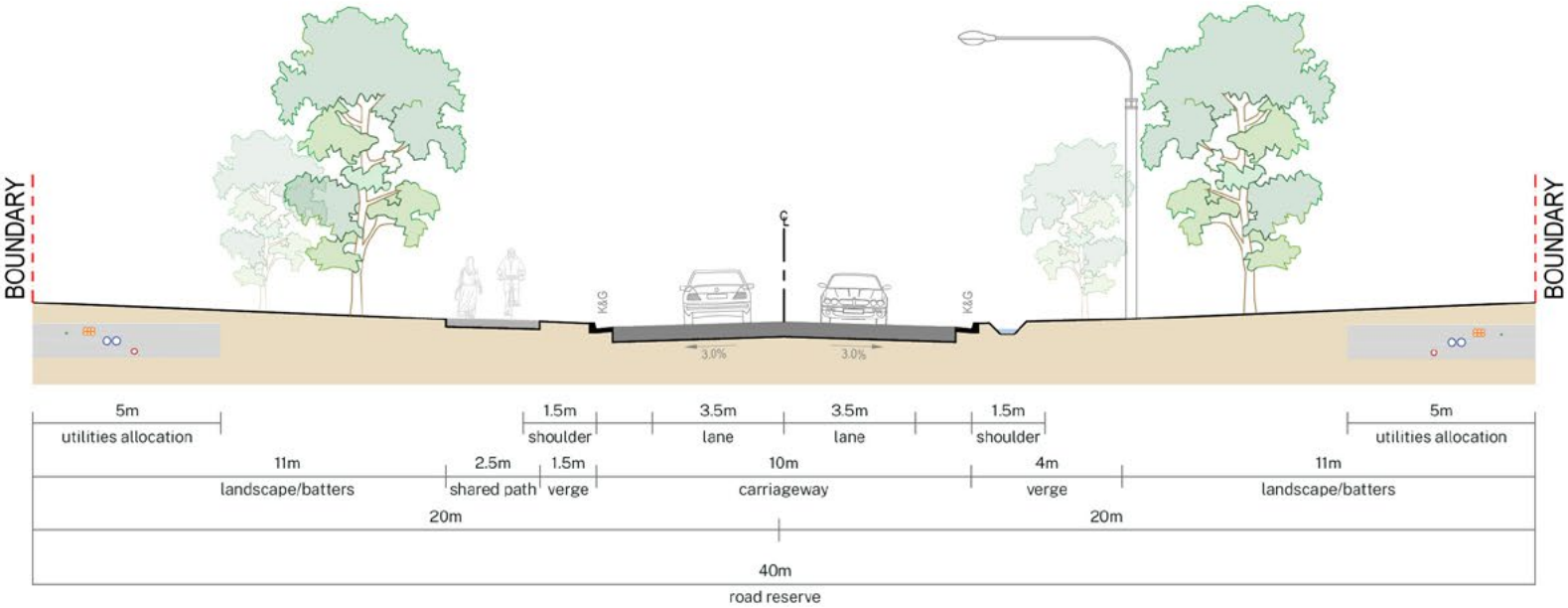


Figure 4.4 Local road typical section

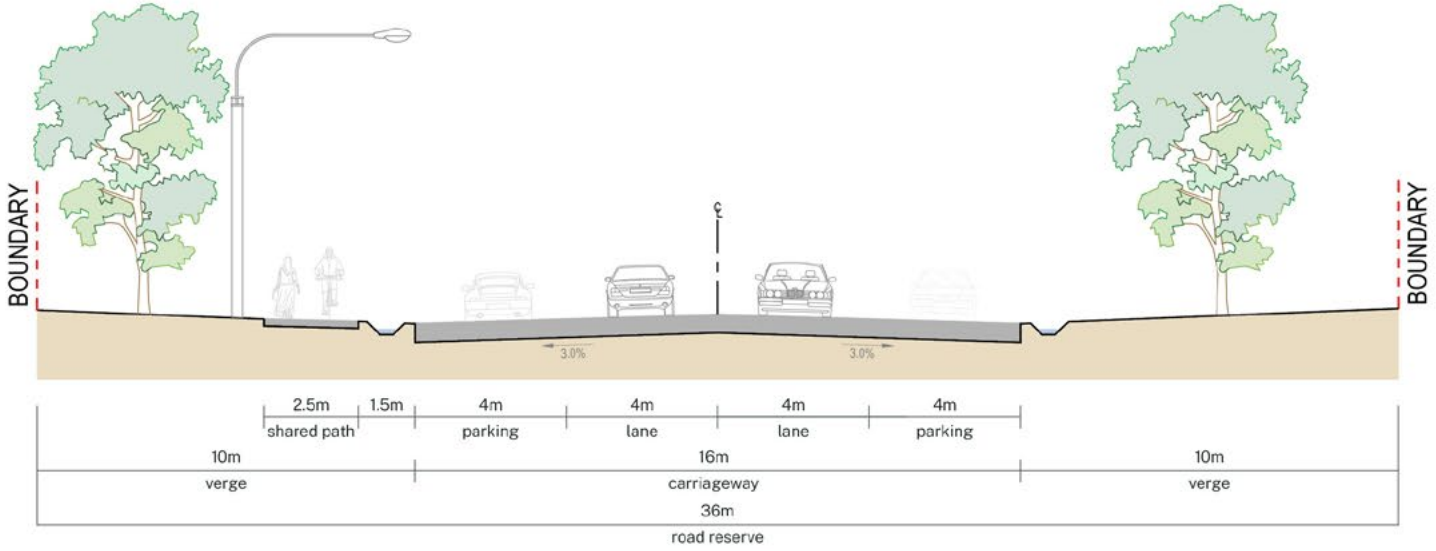


Figure 4.5 Local road typical section
(Commercial Gateway sub-precinct)

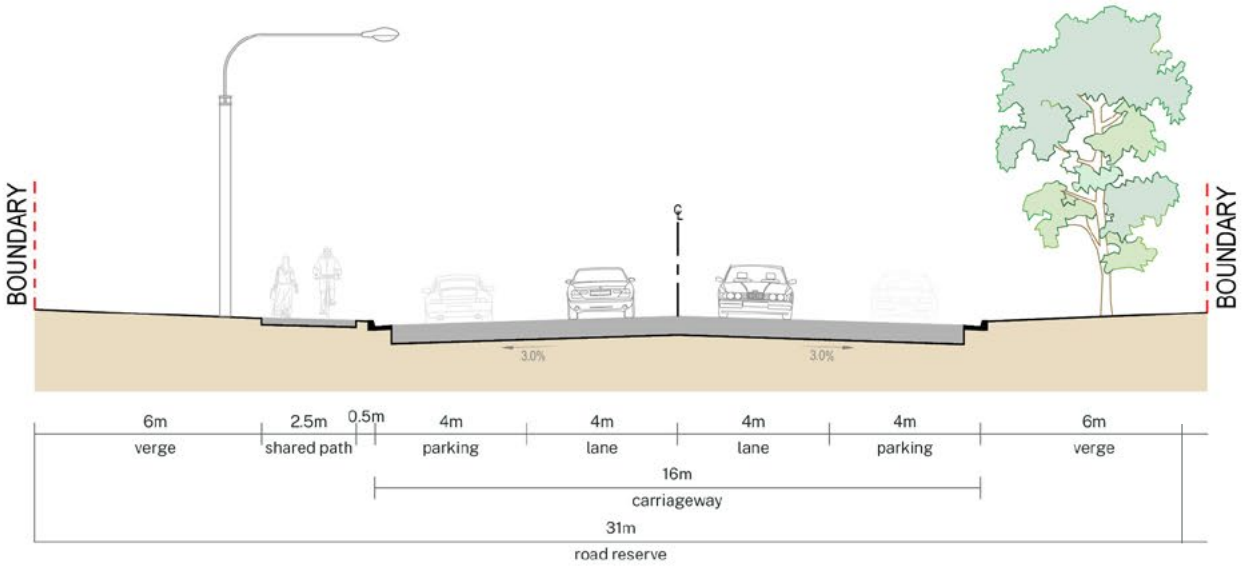
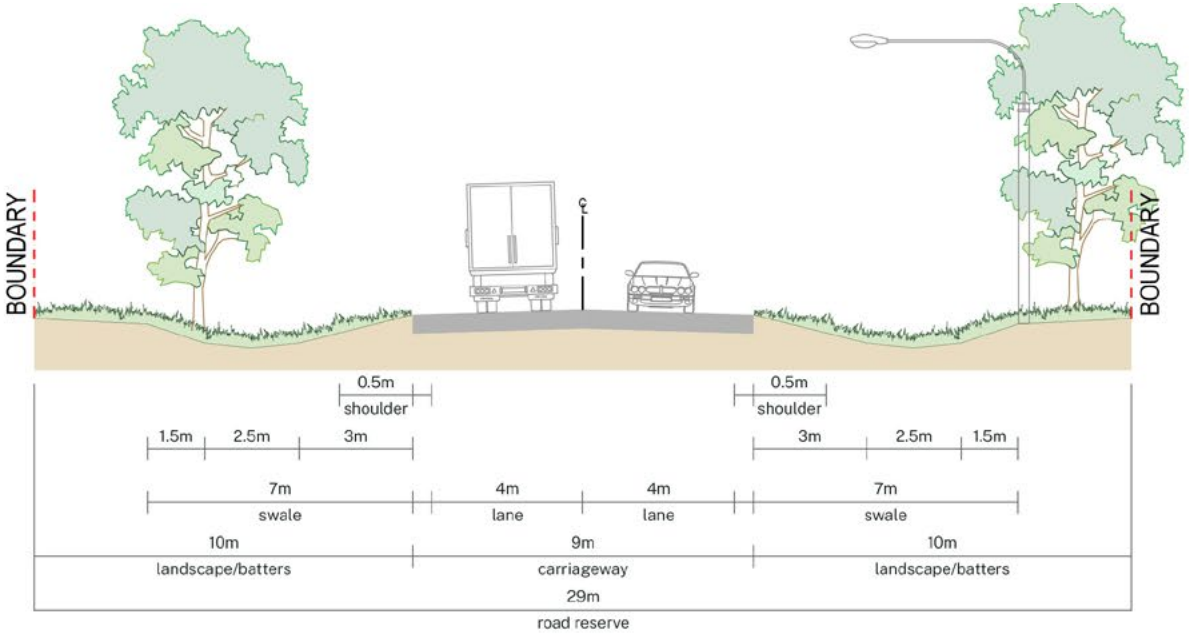


Figure 4.6 Rural road typical section



4.2.2 Rail and intermodals

Rail and intermodal facilities in the Parkes Special Activation Precinct will be based on the following principles:

- all future public rail infrastructure and interfaces within the precinct are designed and installed in accordance with Specifications, Standards and Procedures listed in the ARTC Track and Civil Code of Practice
- ensure all design, materials, equipment, workmanship and installations relating to rail infrastructure complies with the latest revision of the ARTC Engineering Standards and Australian Standards (as relevant)
- rail sidings and spurs to incorporate appropriate horizontal and vertical clearances for double-stacked freight trains along the alignment
- ensure for orderly and coordinated provision of rail infrastructure and associated facilities within the precinct.

4.2.3 Stormwater

The management of stormwater in the Parkes Special Activation Precinct will be based on the following principles:

Stormwater quantity

- the stormwater quantity strategy is shown conceptually in Figure 4.7
- stormwater infrastructure includes on-site management measures, along with precinct-wide measures that form part of the broader stormwater and flood management strategy for the precinct
- large stormwater detention basins are to be located on land acquired by RGDC. These will be constructed as part of initial activation works and incorporated with green infrastructure and vegetated areas across the precinct, where appropriate
- no increase in peak discharges from overland flows or local stormwater runoff from the pre to post development case scenarios
- cross drainage infrastructure for waterway crossings maintains natural overland flow paths and is sized to achieve a 1% AEP flood immunity for sub-arterial roads and a 5% AEP flood immunity for local roads. However, developable areas must have a trafficable flood free (1% AEP) evacuation route
- longitudinal drainage swales are provided for the conveyance of stormwater along existing and proposed road alignments
- stormwater detention can be provided in conjunction with stormwater quality improvement devices.

Stormwater quality

- the stormwater quality strategy is shown conceptually in Figure 4.8
- regional measures include the use of roadside drainage swales (bioswales), the provision of gross pollutant traps on the inlet to the detention basins (as a means of primary treatment) with a bioretention filter at the base of the regional detention basins to target finer sediment and nutrients
- proposed lot scale treatment includes rainwater tanks to capture roof runoff for landscape irrigation and internal re-use
- site runoff from certain industrial uses may require additional on-site treatment to achieve precinct water quality objectives. This could include the installation of proprietary underground oil-water separators or sand filters. Some industrial uses may require diversion of flows to the wastewater system, under a trade waste licence. The requirements for discharge are set out in the *Liquid Trade Waste Management Guidelines*[2] (DPIE, 2021)
- impacts to groundwater resources will be managed by treating runoff from the developed catchments and, where relevant, site runoff from certain industrial sites may need additional on-site treatment to achieve precinct water quality objectives. The volume of runoff that will ultimately infiltrate to groundwater is intended to be maintained as it is directed to the green infrastructure corridors
- during construction, erosion and sediment controls will be required in accordance with guidelines such as Managing Urban Stormwater Soils and Construction - Volume 1 (Urban Development, Landcom, 2004), or 2A (Installation of Services, DECC, 2008a) or 2D (Main Roads, DECC, 2008b)
- stormwater quality control measures to be delivered in the precinct are to reduce Total Suspended Solids (TSS) by 80%, Total Phosphorus (TP) by 60%, Total Nitrogen (TN) by 45% and gross pollutants by 90%.

[2] https://www.industry.nsw.gov.au/__data/assets/pdf_file/0010/147088/trade-waste-management-guidelines.pdf

Figure 4.7:
Stormwater quantity strategy

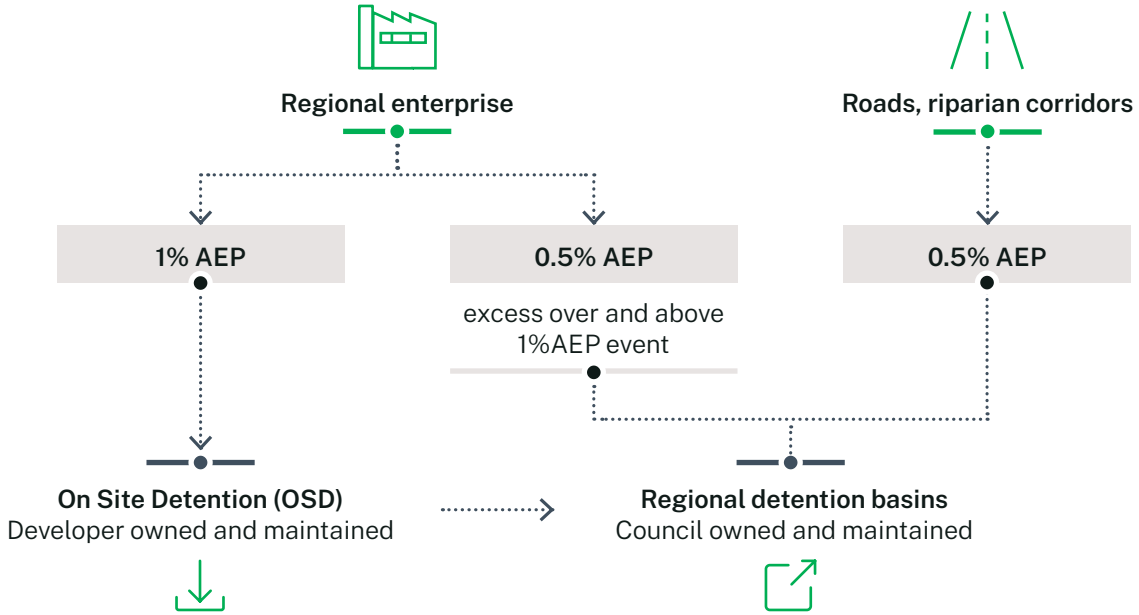
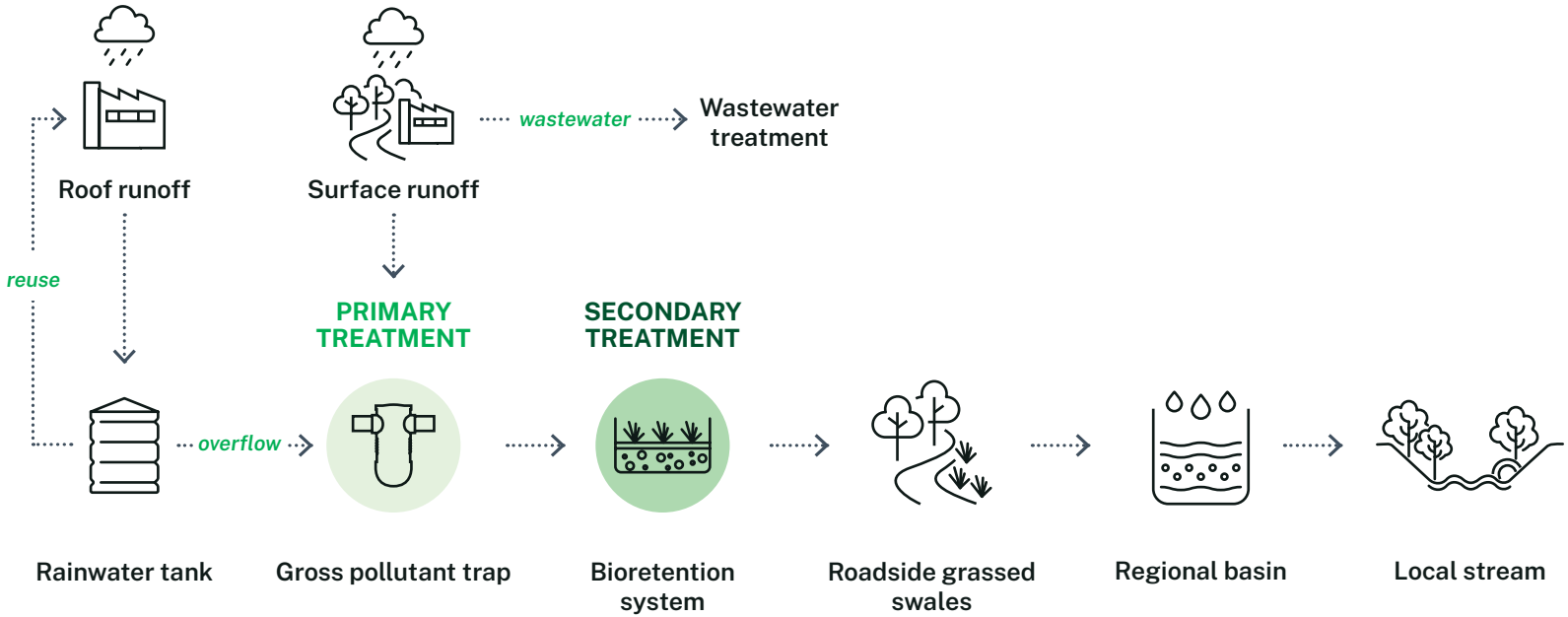


Figure 4.8:
Stormwater volume and quality strategy



4.2.4 Electrical

Electrical services in the Parkes Special Activation Precinct will be based on the following principles:

- supply will be provided to the precinct from an existing Transgrid 132 kV (120 MVA) substation located in the north-west of the Precinct
- a 45 MVA (11kV/132kV) substation connecting the existing Transgrid 132 kV substation will be installed by RGDC, along with trenched High Voltage (HV) (11 kV) cables along Brolgan Road
- planning for the ultimate energy demand of the precinct, which includes the long-term capacity of the 45 MVA substation to be expanded to 100MVA, will take into account the equipment and footprint area requirements for such future expansion
- high voltage/low voltage utilities are to be designed in accordance with Australian and prevailing utility standards, noting that specific requirements for designs will be defined within information work packs issued by each utility prior to the commencement of detailed design
- services will be designed in accordance with the following Australian Standards (AS) relating to substation and overhead line design:
  - AS2067: Substations and High Voltage Installations
  - AS3000: Wiring Rules
  - AS/NZS7000: Overhead Line Design
- the design of future energy networks will support security of supply by making use of dual feeders and ring main units (RMU)
- all electrical equipment will be located away from identified bushfire prone areas, or where this is unavoidable, provide for the necessary asset protection zones from vegetation in accordance with the relevant guidelines.

Essential Energy substation

Transgrid substation

4.2.5 Lighting

Lighting in the Parkes Special Activation Precinct will be based on the following principles:

- regular street lights along Precinct road corridors are generally not proposed due to the rural nature of the area, apart from lighting at intersections and major entry points
- smart lighting is to be delivered as part of the precinct lighting design
- smart lights are to use a mix of sensors and internal programming to automatically adjust lighting levels in response to changing conditions. Sensors can be used to detect movement and communicate with each other over a basic mesh network
- solar powered pole lighting is to be provided to all shared use paths
- poles, bollards and other urban elements will be installed with smartchip sensors that switch the lights on and off according to conditions.
- provision of safety specific lighting at key transport pick ups / setdowns and pedestrian interfaces.

4.2.6 Water

Water supply in the Parkes Special Activation Precinct will be based on the following principles:

- the precinct water network will be supplied by a new 3.5ML reservoir connected to the existing town water network
- town water is to be supplied to ANZECC drinking water quality standards
- potable water storage and reticulation is to be designed in accordance with national standard specifications defined by the Water Services Association (WSA) of Australia. When further details are required the following standards and guidelines should be used:
  - WSA 03 2011-3.1 Water Supply Code of Australia (Regional New South Wales Edition) Version 1.0
- fire flow requirements for a number of industries are significant and therefore these demands are proposed to be managed by each site owner/operator as required via fire tanks as there is no fire capacity within the reservoir systems. Onsite tanks are to be filled from the potable supply and the onsite fire tanks to be sized to meet Australian Standards and Rural Fire Services (RFS) requirements.

4.2.7 Wastewater

Wastewater in the Parkes Special Activation Precinct will be based on the following principles:

- a wastewater network will be delivered in the first stage of the precinct and will prioritise the use of a hybrid gravity/low pressure trunk network and maximise the areas serviced by service connections. This will connect to the Parkes Shire Council sewage treatment plant on Akuna Road, operated by Parkes Shire Council
- the design will minimise the number of pumps in the trunk network and minimise the area (developable lots) requiring local pumps to discharge into the trunk network
- pump stations to be flood proofed to the 0.2%AEP flood level
- local solutions such as private pumps may be required to service low lying areas within the precinct, including:
  - Commercial Gateway sub-precinct
  - the far west of the precinct, consisting of the Regional Enterprise sub-precinct and Recycling and Resource Recovering sub-precinct
- sewer systems are to be designed in accordance with national standard specifications defined by the Water Services Association of Australia (WSAA). Where further details are required the following standards and guidelines should be used:
  - WSA 02: 2014-3.1 Gravity Sewerage Code of Australia (Regional New South Wales Edition) Version 1.0
  - WSA 07-2007 Pressure Sewerage Code of Australia Version 1.1
- WSA 04-2022 Sewage Pumping Station Code of Australia Version 3.1 discharge to the wastewater network will require a trade waste agreement with Parkes Shire Council (see the Liquid Trade Waste Management Guidelines, DPIE, 2021)
- any future treatment plant design is to assume that all treated effluent will be reused as recycled water, without environmental discharge.

4.2.8 Recycled water

Recycled water in the Parkes Special Activation Precinct will be based on the following principles:

- access to a recycled water network will be established in stages. Initially the recycled water feed will be via the Parkes Shire Council recycled water network and ultimately, the feed would be derived from the precinct wastewater treatment plant
- recycled water will be used for green and open space irrigation and to supply individual customers within the precinct
- where relevant, recycled customers will be responsible for building their recycled infrastructure connecting to the proposed trunk network
- recycled water reticulation to be designed in accordance with the NSW Guidance for Recycled Water Management Systems (DPI, 2015) , WSAA (Water Services Association of Australia) standards and Parkes Shire Council requirements. Recycled water infrastructure shall be clearly identifiable by lilac coloured valve levers, pipe stripes, and 'Do Not Drink' signage.

4.2.9 Gas/Hydrogen

Gas in the Parkes Special Activation Precinct will be based on the following principles:

- gas infrastructure within the precinct is designed and installed in accordance with Jemena requirements
- a space allocation has been provided within standard services allocations along all new roads for a future hydrogen service if required.

Jemena Gas

4.2.10 Telecommunications

Telecommunications in the Parkes Special Activation Precinct will be based on the following principles:

- conduits are to be installed within the utility portion of the road corridor to enable optic fibre installations (NBN)
- access to the NBN Fixed Wireless service for the locality (where available)
- where appropriate, all infrastructure should be provided with digital connectivity access to allow for ease of performance monitoring and communication between networks to improve operational efficiency, enabling secure and high-speed digital connectivity.

4.2.11 Active and public transport

Active and public transport in the Parkes Special Activation Precinct will be based on the following principles:

- individual site layouts will provide clear lines of sight for entry points and public shared use paths
- streets within the precinct will feature a shared use path as per Table 4.1 and Table 4.2, separated from the road carriageway, for active transport and safety purposes. These shared use paths will be able to accommodate both pedestrians and cyclists
- use of colour and textures to highlight drop offs / setdowns, graded walkways and building entrances or interfaces. Steps and TGSI's should be minimised to ensure the primary pathway is the accessible pathway
- in some areas of the precinct, avenue plantings either side of a shared use path will be established to provide shade for users (commensurate with sight line and bushfire risk requirements)
- rest areas and signage will be established along shared use paths
- any pedestrian or cycle paths constructed on private land will be covered by a free and unrestricted right of way on the title and connect with adjacent pathways to create a continuous path along the streetscape
- individual site layouts will provide clear lines of sight for entry points and public shared use paths
- future commercial areas are to provide bus route connections, which link efficiently with existing network
- taxi zones/ride share are to be located at each future commercial area. A specific pick up and drop off zone should be easily visible and accessible for all users with appropriate signage and lighting provided
- public transport stops with appropriate shoulder widening will be integrated into road verges in appropriate locations
- active transport should be encouraged within the precinct and where this occurs in the future there is to be provision of end of trip facilities

4.2.12 Utilities and services corridor

The utilities and services trunk corridor in the Parkes Special Activation Precinct will be based on the following principles:

- a services corridor(s) will be provided to support new underground services required to activate the precinct including:
  - gravity and low pressure sewer mains
  - recycled water main
  - medium pressure gas pipeline
  - water main and provision for a future second water main
  - low voltage electricity
  - optic fibre
  - provision for future telecommunications
  - spare 1m corridor for unknown future pipes/conduits
- the new underground services will be organised inside the services corridor in accordance with the NSW Streets Opening Coordination Council Guide 2018
- the services corridor will vary between 3.5 - 10 metres in width depending on the services needed and is to be accommodated within the road reserve
- the services corridor will accommodate any 11kV Essential Energy assets
- the services corridor is to be grassed or covered with low level plantings that can easily and cost effectively be removed and replaced if required. No trees should be planted above the services corridor but may be in the vicinity, providing the appropriate authority's protection measurements for the assets are implemented. If trees are in the vicinity of services, root barriers are required to protect the asset as well as any extra protection deemed by the asset authority
- the design, operation, maintenance, and protection of new utilities will be in accordance with the specifications of the different asset owners for the entire precinct
- every asset will have the required space as per the asset owner specifications and enough clearance from other services to protect and allow maintenance activities, as well as easy access for replacement, if required
- utilities and services must be integrated with precinct infrastructure and where possible, integrated or aligned with road or active transport networks.

4.2.13 Other considerations

Other considerations should include:

Cost effectiveness

- the costs and standards for infrastructure design and construction should address the appropriate lifespan. Designs should achieve efficiencies in maintenance without over scoping and unnecessarily increasing development costs within the precinct.

Future proofing

- infrastructure planning should accommodate the anticipated demand for each stage, without compromising future development potential, or significant capital investment costs for upgrading or replacing infrastructure ahead of its planned lifespan. Infrastructure should be fit-for-purpose and provide value for money
- infrastructure design should embrace innovation and future change, without introducing onerous construction and operation costs
- development within the solar sub-precinct should accommodate future opportunities and advancements in technology, such as the provision of common vehicle charging or battery recharging facilities.

Smart infrastructure

- smart infrastructure and smart technology should be implemented where possible
- infrastructure should be established and designed in accordance with the NSW Government's Smart Infrastructure policy.

Asset management standards

- infrastructure design is to consider consistency of componentry to access spares, technical familiarity and efficiency, along with quality of construction, maintenance periods and asset longevity.

4.2.14 A collaborative approach

One of the primary functions of RGDC is to facilitate and deliver infrastructure. This is in the context of the broader network management framework of regulated utility providers, State agencies and Parkes Shire Council.

RGDC recommends that proponents collaborate in the planning and design of infrastructure with the ultimate asset owners. This will ensure consistency with both the precinct objectives and individual utility and authority objectives and requirements.

RGDC will coordinate consultation for works it will undertake. Each proponent will be responsible for consultation related to works associated with their own individual developments.

5

Subdivision design guidelines

Aerial view of roundabout construction in Parkes

5

5.1 Planning your subdivision

These guidelines provide the design objectives for the subdivision of land within the Parkes Special Activation Precinct. They include objectives for:

- Topography
- Environment
- Environmental hazards
- Design and landscaping
- Stormwater and drainage
- Accessibility
- Infrastructure and services

Clarinda Street, Parkes

5.1 Planning your subdivision

The design objectives should be applied to the context of the development proposal. Where a specific design objective cannot be met, then applicants should demonstrate how the proposed design of the development will achieve the relevant precinct design principles in Chapter 2.

5.1.1 Topography

The natural landform and setting contribute to a sense of place. Subdivision is responsive to the setting and natural site features, and established subdivision patterns.

The Parkes Special Activation Precinct has a landform that is undulating, with sparse areas of native trees and vegetation, that has been predominantly used for broadacre agriculture. Other natural attributes of the precinct include significant stands of mature native trees along Henry Parkes Way, Coopers Road and Keiths Lane. Stands of vegetation are evident on the steeper areas of the precinct where cropping was difficult.

It is important that the design and landscape of the subdivision considers the precinct's rural outlook and setting. The considered location of revegetation and further large format buildings will continue to contribute to the character.

Topography objectives

O1 Be responsive to and integrate with the natural terrain and topography, and natural features such as drainage lines and waterways.

O2 Protect the memory of the precinct's topography, particularly small hills by:

- leaving these spaces in either public open space or publicly accessible areas of sites
- maintaining the land topography by avoiding cutting and filling of land by more than one metre
- cut and fill practices are located away from identified small hills of cultural significance.

O3 Lot regrading shall be undertaken as part of the subdivision.

O4 Ensure adequate provision for drainage in relation to cut and fill practices.

5.1.2 Environment

Environmental values and constraints across the site include vegetation, biodiversity corridors, and cultural heritage, as shown in **Chapter 3 – precinct revegetation strategy**. These values and constraints should be considered and either avoided or appropriately incorporated into the subdivision design

Objectives

O1 Development avoids impacts to Aboriginal cultural heritage and is undertaken in accordance with the precinct's Cultural Heritage Management Plan.

Note: Access to the precinct's Cultural Heritage Management Plan can be obtained from RGDC.

O2 The design and layout of streets, lots, landscaping and infrastructure:

- retains in place and integrates scarred trees, stone quarry, identified artefact sites and other Aboriginal cultural heritage places of importance within areas of environmental significance, landscaped and public areas of sites that are publicly accessible
- considers the **Wiradjuri planning principles** provided in **Section 3.5.1 – Cultural heritage** of the master plan and the elements shown in **Figure 2: Drawing showing places of Aboriginal history and meaning** of the master plan
- incorporates storytelling and memory, through means such as interpretative signage

O3 Accommodate open space and landscapes that support the establishment of vegetated corridors including:

- trails as shown in **Figure 3.2 - Biodiversity and revegetation**
- Open space and landscape principles provided in **Section 3.2.2 – Biodiversity, vegetation and the landscape** of the master plan, including:
  - 'The Quarry to Creek Green + Ochre Grid' corridor of linked spaces
  - 'Green north-south spines' that retain existing bush roads, stock routes and mature vegetation
  - 'A green entry to the Parkes Special Activation Precinct' adjacent the Newell Highway.

O4 Be responsive to areas of high value biodiversity and integrate precinct biodiversity and green corridors, and strategic revegetation sites.

O5 Minimise the need for vegetation clearing.

O6 Increase lot sizes where sites have a significant slope or site constraints.

O7 Provide building envelopes on the subdivision plans that are responsive to the environmental values and constraints on the site.

5.1.3 Environmental hazards

This section applies to land subject to environmental hazards including flooding or bush fire as shown in **Chapter 8 – Mapping** and areas of contaminated land recorded on the Parkes Shire Council Contaminated Lands Register. Note that the locality is also known for naturally occurring asbestos.

The design and construction of a subdivision should recognise, and be designed within, the environmental hazards of the site.

Objectives

01 Avoid increasing the risks associated with natural hazards including bush fire and flooding.

02 Ensure subdivision for commercial or industrial purposes provides suitable building areas located outside of the extent of the 0.2% AEP event, referred to as the Flood Planning Area (FPA) (as shown in Map 8.2 Flood Prone Land). Where subdivision is proposed within the extent of the FPA, a flood impact assessment comparing flood behaviour of the proposed development (including any landform change such as cut to fill earthworks, changes in surface conditions, new drainage structures and proposed buildings), shows that:

- Flood function can be maintained
- There is no impact on adjacent properties
- The finished floor level of any proposed building or operational area can be located above the 0.2% AEP flood level and is not located in a floodway.

03 Subdivision layout does not result in isolation or create evacuation challenges for users when a natural hazard occurs. The issuing authority may require a site-based flood emergency response plan for all development within the land affected by flooding, being that land as shown as the extent of the Probable Maximum Flood, being the extent of the Special Flood Considerations (SFC) area, prepared by a suitably qualified person.

04 Minimise the risk to life, property and the environment in the event of a natural hazard (including bush fire and flood), including the lives of emergency services personnel and make adequate provision for access for emergency personnel, vehicles and equipment.

05 Lot sizes and dimensions can accommodate development and minimise risk to life and property from environmental hazards, including bush fires. Each lot created contains a suitable area for the development, including an appropriate asset protection zone within the property boundary to protect the property from the threat of bush fire.

06 Development on bush fire prone land to which these objectives apply comply with the requirements of:

- Planning for Bush Fire Protection 2019 (or as updated)
- AS 3959:2009 (or as updated) – Construction of Buildings in Bush Fire Prone Areas or the NASH Standard for Steel Framed Construction in Bush fire Prone Areas.

07 Recognise that land not classified as bush fire prone land or a bush fire hazard area may still be subject to the impact from adjacent bush fire prone land, particularly through radiant heat exposure and ember attack.

08 Recognise that land not classified as flood prone, may still be isolated during a flood and access to and from that site might be restricted for periods of time due to roads and other areas in the precinct or the wider locality being inundated.

5.1.4 Design and landscaping

Subdivision design is important for commercial and industrial developments as it can influence what types of developments can be accommodated on site. The orientation of lots can inform the preferred location of future buildings to maximise solar access, optimise access and parking arrangements, facilitate expansion and growth of services and strategically co-locate noise and odour to minimise conflict.

Site landscaping should be informed by the site's natural features and landscape and, where possible, retain and protect existing areas of remnant vegetation. Landscaping should contribute to shade and cooling to combat high temperatures and seek opportunities to improve legibility and wayfinding through streetscape and gateway planting. It should reflect the bioregion and vegetation typologies of the precinct and assist broader efforts to enhance habitat and biodiversity across the precinct in accordance with **Chapter 3 – Precinct revegetation strategy**.

Objectives

O1 Create a range and mix of lot sizes, layouts and dimensions that are suitable for commercial and industrial uses, respond to site constraints and opportunities and avoid or minimise future land use conflicts. Development on land subject to the Parkes Indicative Layout Plan as shown in Map 8.1 is to be generally in accordance with that plan.

O2 Create lots that are regular in shape and are of sufficient size to enable the siting of future buildings and ancillary structures, acceptable vehicle access and on-site parking. Subdivision design should take into account the need for:

- safe ingress and egress for staff, visitors and heavy vehicles that provides adequate separation
- efficient vehicular movement within the new lots for the largest design vehicle anticipated to use the site as well as delivery vehicles, service vehicles and customers vehicles
- accommodate on-site carparking
- storage and bin areas
- landscaped areas
- buffer areas between future industrial activities and adjacent or nearby sensitive land uses
- accommodate building setback requirements.

O3 Use vegetation to provide shade to the northerly and westerly elevations of buildings, outdoor common areas, carparking areas whilst ensuring adequate solar access during winter.

O4 Achieve good public domain outcomes through attractive landscaping consistent with species lists included in **Chapter 3 – Precinct revegetation strategy**.

O5 Ensure landscaping in industrial subdivisions is maintained for a reasonable period of establishment time to improve the function and appearance of the space.

O6 Limit overall impervious areas to a maximum of 60% for commercial lots and 70% for industrial lots (calculations to be inclusive of all impervious areas, including internal roads). Where practical, integrate stormwater management systems within the design of landscaped areas.

O7 Integrated water cycle management and water sensitive urban design principles should be incorporated including vegetated swales, natural drainage corridors, bioretention and/or sand filters, gross pollutant traps and constructed wetlands. Subdivision design should make provision to ensure roof runoff capture and re-use can occur for all sites to reduce the volume of additional runoff generated.

5.1.5 Stormwater and drainage

Commercial and industrial sites have high impervious area ratios which results in greater runoff volumes. Consider existing downstream drainage systems and their capacity to receive the changed runoff volumes and patterns from the site, while maintaining existing flows to support habitats.

Objectives

O1 Stormwater infrastructure includes on-site measures that form part of the precinct stormwater strategy provided in **Chapter 4 – Infrastructure**.

O2 Stormwater drainage systems are to be designed using the Australian Rainfall and Runoff 2019 major and minor event philosophy, where the minor system shall be capable of carrying the controlling flows from frequent runoff events, while the major system shall provide safe, well-defined overland flow paths for rare and extreme storm runoff events. Stormwater volumes and characteristics are to be estimated in accordance with Australian Rainfall and Runoff 2019 by a suitably qualified engineer.

O3 Provide stormwater detention facilities to capture rainwater and surface runoff to ensure post development flows do not exceed pre-development flows from the site, for frequencies up to and including the 1% AEP storm event with climate change.

O4 Provide stormwater drainage within new and existing road reserves to collect and convey the individual discharges from each lot. Inter-lot drainage will also be required to collect drainage from higher lots and avoid uncontrolled discharge onto lower lying properties.

O5 Lots are designed to allow for appropriate stormwater conveyance by a network of underground stormwater pits and pipes to convey up to the 1% AEP event. A minimum grade of 1% on stormwater pipes is required.

O6 Overland flow in excess of this capacity is to be safely conveyed in suitable swale drains or other forms of overland flow conveyance safely for events in excess of the 1% AEP (including) up to and including the 1 % AEP event (with climate change). Overland flow paths shall be mapped using the AIDR (2017) H1-H6 hazard classification system for the 1 in 100 AEP (with climate change) and should not result in hazards than are identified as suitable for areas where pedestrians might be directed, or where vehicles might be located.

O7 Water sensitive urban design measures that also meet integrated water cycle management objectives are incorporated to ensure the stormwater continues to flow to receiving waters in a sustainable fashion. The target is less than a 10% change in the modelled annual runoff from each site and in the aggregate in wet, dry and average rainfall conditions (being 90th percentile, 10th percentile and 50th percentile rainfall years for the nearest relevant rainfall gauge with at least 50 years of rainfall records).

O8 Water sensitive urban design measures that also meet integrated water cycle management objectives are incorporated to ensure water pollution is avoided and contribute to achieving the following precinct-wide pollution load reduction targets:

- Total Suspended Solids (TSS) by 70%
- Total Phosphorus (TP) by 45%
- Total Nitrogen (TN) by 45%
- Gross pollutants by 90%.

O9 Easements to drain stormwater are provided over all pipelines, pits, overland flow paths, channels and water sensitive urban design features (other than natural water courses) where they traverse private property.

Any future development of water quality targets, at a precinct-wide scale, should be set out using the *Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land Use Planning Decisions* (2017) to help guide design.

5.1.6 Universal Design and Accessibility

The application of the 7 Universal Design (UD) principles and Accessibility regulations to the built environment, landscape and operational elements of the precinct, also goes a long way to ensuring that reasonable adjustment requirements of the Disability Discrimination Act (DDA) and the National Construction Code (NCC) are implemented.

More importantly though, the application of UD principles across the following areas, creates a seamless and sustainable community benefit and legacy. Some key principles include:

- Accessible transport and community linkages between Parkes and the precinct
- Transport set downs, stops, parking or stations that allow accessible interfaces for private cars (self-drive and driverless) community vehicles / buses, tourist vehicles, taxi and rideshare, some of which may require electric charging
- Pathways, graded walkways, ramps and lifts that provide accessible linkages for pedestrians, cyclists / electric scooters or families with strollers
- Lighting and wayfinding systems that allow secure, all weather and hours use
- Building locations that take advantage of minimal gradient, multiple accessible entry locations, external and internal parking locations and set downs that allow direct access
- Community hubs that may include amenities such as male / female including ambulant, accessible toilets with baby change tables or showers depending on intended use, all gender toilets for the diverse population, changing places toilet for those with high needs
- Consideration of wellness hubs in key civic locations that may include quiet / sensory rooms, multi faith rooms, parents rooms, first aid rooms or multipurpose rooms located near information centres, libraries or regional council offices or administration areas
- Building design where main entrances are undercover with line of sight to key transport set downs, doors are automated and provide intuitive and accessible movement pathways both horizontally and vertically throughout the building and to its key features for staff, business visitors, community members or the general public
- Inclusion of technology across the infrastructure and operations where information can be provided via a smart device or virtual reality to enhance predictability, safety and coordination of movement through the precinct
- Consideration accessible emergency evacuation refuges, routes or areas for the external or internal area of the precinct

Street art in Parkes

5.1.7 Access

Good subdivision offers connectivity and has a legible hierarchy of roads that are designed for the largest design vehicle anticipated to require access to the subdivision. Roads should offer a choice of routes for pedestrian and vehicles, and integrate to adjoining streets, neighbourhoods and local facilities or shops. Public corridors (including creek lines) can supplement the thoroughfare network in providing movement opportunities, where possible and logical.

Objectives

O1 Local roads should connect to the broader precinct road network. Local roads are designed and constructed in accordance with **Table 4.2 in Chapter 4 – Infrastructure**.

Note: The issuing authority may require a traffic impact assessment prepared by a suitably qualified person which considers impacts of the proposal in terms of the design and location of the road/s, and the likely nature, volume or frequency of traffic generated by the development.

O2 Provide all lots with practical, legal and safe vehicle access and manoeuvring areas for the largest design vehicle anticipated to require access to the individual lots, including emergency service vehicles.

O3 Vehicle access to each lot is gained onto the local road network in accordance with *Part 4 – Intersections and crossings* and *Part 4a – Unsignalised and signalised intersections of the Austroads Guide to Road Design*. Access onto a classified road is only provided were there are no other practical means of access available to the lot(s), and access and intersections comply with TfNSW requirements.

Note: Consultation with the relevant Roads Authority under section 138 of the *Road Act 1993* occurs at the earliest possible time in relation to the proposed vehicle accesses to each lot. Written confirmation is received from TfNSW where access to a classified road is proposed.

O4 Minimise the number of new access points to the public road system by combining entrances where possible.

O5 Heavy vehicle entry and exit movements onto public roadway will be in a forward direction.

O6 Concrete driveways will be constructed within the road reserve. Pipe or box culverts will be installed below driveways that bridge public road table drains and will be designed to convey the 1% AEP storm event.

O7 Local roads should connect to the broader precinct road network and avoid cul-de-sacs and battle-axe shaped lots which do not easily facilitate the movement of large vehicles.

O8 Integrate public transport stops at appropriate locations.

O9 Road reserves, road carriage way and road verges are sized and designed to the relevant road function in accordance with **Chapter 4 – Infrastructure** and "Guide for Traffic Generating Development", Road and Traffic Authority of NSW, October 2002.

O10 Roadside vegetation is provided within road verges in accordance with **Chapter 3 – Precinct revegetation strategy**.

Alternate species for roadside vegetation can be accommodated if it can be demonstrated that alternate species:

- are native to the area
- have similar water consumption and drought tolerance characteristics to the equivalent vegetation type, and
- will not obstruct or impede large vehicle movements or sight lines
- will not damage underground utilities or paving

5.1.8 Infrastructure and services

The infrastructure and services network, including a dedicated utility corridor, forms the basis of infrastructure and services to connect subdivisions.

Objectives

O1 Use of easements to:

- protect and maintain existing services (i.e. electricity, telecommunications and gas)
- ensure protection of new private and public assets (road, drainage, rail, electricity, telecommunications, gas, water, sewer and the like) and connections to services in the local road corridor or the trunk services corridor.

O2 Services easements are to be provided on lots where public infrastructure traverses private land to allow for the connection to the following services:

- water connections
- recycled water connection
- gravity and/or pressure sewer connections
- electrical connections (except where this is provided overhead)
- telecommunications
- provision for medium pressure gas pipe
- provision for future hydrogen
- spare space in the corridor for unknown future pipes/conduits.

Provision for a circular economy easement for intra-lot (within the subdivision) and inter-allotment connections (to all adjacent lots) should also be made.

O3 Services must be easily accessible as required by **Chapter 4 – Infrastructure.**

O4 The developer shall be responsible for providing utilities and services connections to all lots including:

- **water** - In accordance with *Parkes Shire Council Engineering Design Minimum Standards for Subdivision and Development 2021*
- **wastewater** - in accordance with *Parkes Shire Council Engineering Design Minimum Standards for Subdivision and Development 2021*
- **electrical** - in accordance with the *Essential Energy Connecting to the network information pack 2018*
- **street lighting** - in accordance with AS/NZS 1158:2010 (AS/NZS 1158.1.1:2022 for vehicles and AS/NZS 1158.3.1:2020 for pedestrians) Lighting for roads and public spaces and Parkes Shire Council Engineering Design Minimum Standards for Subdivision and Development 2021
- **telecommunications** - in accordance with the *Telstra New Developments Policy 2015*
- **natural gas** (where available) - in accordance with the *Jemena Residential Connections Guide and Gas Connections FAQs (Jemena Commercial Connections)*

  Note: The relevant utility suppliers should be consulted at the earliest possible time in relation to providing utilities and service connections to lots.

  Note: Council should be consulted on connections to utility services including for sewerage, drainage and approval under section 68 of the Local Government Act 1993. The process for seeking approval from the Council should commence at the earliest possible time and should run in parallel with the Activation Precinct Certification process where possible

O5 Common trenching is used for compatible services and infrastructure, generally in accordance with the Parkes Shire Council Typical Service Arrangements.

O6 The location of utilities and services does not adversely impact existing site conditions.

Bridge construction

6

Assessment criteria

Canola fields of Parkes

6

This section documents the criteria used to evaluate development proposals for change of land uses and construction of new buildings and structures.

Under the Precincts-Regional SEPP, an Activation Precinct certificate can only be issued where a development is consistent with the master plan and delivery plan. Section 3 – Controls of the master plan sets out the aims and performance criteria for development within the precinct, to ensure the principles are realised. This delivery plan provides the detailed development controls (referred to as assessment criteria) that will facilitate the delivery of the precinct. The assessment criteria align with the aims and performance criteria provided by the master plan in line with the guiding principles and long-term vision.

The assessment criteria are organised around the following sections:

6.1 General controls	contains the assessment criteria that apply to all development within the precinct, including land uses, setbacks, building design, car parking and access, transport infrastructure and utilities, stormwater, earthworks, landscaping, service and storage areas and signage
6.2 Specific development requirements	contains the assessment criteria for development of solar energy farms, thermal electricity generating work, the intermodal and rail terminal facilities overlay and the drainage investigation area
6.3 Sustainability	contains the assessment criteria related to the requirements of an Eco-Industrial Park
6.4 Environment	contains the assessment criteria for protecting the landscape character and visual amenity, heritage items and conservation areas, biodiversity, vegetation and groundwater
6.5 Environmental hazards	contains the assessment criteria for development on land subject to environmental hazards including flooding, bushfire and contaminated land
6.6 Environmental impact management	contains the assessment criteria for development that may have an environmental impact, be hazardous or offensive, requires an environment protection licence or may emit noise, odour and substances into the air
6.7 Savings provisions	contains the assessment criteria for development or extensions to existing land uses that were existing before the commencement of the master plan.

Performance-based planning approach

This delivery plan adopts a performance-based approach to evaluate development proposals. This provides flexibility for achieving desired outcomes across the precinct and allows for innovative on-site solutions where appropriate. It also considers the differing risk levels for development and provides clarity for proponents and the community regarding the evaluation of alternative solutions.

The assessment criteria comprise performance criteria (column 1) which set the desired outcomes that are being sought and acceptable solutions for achieving the performance criteria which are provided in column A. There may be more than one way of achieving the performance criteria. Where an alternate solution is proposed, column B (referred to as *merit assessment*) provides the merit objectives which must be met:

PC# '**Performance criteria**' provide the overarching performance outcomes that are being sought for a particular parameter i.e. setbacks, building design, landscaping etc.

'**Acceptable solutions**' provide the solutions for achieving the performance criteria.

'**Merit assessment**' provide the flexibility to provide alternate solutions for achieving the performance criteria and set out the objectives which must be considered if proposing an alternate solution.

'**Unacceptable outcomes**' list the outcomes that will not be supported.

The assessment criteria should be considered in the context of the development proposal. Where an alternate solution is proposed or a specific acceptable solution cannot be met, applicants should demonstrate how the proposed development will achieve the objectives provided in the merit assessment column.

Aerial view of Brolgan Road bridge construction

6.1 General controls

The Regional Enterprise Zone provides for a consolidated industrial precinct for a range of agricultural, industrial and employment uses, located to avoid areas of environmental importance and leverage existing and future infrastructure.

This section provides the assessment criteria for planning and designing a site within the Regional Enterprise Zone, including requirements for site layout and built form, car parking and site access, transport and utilities infrastructure, management of on-site stormwater and earthworks, landscaping and signage, certain types of development envisaged for the precinct, and sustainability.

Aerial view of Parkes railway
Courtesy of Pacific National

6.1.1 Land uses

Zones and sub-precincts

The Precincts-Regional SEPP identifies two zones within the Parkes Special Activation Precinct and provides the land use table and objectives for each zone including:

- Regional Enterprise Zone
- SP2 Infrastructure Zone.

Note limited development is permitted in the SP2 Infrastructure Zone as per the Precincts-Regional SEPP.

The Parkes Special Activation Precinct Structure Plan which is provided in the master plan sets out the long-term strategic planning intent for the precinct. The Structure Plan sets out six sub-precincts tailored to the strategic environmental impacts and economic development aspirations around freight, logistics, value adding agribusiness, advanced manufacturing, resources and recycling, including the:

- Regional Enterprise sub-precinct
- Solar sub-precinct
- Resource Recovery and Recycling sub-precinct
- Commercial Gateway sub-precinct
- Intensive Livestock Agriculture sub-precinct
- Mixed Enterprise sub-precinct.

The master plan provides the objectives and compatible land uses for each sub-precinct. Performance criteria A and B in Section 3.1.1 of the master plan requires that an Activation Precinct certificate can only be issued for a development that is consistent with the land use objectives and listed compatible uses for the relevant sub-precinct. Where a land use is not specified as a compatible use, an Activation Precinct certificate can be issued where:

- RGDC is satisfied that the development is appropriate in that zone, considering the objectives for the zone and the compatible land uses listed in the table
- additional studies have been prepared to the satisfaction of RGDC, if required, to support that development is suitable in the sub-precinct.
- if the development is a potentially offensive industry, development must have a 1km buffer area within the development site.

This section sets out the compatible land uses and lot sizes for the sub-precincts identified by the Parkes Special Activation Precinct Structure Plan for the Regional Enterprise sub-precinct, Solar sub-precinct, Resource Recovery and Recycling sub-precinct, Commercial Gateway sub-precinct, Mixed Enterprise sub-precinct and Resource Recovery and Recycling sub-precinct, as shown in **Figure 2**.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Land uses			
The following assessment criteria identifies the compatible land uses for land included in the sub-precincts, as shown in Figure 2.			
PC1 Land uses are consistent with the sub-precinct objectives and compatible land uses.	**A1.1** Land uses within the **Regional Enterprise sub-precinct** are consistent with the objectives of the sub-precinct and compatible land uses as set out in the master plan Note: Objectives of the Regional Enterprise sub-precinct include: • Supports a wide range of compatible land uses and industries such as freight and logistics, advanced manufacturing and agribusiness that align with eco-industrial precinct principles and present circular economy opportunities. • Identifies the area dedicated to businesses who need direct access to rail terminals and intermodal facilities including good access to transport connections and services. Compatible land uses include: Electricity generating works, heavy industrial storage establishment, intensive plant agriculture, industry, rural industry, sewerage system, waste or resource management facility, water supply system, ancillary uses and supporting infrastructure, farm buildings, landscaping material supplies, timber yards, industrial retail outlets, specialised retail premises wholesale supplies, boat building and repair facilities, vehicle body repair workshops, vehicle repair stations, storage premises, depots, warehouse or distribution centres, carparks, freight transport facilities, passenger transport facilities, roads, transport depots, truck depots, research station, recreation areas, environmental protection works, crematoria, flood mitigation works, intermodal terminal, freight terminal	**A1.1** Land uses that are not specifically listed, or identified for another sub-precinct, provided the use: a. is compatible with those envisaged land uses and b. does not conflict with or prevent the achievement of the objectives of the sub-precinct and c. where requested by RGDC or EPA, additional studies have been undertaken that demonstrate the land use as suitable within the sub-precinct, having regard to the achievement of other performance criteria within this delivery plan relating to economic, environmental and amenity impacts and d. does not compromise the achievement of another sub-precinct to which the use is identified as envisaged. Note: The master plan requires that where a land use is not specified as a compatible use additional studies need to be prepared to the satisfaction of RGDC, if required, to support that development is suitable in the sub-precinct.	**U1.1** Land uses contrary to the objectives of the sub-precinct. **U1.2** Land uses that could otherwise be more appropriately established in another sub-precinct and there is sufficient land and infrastructure capacity in place for this to occur. **U1.3** Sensitive land uses (i.e., hotel or motel accommodation) that would compromise existing or future envisaged land uses within a sub-precinct or adjacent sub-precinct. **U1.4** Commercial and retail uses of a scale and nature that would be better located within the Parkes township or would effectively compete with the Parkes town centre.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC1 Continued	**A1.2** Land uses within the **Solar sub-precinct** are consistent with the objectives of the sub-precinct and compatible land uses as set out in the master plan. Note: Objectives of the Solar sub-precinct include: • Attracts and encourages development for solar energy production. • Ensures services and infrastructure required to support these uses can be delivered in an orderly way. • Ensure vegetation and places of aboriginal cultural heritage value within this sub-precinct are protected. Compatible land uses include: Electricity generating works, sewerage system, water supply system, ancillary uses and supporting, infrastructure, industry, rural industry, farm buildings, wholesale supplies, boat building and repair facilities, vehicle body repair workshops, vehicle repair stations, heavy industrial storage establishments, storage premises, depots, warehouse or distribution centres, carparks, freight transport facilities, roads, transport depots, truck depots, research station, recreation areas, environmental protection works, crematoria, flood mitigation works.		

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC1 Continued	**A1.3** Land uses within the **Resource Recovery and Recycling sub-precinct** are consistent with the objectives of the sub-precinct and compatible land uses as set out in the master plan. Note: Objectives of the Resource Recovery and Recycling sub-precinct include: • Provides dedicated areas for essential waste and resource recovery that allows for a variety of new recycling and reprocessing industries. • Dedicates an area with direct rail access that enables an energy from waste facility, along with recycling and repurposing uses, that champions circular economy principles. This will form a key component of a true eco-industrial precinct. • Minimises any impacts on other areas of the precinct. • To ensure the intended uses have good road access. • Provides an area that is appropriately located to reduce noise, air quality, odour and dust generating activities, and that can operate 24/7. • Provides an area that is also appropriately located to offer high volume electricity and heat export, and carbon sequestration to other businesses within the Precinct. • Identifies the former Westlime Quarry site as a future specialised construction and raw material node. • Facilitates the continued operation of the Parkes Shire Council landfill site. There may be the opportunity over time for this site to transition to an alternative use. Compatible land uses include: Electricity generating works, heavy industrial storage establishment, sewerage system, waste or resource management facility, water supply system, ancillary uses and supporting infrastructure, agriculture, rural industry, industry, farm buildings, rural supplies, timber yards, industrial retail outlets, specialised retail outlets, wholesale supplies, industry, boat building and repair facilities, vehicle body repair workshops, vehicle repair stations, heavy industrial storage establishments, storage premises, depots, warehouse or distribution centre, heliport, helipad, car parks, freight transport facilities, passenger transport facilities, roads, transport depots, truck depots, wharf or boating facilities, research stations, signage, crematoria, flood mitigation works, recreation areas.		

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC1 Continued	**A1.4** Land uses within the **Commercial Gateway sub-precinct** are consistent with the objectives of the sub-precinct and compatible land uses as set out in the master plan. Note: Objectives of the Commercial Gateway sub-precinct include: • Provides a transition between the heavier industrial uses in other areas of the Precinct and the existing Parkes township. • Creates the appropriate environment for businesses with more of a public interface. • Provides an attractive and welcoming entry to the Precinct. • Identifies a gateway area to the Precinct off the Newell Highway that allows businesses to be located prominently. • Services local, Precinct and travelling populations with provision for a highway service centre, a truck depot and truck stop, and a motel or hotel. • Provides an entrance for development that requires vehicle visibility and promotion, within a high amenity sub-precinct with good public realm connection, landscaping and cultural heritage features. Compatible land uses include: signage, sewerage system, water supply system, ancillary uses and supporting infrastructure specialist retail, industrial retail outlets, storage establishments, light industry, warehouses, visitor centre/sales offices, food and drink premises, neighbourhood shops and kiosks, signage and wayfinding, highway service centres, driver rest facilities and vehicle servicing. **A1.5** Land uses within the **Intensive Livestock Agriculture sub-precinct** are consistent with the objectives of the sub-precinct and compatible land uses as set out in the master plan. Note: Objectives of the Intensive Livestock Agriculture sub-precinct include: • Provides a dedicated area for intensive livestock activities, such as a large abattoir and other livestock value-adding and processing businesses, where impacts can be managed. • To separate the above uses from other sensitive uses in the area. • Provides stakeholders certainty about the location of these industries. • Identifies an area with good links to other sub-precincts and that has access to freight connections, including direct rail frontage, and utilities and services. Compatible land uses include: Agriculture, electricity generating works, heavy industrial storage establishment, rural industry, sewerage system, waste or resource management facility, water supply system, ancillary uses and supporting infrastructure, farm buildings, rural supplies, timber yards, wholesale supplies, industry, boat building and repair facilities, vehicle body repair workshops, vehicle repair stations, storage premises, depots, warehouse or distribution centre, car parks, freight transport facilities, roads, transport depots, truck depots, research stations, crematoria, flood mitigation works, recreation areas.		

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC1 Continued	**A1.6** Land uses within the **Mixed Enterprise sub-precinct** are consistent with the objectives of the sub-precinct and compatible land uses as set out in the master plan. Note: Objectives of the Mixed Enterprise sub-precinct include: • Provides a wide range of employment uses, such as agribusiness, manufacturing, recycling businesses, and general industries and enterprise. • Identifies an area adjacent to a range of neighbouring sub-precincts that provides opportunities for circular economy linkages between businesses. • Provides opportunities for businesses who require direct access to rail infrastructure. • Provides opportunities for development that requires moderate to larger lots and have moderate impacts. • Ensure development protects and enhances environmentally sensitive areas within the sub-precinct. Compatible land uses include: Electricity generating works, heavy industrial storage establishment, industry, rural industry, signage, sewerage system, waste or resource management facility, water supply system, ancillary uses and supporting infrastructure, intensive plant agriculture, farm buildings, wholesale supplies, agricultural produce industries, boat building and repair facilities, vehicle body repair workshops, vehicle repair stations, storage premises, depots, warehouse or distribution centres, car parks, freight transport facilities, roads, transport depots, truck depots, wharf or boating facilities, research stations, signage, recreation areas, environmental protection works, flood mitigation works, intermodal terminal, freight terminal.		
PC2 Development on land subject to the Parkes Indicative Layout Plan is generally in accordance with that plan.	**A2.1** Development is generally in accordance with the Precinct Indicative Layout Plan as shown in Map 8.1.	**B2.1** Development demonstrates that it accommodates a future use that is consistent with the objectives of the sub-precinct. **B2.2** Development does not compromise the delivery of desired land uses or lot layouts on surrounding land.	Not applicable.

6.1.2 Setbacks

Effective setbacks from the street, side and rear boundaries (as required) and between buildings on a site are essential to allow for space between buildings for access, transitions in landforms, reduction in building massing and soft landscaped elements (drainage, biodiversity, vegetation protection). Careful spacing of buildings will also aid in establishing a precinct character, site operations and functionality and fire safety.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Setbacks			
PC3 Development contributes to good public domain outcomes by providing suitable setbacks from the street and adjoining lots.	**A3.1** Buildings are set back from site boundaries as follows: a. a minimum 15 metre setback applies to the Newell Highway, Brolgan Road and Condobolin Road b. a minimum 10 metre setback applies to all other roads in the precinct c. a minimum 10 metre setback applies to side and rear boundaries adjoining rural land and for lots greater than one hectare and d. a minimum 50 metre setback applies to development adjacent to the rocky outcrops.	**B3.1** Reduced setbacks may be considered where good public domain outcomes are achieved in accordance with Chapter 2 – Precinct design principles.	**U3.1** Development hard up against regional stormwater basin or compromising open space function, flood conveyance, channel bank stability or future ability to provide access to and/or along the corridors.

6.1.3 Building design

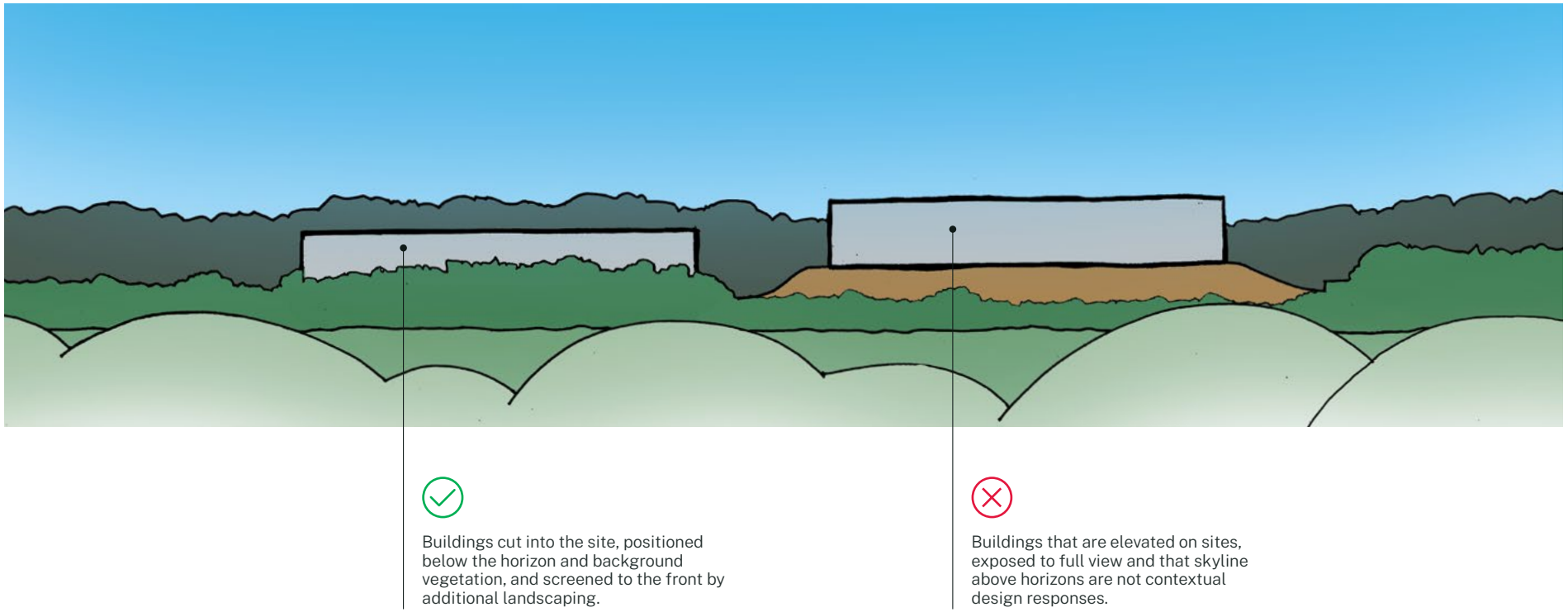
Development should be aesthetically pleasing, responsive to its context and embody the guiding principles and vision for the precinct.

Creating bold yet integrated buildings is a core part of the vision for the precinct. Buildings designed for 'form to follow function' will define the precinct, represent its aspirations and set an international benchmark in design and delivery.

It is also important that building design and form responds to, and assists in blending the precinct into the landscape, minimising visual impacts where sites are more highly visible from public spaces.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Building height			
PC4 Building heights: a. respond to the natural topography of the site; and b. minimise any impacts on surrounding areas.	**A4.1** Buildings respond to the natural topography of the site and provide a consistency of building heights while allowing for a variety of building forms that minimise any impacts on surrounding areas. **A4.2** High elements in buildings are provided at key sites to denote points of entry or prominent locations. **A4.3** Rooftop plant and equipment is integrated into the overall roof form or screened from public view. **A4.4** Development adjacent to the rocky outcrops is designed and sited to: a. have lower scale buildings no taller than seven metres in height b. locate buildings to maintain key vistas from the rocky outcrops and c. have buildings cut into site rather than filled.	**B4.1** Development minimises its visual impact on the surrounding areas. **B4.2** Development adjacent to the rocky outcrops: a. maintains visibility beyond the site of the development to the horizon when viewed from the rocky outcrops without any buildings or structures on the site skylining above the horizon and b. maintaining visibility to the rocky outcrops when viewed from public roads and open spaces in proximity to the development site and c. ensuring that vegetation and landscaping frames the viewscape instead of built form.	**U4.1** Development that impinges on views to and from the rocky outcrops.

Figure 6.1 Diagram illustrating performance criteria compliant height and siting that responds to the surrounding landscape.



Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Environmental design			
PC5 Buildings: a. are oriented to accommodate energy efficient development to take advantage of solar orientation in gaining thermal efficiencies b. incorporate natural ventilation as the primary measure for cooling buildings and reducing thermal loads and c. maximise natural daylight.	**A5.1** Buildings are designed to maximise the north and south exposure. **A5.2** Buildings are designed to minimise east and west facing orientation or provide adequate shading. **A5.3** Glazing is provided to northern sides to benefit from winter solar access, particularly for offices and other parts of buildings where people work and inhabit. **A5.4** Landscaping provides valuable shade throughout summer and allows for the use of the winter sun. **A5.5** Shade structures are integrated into the façade such as awnings, screens, light shelves, canopies and louvres to: a. minimise penetration of sunlight into any part of a building between 10am and 3pm between 21st November – 21st March b. provide shade and rain protection in areas where people will congregate outdoors. **A5.6** Buildings are orientated to maximise natural cross flow ventilation and incorporate adequate openings.	**B5.1** Building design considers natural climate control design elements to improve building energy efficiencies, natural ventilation and maximise natural daylight in accordance with **Chapter 2 – Precinct design principles.**	Not applicable.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC5 Continued	**A5.7** Natural ventilation is used to cool buildings by incorporating: a. windows or doors to allow for cross ventilation b. roof ventilation measures to allow for heat to rise and disperse and/or c. indirect evaporative cooling and/or economy cycle ventilation where natural ventilation is prohibited due to process / manufacturing requirements. **A5.8** Buildings: a. incorporate thermal insulation (including buildings that are not air conditioned) and b. incorporate light coloured external finishes with a roof solar reflective index greater than 64 to minimise the heat island effect and/or c. may incorporate external cladding and insulation to concrete pre-cast or tilt-up panels to minimise heat gain, isolate thermal mass internally and minimise heat radiation to the interior. **A5.9** Natural daylight is maximised to workspaces and areas people inhabit by incorporating skylights, courtyards, light wells or roof lighting strips to all warehouse and process/ manufacturing areas.		

Detailing

Materials, architectural features and signage elements can aid in reducing expanses of uninterrupted walling, or large expanses of singular materials and colours to facades.

Modulation

Articulation and material change visually breaks up large structures.

Shadowing of screening and modulation

Louvres can act as both shading devices, as well as design features that add interest and aid in modulating facades.

Sunshading

Cantilevered walkway (sunshading) providing shelterd access to buildings

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Building size, footprint and layout			
PC6 Building size, footprint and layout is functional and responds to the site characteristics and aims to reduce overall bulk and scale.	**A6.1** Buildings consist of a simple shape in plan, reflective of intended function without ornamentation or irregular shapes. **A6.2** Buildings: a. provide façade variation using different materials b. are broken into smaller elements c. use modulation and/or d. use a variation in roof forms. **A6.3** Smaller or lower building elements such as offices and showrooms are positioned to the front of the site to reduce the visual bulk of larger building elements. **A6.4** Buildings are designed to be scalable, adaptable and expand over time. **A6.5** Building layout and design enhances crime prevention through passive and active surveillance achieved through: a. passive surveillance of street and public areas b. visibility of parking areas from adjacent properties and the public street c. building design which limits the ability for unauthorized entry d. clear demarcation between the public and private realm e. eliminating public areas with minimal or no surveillance and f. building design and site layout which avoids entrapment areas.	**B6.1** Buildings are designed to minimise intrusion into the landscape through careful building placement, design and landscaping, in accordance with **Chapter 2 – Precinct design principles.**	Not applicable.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Facades and main entrance			
PC7 Buildings: a. address the street with clear views to the main entrance; b. contribute to the precinct's character through built form; and c. express the intended function of the development.	**A7.1** The primary street frontage incorporates: the main building entry a. simple and bold elements to create visual interest and an easy to see entrance for all users b. a comfortable pedestrian environment through maintaining a human scale to building forms and through the use of canopies c. direct access from on-site car parking for visitors, workers and customers d. direct access to end-of-trip facilities including secure bike storage and amenities and e. business signage and wayfinding signage into the main building entry. **A7.2** The main building entry is designed as a focus point and includes: a. glazing to at least 50 per cent of the main office building entry b. use of glass, screen printed, sandblasted or cast panels, colour or super graphic backed glass or high performance 'low-e' glass and/or c. solar shading devices such as louvres, mesh screens, awnings, timber screens and devices for climbing plants. **A7.3** Glazing is shaded by awnings or building elements to avoid reflection.	**B7.1** Facades along the primary street frontage: a. express the intended function of the building and its component uses b. present a resolved form and design and represent the uses in each part of the building c. form a coherent whole as part of a complex of buildings d. include identifiable entrances that are scaled appropriately e. include external shading and passive design features with a distinct function integrated within the building façade vernacular f. provide interest to the building design and contribute to an attractive precinct and g. contribute to breaking down the scale and massing of building forms when viewed from streets and other public areas.	Not applicable.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC7 Continued	**A7.4** Long expanses of uninterrupted walling is avoided by using a combination of the following: a. articulating the façade b. regular openings (doors or windows) c. integrating a variety of materials, textures and finishes (at least three) along the length of the façade or d. including an awning or canopy along the whole or substantive part of the façade to provide depth and shadowing. **A7.5** Colour palettes involve a range of subtle and natural colour tones that aid in buildings blending into the landscape, with: a. highlight colours used in strategic locations; and b. a 70/20/10 application to buildings including: • 70 per cent of the building is in tonal and recessive colours to assist large buildings to blend into the broader landscape. This would apply to most areas of large industrial buildings, stores, etc. Appropriate colours include Colorbond Woodland Grey, Bushland, Jasper, Ironstone, Blueridge, Night Sky, Deep Ocean (or similar). • 20 per cent of the building is in a colour used to highlight and express architectural features building entrances or principal office areas etc. Allowable colours include Colorbond colours above as well as white, black, darker greys or tonal variations to the colours stated above. • 10 per cent of the building is in bolder colours including corporate colours.		

Facade Treatments

Building facade is broken up into multiple appealing elements to break down the scale and bulk of building frontage. Complementary colours allow a visual flow and cohesive appearance.

Active Frontages

Main building entry includes glazed elements to provide opportunities for passive surveillance to communal areas and public spaces

Shadowing of screening and modulation

Louvres can act as both shading devices, as well as design features that add interest and aid in modulating facades allow a visual flow and cohesive appearance.

6.1.4 Car parking and access

Creating identifiable and clear access to each development via a primary vehicle access allows for legible development. Any business branding or signage should be integrated into the primary vehicle access point to support wayfinding for visitors and workers in the precinct.

Separation of vehicle access points is encouraged to ensure a clear distinction between heavy vehicle access to the site, as well as staff and visitor access to primary car parking and administration areas. This will minimise vehicle and pedestrian conflicts and increase user safety.

Additional vehicle access may be permitted if it avoids any safety issues from both the public right of way and internal to the site, and aids in separating heavy vehicle / servicing traffic from car, cyclist and pedestrian movements.

Appropriate car parking is required for all private developments on site to service their anticipated demand.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Car parking and access			
Note: The issuing authority may require a traffic and parking study prepared by a suitably qualified person.			
PC8 Ensure the safe and efficient movement of vehicles entering and exiting the development without adversely affecting the existing and future service and safety levels of the road.	**A8.1** Provide suitable staff, visitor and service access/es to the site. **A8.2** Ensure vehicular access/es have a suitable separation distance to all other access drives (including those on adjacent properties) and do not adversely impact on the safety and efficiency of the surrounding road network. **A8.3** Heavy vehicle access separated from general traffic access and circulation roads. **A8.4** Ensure the primary vehicle access provides access to the main visitor car park and the main building/s. **A8.5** Design for the maximum design vehicle expected to access the site. **A8.6** Design all vehicle accesses in accordance with the relevant Council standards and guidelines and Australian Standards 2890.1:2004 and 2890.2:2018. **A8.7** All vehicles must enter and exit the development site in a forward direction. Note: The Roads Authority should be consulted on access and egress requirements and approval under section 138 of the Roads Act 1993. The process for seeking approval from the Roads Authority should commence at the earliest possible time and should run in parallel with the Activation Precinct Certification Process where possible.	Not applicable.	Not applicable.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC9 Vehicular access is compatible with the surrounding road network.	**A9.1** Vehicular access to the land is provided by a road other than a Classified Road. Note: The Roads Authority should be consulted on access and egress requirements and approval under section 138 of the Roads Act 1993. The process for seeking approval from the Roads Authority should commence at the earliest possible time and run in parallel with the Activation Precinct Certification Process.	**B9.1** Vehicular access is designed to ensure that development does not compromise the effective, and ongoing operation and function of any adjoining Classified Roads. **B9.2** Development is designed to consolidate the access of multiple tenancies or lots to reduce the number of accesses to any Classified Road. Note: Where access is proposed from a classified road it is recommended that in principal support for the development be obtained from TfNSW prior to the lodgement of an application for an Activation Precinct certificate. Issue of an Activation Precinct certificate does not guarantee approval under section 138 of the Roads Act 1993 for any proposed vehicular access to a classified road.	**U9.1** Vehicular access designed such that the safety, efficiency and ongoing operation of the Classified Road is adversely affected. **U9.2** Multiple, single service access drives to a classified road. **U9.3** Access from a classified road where suitable access is available from a local or unclassified road.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC10 Adequate car parking is provided on site that is safe and conveniently integrated within the site.	**A10.1** Visitor car parks for light vehicles are located next to the main building entry. **A10.2** Movement of pedestrians throughout the light vehicle car park is clearly delineated and visible for all users of the car park to minimise conflict with vehicles. **A10.3** Light vehicle parking is provided at a rate applicable to the proposed use or uses on the land, as contained within the RTA Guide to Traffic Generating Developments, 2002. **A10.4** 5% of the light vehicle parking spaces are designed, constructed and wired to be 'Electric Vehicle ready' ' level 2 car charger in convenient and visible locations. **A10.5** All light vehicle parking, access and manoeuvring areas, and internal roadways are designed in accordance with Australian Standard 2890.1:2004 and Australian Standard 1428.1:2021. **A10.6** Car parking spaces for people with a disability are provided in accordance with the Access to Premises Standards, the Building Code of Australia and Australian Standard 2890.6:2009. **A10.7** Light vehicle parking is constructed of asphalt or concrete with parking bays and circulation aisles clearly delineated. **A10.8** Design of the car park ensures that passive surveillance is possible and, where appropriate, incorporate active measures such as cameras and security patrols. **A10.9** Where car/light vehicle parking is proposed in a H2 and above flood hazard area, provision of bollards to prevent vehicles floating off-site in a flood, up to the Probable Maximum Flood.	**B10.1** Light vehicle/car parks are designed: a. having regard to the activities proposed on the land and the intensity of the use; b. in accordance with the Australian Standards for efficient and safe vehicle circulation and parking; c. to provide adequate space for parking and manoeuvring of vehicles (including bicycles); d. to reduce pedestrian and vehicle conflicts; e. to be safe and conveniently integrated within the site; and f. to minimise the visual impact of on-site parking through landscaping. **B10.2** A reduced rate of parking (including a reduced rate of electric vehicle parking) may be appropriate if it can be demonstrated that: a. the development has operational management or specific activities that warrant a reduced demand; or b. the development has formal access to car parking in other locations.	**U10.1** Development that does not provide adequate parking. **U10.2** Large, uninterrupted areas of car parking visible from streets without any landscaping.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC10 Continued		**B10.3** Where parking rates are not defined by the RTA Guide to Traffic Generating Developments, 2002 the proposed parking rate shall be supported by parking surveys of similar land uses or if a unique development based on a first principles approach. Note: The issuing authority may require a traffic and parking study to be prepared by a suitably qualified person to demonstrate the reduced rate of parking is appropriate. **B10.4** Large expanses of car parking can be considered where it can be demonstrated that the visual impact is reduced through: a. landscaping beds at least 5 metres in width to the edges of the site which screen large portions of the car park from views from roads and public spaces and b. regular landscaped areas and tree plantings are included within the design to break-up the expanse of paved area, provide shade and reduce the heat island effect of the space.	

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC11 Development provides adequate space for parking and manoeuvring of service and heavy vehicles.	**A11.1** Heavy vehicle and trailer parking is provided separately to light vehicle/car parking. **A11.2** On-site loading facilities are provided to accommodate the anticipated heavy vehicle demand for the site. **A11.3** Loading dock circulation areas for service and heavy vehicles are: a. integrated into the design of developments b. separated from staff/visitor car parking areas and waste storage and collection areas c. located away from the circulation path of other vehicles d. located at the rear or sides of the buildings behind the front building line and e. screened from the street. **A11.4** Access, parking, manoeuvring and loading facilities for industrial development are designed in accordance with Australian Standard 2890.2 -2018 and Performance Based Standards 'An introduction for road managers' (National Heavy Vehicle Register – May 2019). **A11.5** Adequate space is provided on site for reversing of heavy vehicles in designated loading bays and loading docks.	**B11.1** The design of parking and manoeuvring areas for service and heavy vehicles accessing the site meets the day to day needs of the business and does not create any safety risks or impacts on the public road network. Note: The issuing authority may require a traffic and parking study to be prepared by a suitably qualified person to demonstrate the design and space for parking and manoeuvring of service and heavy vehicles is adequate.	**U11.1** Loading, unloading or servicing within the public right of way.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC12 Safe and convenient pedestrian paths and cycle ways are provided.	**A12.1** End of journey facilities are provided on site for staff, including: a. secure, highly visible and conveniently located bike racks b. shower facilities; and c. lockers. **A12.2** Pedestrian and cyclist access is: a. provided from the street frontage to the main building entry b. a minimum 1.5 metres wide. **A12.3** Development is to ensure that continuous shared paths, designed for comfortable use by pedestrians and cyclists, is maintained along: a. primary streets b. the Green north-south spines identified within the master plan c. Quarry to Creek Green Grid. **A12.4** Shared paths have lighting to allow for 24/7 usage. **A12.5** Pedestrian and cyclist access is designed for universal access and to the relevant Australian Standards 1428.1-2009 and Disability Discrimination Act 1992 Standards and Guidelines relating to site and building access for people with disabilities and mobility difficulties. **A12.6** All cycle routes and facilities are consistent with the relevant requirements of “Austroads Cycling Aspects of Austroads Guides” and Roads and Maritime Services’ “Bicycle Guidelines” including line-marking, signage and logos and Parkes Shire Council policies regarding bicycle access.	**B12.1** The design of the site ensures that pedestrian and cyclist needs are adequately and safely accommodated.	Not applicable.

6.1.5 Transport infrastructure and utilities

The planning and delivery of transport infrastructure and utilities across the precinct needs to be flexible and responsive, depending on the timing of growth and land take up within stages, in accordance with Chapter 4 - Infrastructure.

Road infrastructure in the precinct should cater for the largest design vehicle anticipated to access the precinct and should ensure the safe and efficient movement of vehicles throughout the precinct.

All new development within the precinct will be required to connect to key infrastructure including water, wastewater, electrical, telecommunications and other utilities and services as necessary. Where development is located near existing transport infrastructure or utilities, appropriate measures should be incorporated to protect the existing transport infrastructure or utilities.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Streets and movement			
PC13 Development ensures a safe and efficient road network is provided for all users within the precinct.	**A13.1** A servicing road network is in place to the standards set out in Chapter 4 and intersection capacities can accommodate the anticipated additional traffic volumes of the development. **A13.2** Development provides for public transport where required in accordance with **Section 4.2.11 – Active and public transport.**	**B13.1** Provision of new public roads or upgrades to a road or intersection, for development in advance of public road provision to safely cater for the anticipated traffic flows or specific vehicle types servicing the development and demonstrate that: a. road and lane widths allow for two-way movement and turning movements of the largest design vehicle b. provide adequate turning paths for the largest design vehicle at intersections and for property access c. road widths are set to minimise kerbside restrictions and regulatory signage d. sufficient width is provided for drainage functions and drainage facilities are provided	**U13.1** Roads are not suitable to service the development in terms of traffic volumes or vehicle types. **U13.2** Roads are designed and/or constructed in a manner that is not suitable for asset transfer to the relevant public authority. **U13.3** Roads that do not include provision for planned and anticipated utilities. **U13.4** Roads that do not include provision for pedestrians, cyclists and public transport.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC13 Continued		e. either sufficient space for shared infrastructure, or provision of infrastructure within the road reserve is not required due to its location elsewhere or within an easement on adjacent private property f. life cycle costs for construction and maintenance are minimised g. provide adequate on-street parking, where required h. provide a shared use path i. provide street tree planting in accordance with **Section 3.4 – Species list** and j. provide lighting in accordance with relevant Australian Standards. B13.2 Development in advance of public road provision demonstrate the advanced roads (and utilities) will integrate with the staged public road provision. Note: A traffic impact assessment prepared by a suitably qualified person is required and considers the principles in **Chapter 4 – Infrastructure** and the suitably of the proposal in terms of the design and location of the road, and the likely nature, volume or frequency of traffic generated by the development.	

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Transport asset			
PC14 Development on land that interfaces with an existing or future transport asset is designed to protect the safety, function and performance of the transport asset.	**A14.1** Development on land within or adjoining a transport asset is undertaken in accordance with a. the *Guidelines for external and developer-led works affecting Transport Assets* and b. Part 3, Division 2 of the Precincts-Regional SEPP. Note: The Precincts-Regional SEPP prevents an Activation Precinct certificate from being issued unless the issuing authority has consulted with the Rail Authority for the rail corridor for certain development in rail corridors. The Roads Authority and/or the Rail Authority should be consulted at the earliest possible time during the Activation Precinct Certification Process and relevant approvals obtained where required.	Not applicable.	**U14.1** Development impacts the safety, function or performance of transport assets.
Utilities and services			
PC15 Adequate services are available to facilitate development.	**A15.1** Development sequencing and staging is consistent with the infrastructure provision and capacity for the precinct in accordance with **Chapter 4 – Infrastructure**.	**B15.1** A reduced design standard or design approach may be acceptable if the infrastructure is intended to be temporary whilst other development is established or the permanent infrastructure is being built, provided the design does not present a risk to life or property.	**U15.1** Development that compromises the planned and orderly delivery of infrastructure throughout the precinct, either due to location, sequencing, or demand generation.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC15 Continued	**A15.2** Development makes provision for and connects to the key infrastructure in accordance with **Chapter 4 – Infrastructure** and Parkes Shire Council's relevant guidelines and policies, including as required: a. electricity b. water c. wastewater d. electrical e. telecommunications and f. other utilities and services as required such as gas, hydrogen reticulation (including future hydrogen), recycled water etc. Note: The relevant utility suppliers should be consulted at the earliest possible time. The following suppliers service the Parkes precinct: • electricity supply – Essential Energy • gas supply – Jemena • water supply – Parkes Shire Council • wastewater – Parkes Shire Council • recycled water – Parkes Shire Council • telecommunications – NBN Co. Note: Council should be consulted on connections to utility services including for sewerage, drainage and approval under section 68 of the Local Government Act 1993. The process for seeking approval from the Council should commence at the earliest possible time and can run in parallel with the Activation Precinct Certification Process where possible. Note: Information will be required on the proposed sewer outflow requirements including general sewer and trade waste. For trade waste, nominate the expected material/ chemical composition. Depending on the trade waste, a separate approval may be required from Council or the Department of Planning and Environment.	**B15.2** Development may occur in advance of infrastructure provision being in place, provided it can demonstrate that: a. capacity and loads for all utilities and services is known for future connection to infrastructure and b. the development is a catalyst project that cannot be accommodated within existing land areas currently able to be serviced by existing infrastructure or c. the applicant contributes to the provision of infrastructure, at a rate commensurate to the bringing forward of such infrastructure. **B15.3** Alternative locations for key infrastructure are identified as a result of further investigations and feasibility assessment.	

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC16 Development protects existing and proposed utilities and services corridors.	**A16.1** Development is appropriately designed, constructed, operated and maintained to protect existing and proposed utility and services corridors in accordance with: a. **Chapter 4 – Infrastructure** b. Part 3, Division 2 of the Precincts-Regional SEPP and c. relevant requirements for development adjacent to or likely to affect utility and services corridors within the Transport and Infrastructure SEPP.	Not applicable.	**U16.1** Development that impacts on existing and proposed utilities and services corridors.
PC17 Development does not compromise the safe operation and maintenance of the APA high-pressure gas pipeline, located on the eastern side of the Precinct.	**A17.1** A safety management study is required for any development within the pipeline Measurement Length in accordance with Australian Standards 2885 for Pipelines – Gas and Liquid Petroleum. The study must demonstrate that the proposed development does not create an unacceptable risk to life or property and does not compromise the safe operation of the gas pipeline. Note: The Measurement Length is 463 metres measured radially either side of the pipe. **A17.2** The following developments require the prior approval of the relevant pipeline operator to be located within the pipeline Measurement Length: a. educational establishment b. highway service centre c. service station d. shop e. neighbourhood shop.	Not applicable.	Not applicable.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC17 Continued	**A17.3** Development is not located on or in the pipeline easement without prior written confirmation from the relevant pipeline operator. **A17.4** Any new road / service crossings for a development should be consolidated and perpendicular to the pipeline. **A17.5** Where linear open space is impractical for industrial or commercial developments, the pipeline should be located within the front setback. **A17.6** Development does not create additional lots (less than 2ha) over the pipeline easement. All lots that include the pipeline easement should ensure the building envelope is a sufficient size to accommodate the likely buildings to be constructed on the lot. **A17.7** Development does not involve civil works within 20 metres of the pipeline or 20 metres of the pipeline easement boundaries for a high pressure gas pipeline, without prior written confirmation from the relevant pipeline operator. **A17.8** Landscape plans depicting any planned landscaping within 3 metres of the pipeline must be submitted for approval by the pipeline operator. **A17.9** The design of any infrastructure services shall minimise the encroachment on the gas pipeline easement. **A17.10** Buildings, structures, roadway, pavement, pipeline, cable, fence, on-site wastewater treatment (or irrigation area), or any other improvement on or under the land within the gas transmission pipeline easement must not be constructed without prior consent from the pipeline operator.		

6.1.6 Stormwater

Stormwater infrastructure should integrate with the broader stormwater and flood management strategy. Stormwater runoff should also be retained on site, treated where necessary with discharge not to exceed pre-development flows or concentrations.

Best practice water cycle management initiatives are encouraged to reduce onsite potable water usage (including capture and re-use of roof runoff as a relatively clean source of water).

Water sensitive urban design (WSUD) techniques are to be used to reduce stormwater runoff, such that precinct stormwater system connections are limited to the design capacity of the site.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Stormwater			
PC18 Stormwater generated on-site is appropriately managed to ensure minimal nuisance, danger and damage to people, property and the environment.	**A18.1** Sites include 30% pervious surfaces to control runoff generation and capture rainwater and surface runoff and maintain pre-development flow rates for all events up to and including the 1%AEP. **A18.2** On-site stormwater management infrastructure is designed, constructed and operated: a. to not impede or necessitate alterations to the precinct-wide stormwater infrastructure; and b. to not impact on flood risk management requirements; and c. in accordance with Parkes Shire Council Stormwater Drainage Design Guidelines and Australian Standard for Plumbing and Drainage: Part 3 Stormwater Drainage AS/NZ3500.3.2021; and d. to ensure that the system capacity is in accordance with Australian Rainfall and Runoff (Ball et al, 2019). Note: A site-based stormwater management plan may be required.	**B18.1** When sites include less than 30 per cent pervious surfaces, on-site stormwater retention and detention infrastructure is provided to capture rainwater and surface runoff and maintain pre-flow rates for all events up to, and including, the 1% AEP at a capacity nominated by a Stormwater Management Plan prepared by a suitably qualified Chartered Professional Engineer of Engineers Australia.	**U18.1** Suitable onsite stormwater detention infrastructure is not provided. **U18.2** Onsite stormwater detention infrastructure impacts precinct-wide stormwater infrastructure or flood risk management requirements. **U18.3** The subdivision and development of land does not appropriately consider the spatial requirements required for the management of stormwater within the subject property and for the immediate properties surrounding.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC19 Development integrates best-practice water cycle management initiatives with both quantity and quality aspects for water management.	**A19.1** Development provides the following onsite rainwater capture, storage facilities and re-use of water in irrigation, industrial processes, toilet flushing, evaporative cooling or for other non-drinking purposes: a. for development with a building footprint less than 3,000 square metres a rainwater tank with a minimum of 10,000 litres or b. for development with a building footprint greater than 3,000 square metres onsite rainwater storage tanks equivalent to a minimum of 3 litres per square metre of building footprint. Note: Information is required to be provided on the proposed potable water and non-potable water demands and percentage to be delivered via onsite water systems for the proposed development.	**B19.1** Development demonstrates equivalent or better alternatives for integrating best-practice water cycle management initiatives in order to reduce potable water use. Note: This is defined by less than a 10% change in the modelled annual runoff from each site and in the aggregate in wet, dry and average rainfall conditions (being 90th percentile, 10th percentile and 50th percentile rainfall years for the nearest relevant rainfall gauge with at least 50 years of rainfall records). **B19.2** Development provides the following onsite rainwater capture, storage facilities and re-use of water in irrigation, industrial processes, toilet flushing, evaporative cooling or for other non-drinking purposes is provided at a rate of 30kL per hectare of building footprint.	**U19.1** Development does not seek to reduce potable water use. **U19.2** Development results in increased volumes of discharge to the receiving waters of Goobang Creek and its tributaries.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC20 Protect and maintain: a. water quality and waterway health through the design and management of the stormwater and wastewater management systems; b. the ecological condition of aquatic systems (including but not limited to wetlands and riparian lands) over time; and c. native vegetation to promote aquatic ecosystem functioning.	**A20.1** Development incorporates WSUD measures through the design of stormwater drainage, onsite detention and landscaping. **A20.2** Site-based stormwater quality control measures: a. ensure water pollution is avoided and b. contribute to the following precinct-wide pollution load reduction targets: • Total Suspended Solids (TSS) by 70% • Total Phosphorus (TP) by 45% • Total Nitrogen (TN) by 45% • Gross pollutants by 90%. **A20.3** All stormwater treatment measures are designed having consideration for ongoing operation and maintenance. Note: A maintenance plan for stormwater treatment measures will be required for all development proposals that include stormwater treatment measures.	**B20.1** Development provides onsite end of pipe treatment devices where it can be demonstrated that WSUD measures are not feasible. **B20.2** If discharges are unavoidable, a water pollution impact assessment commensurate with the potential risk and in accordance with the National Water Quality Guidelines must be prepared, consistent with Section 45 of the Protection of the Environment Operations Act 1997 (POEO Act) and in consultation with the Environment Protection Authority (EPA). The assessment must at a minimum: a. predict the expected frequency and volume of discharges b. characterise the quality of any discharges in terms of the concentrations of all pollutants present at non-trivial levels c. assess the potential impacts of the proposed discharges on the environmental values of the receiving waterways consistent with the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG, 2018)	**U20.1** Any discharge of wastewater and/or contaminated stormwater to watercourses or waterways.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC20 Continued		d. demonstrate that all practical and reasonable measures to avoid or minimise water pollution are considered and implemented; and e. propose appropriate discharge criteria based on the potential water quality impacts and the practical measures available to minimise pollution (e.g. treatment performance). Note: Under section 120 of the POEO Act, it is an offence to pollute waters. However, sections 121 and 122 of the POEO Act provide a defence against a prosecution under section 120 where the pollution was regulated by a licence or regulation which was complied with fully. The definition of 'water pollution' in the POEO Act sets out general and specific circumstances that constitute pollution. At its broadest, this means a prohibition on placing anything in waters that changes their chemical, biological or physical nature. Development that is a scheduled activity under the POEO Act, or requires an environment protection licence to discharge water, must first seek to avoid any discharges. If discharges are unavoidable, development must comply with POEO Act requirements.	

6.1.7 Earthworks

Site layout and design should seek to maintain the natural topography of the land and avoid the removal of vegetation by minimising earthworks on site. Where earthworks are required, they should be appropriately integrated with the natural topographic pattern, building design and landscaping to screen from view. Earthworks should be cognisant of the soil type in the locality and include relevant geotechnical investigations to inform design and construction.

Soil erosion from building sites, especially sloping sites is a major pollutant of watercourses and stormwater drainage systems. Reasonable measures are to be implemented to preserve the existing vegetation, prevent soil loss and rehabilitate the site through interim and long term revegetation strategies.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Earth works and retaining walls			
PC21 To: a. protect and minimise disturbance to natural landforms and design buildings and siteworks that respond sensitively to the natural topography b. take into account the stability of land having regard to its topography, geology and soils as part of site planning principles c. minimise disturbance of vegetation that stabilises land, particularly on sloping sites and d. encourage reuse of suitable fill material from within the precinct	**A21.1** Earthworks should be designed and specified in accordance with Australian Standard AS3798. **A21.2** Design and site layout minimises the need for cut and fill, including minimisation of offsite disposal of fill. Note: A geotechnical report prepared by a geotechnical engineer registered on the National Engineers Register of Engineers Australia is to be submitted where earthworks are proposed greater than 1 metre in height. **A21.3** Development ensures vegetation is protected on the site, particularly where it is important to site stability. **A21.4** Level transitions are managed between lots and not at the interface to the public domain. Finished ground levels adjacent to the public domain or public road dedication are no greater than 1 metre above the finished road level (or public domain level). **A21.5** Excavation and fill in excess of 1 metre may be permitted to allow for the establishment of a level construction pad providing excavation is adequately retained and drained in accordance with engineering requirements. **A21.6** Retaining walls (if required) are designed and integrated into the landscape. Note: All retaining walls proposed for the site are to be identified in the application for the proposed Activation Precinct certificate.	**B21.1** Earthworks outcomes that require offsite disposal of fill to a development site within the precinct that requires fill to establish its earthworks. Applications for both developments sites would need to be lodged concurrently to assess the movement of material. **B21.2** Where a level difference must exceed 1.0 metre and adjoins the public domain or public road dedication, the resulting landscape setback must be increased to accommodate tiered retaining walls.	**U21.1** Larger retaining walls located in areas highly visible from public spaces. **U21.2** Filling, excavation or retaining walls that impact on areas of high value biodiversity, the root systems of paddock trees or the amenity and functionality of adjoining properties. **U21.3** Filling, excavation or retaining walls located within easements. **U21.4** Filling, excavation or retaining walls that do not consider access from the planned road network. **U21.5** Filling, excavation or retaining walls that impede or restrict access to existing and proposed utility infrastructure.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Erosion and sediment control			
PC22 Protect waterways, drainage systems and groundwater quality, flows and drainage patterns during demolition, construction and ongoing operation phases of development.	**A22.1** An Erosion and Sediment Control Plan (ESCP) is prepared by a suitabily qualifed person in accordance with Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom, 2004) prior to applying for a Complying Development Certifcate. The ESCP should specifcally address the local soil type and include relevant constructon phase treatment measures, such as focculation prior to discharge.	Not applicable.	**U22.1** Development results in an impact upon surface or ground water quality.

6.1.8 Landscaping

Landscaping should maintain the character of the precinct and enhance the surrounding environment. Landscaping should be informed by the site's natural features and, where possible, retain and protect existing areas of remnant vegetation. It should reflect the bioregion and vegetation typologies of the precinct and enhance habitat and biodiversity in accordance with Chapter 3 – Precinct revegetation strategy. Landscaping should be used to revegetate creek lines, prevent erosion and to soften building mass and scale, provide shade and strengthen overall visual amenity.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Landscaping *Note: A landscape plan prepared by a qualified architect or consultant will be required for all development proposals that illustrates the proposed landscape design for the development proposal.*			
PC23 Landscaping creates a distinctive and memorable experience for users and is used in high-visitation areas.	**A23.1** Landscaped areas to the primary street frontage, main entrance driveway, street interfaces, car parks and other open space areas provided for customers and staff within developments include: a. mulch to a depth of 75mm b. irrigated garden beds to a minimum width of 1500mm, except for any garden bed to the primary street frontage along the front fence is to be a minimum 2 metres width c. plant species in accordance with **Section 3.4 – Planting** palates. **A23.2** Car park landscaping: a. provide one semi-mature tree at a minimum between every 5 car spaces or one tree every 3 spaces, evenly through the parking areas b. is located adjacent to the edge of all car parks and pathways c. includes plant species in accordance with the planting palate in **Section 3.4.2 – Landscape planting** d. retains existing vegetation of ecological value and e. uses recycled water or on-site stormwater for irrigation.	**B23.1** Landscape responsive streets and places are developed, in accordance with **Chapter 2 – Precinct design principles** and **Chapter 3 – Precinct revegetation strategy.**	Not applicable.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC23 Continued	**A23.3** Irrigated semi-mature trees are provided along both sides of the driveway with tree height and spread at maturity considering the height of the largest design vehicle to use the driveway. **A23.4** For lots greater than 1 hectare, a minimum three metre width of landscaping: a. is provided from side and rear fences and b. comprises locally sourced, minimum 100L (formal) sized native trees with middle level strata shrubs native to the area in accordance with section 3.4 – Planting palates between the trees. **A23.5** WSUD measures are integrated into landscape design such as irrigating garden beds using stormwater captured on-site and recycled water.		
PC24 Landscaping: a. retains and protects areas of high value vegetation in the site landscape design b. builds on the ecology, habitat and biodiversity of the precinct and wider region c. uses revegetation practices and includes a mix of endemic plant species and plants native to the precinct and d. uses perimeter buffer planting to screen development from surrounding vistas, and longer distance views from settlements across valleys.	**A24.1** Landscape design integrates the following areas: • high value vegetation, including paddock trees and • precinct trails and green infrastructure areas. **A24.2** New vegetated and landscaped areas that form a green corridor are integrated into the landscape design on the site and provide additional connectivity to existing vegetated areas. **A24.3** Where feasible, vegetation clearing is minimised. **A24.4** The planting palate in **Section 3.4.1 – Biodiversity** focused revegetation is used to inform the species selection and minimum species size for the site.	**B24.1** Landscaping contributes to enhanced public domain outcomes consistent with **Chapter 2 – Precinct design principles** and **Chapter 3 – Precinct revegetation strategy**.	Not applicable.

Brolgan Road, Parkes NSW
Existing landscape, White Cypress Pines

Mernda Station, VIC
Informal and local tree and grass species
Courtesy of Tract

Small Creek, QLD
Restored creek
Courtesy of Alan Hoban, Bligh Tanner

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Fencing			
PC25 Fencing is integrated with the development and is suitable for its intended purpose.	*Precinct Wide* **A25.1** Primary street frontage fences: a. are open in character b. are below 2.4 metres in height c. incorporate complementary gates d. are integrated with the main entrance and e. may incorporate customised panels or features to reflect the intended character of the built form and landscaped areas. **A25.2** Areas requiring solid fencing for screening should: a. be recessive and use corrugated, powder coated metal panels with a matte finish, in dark grey b. be minimised to areas adjacent to the proposed building or service areas c. be softened and screened by low and medium height landscaping within a bed of at least 1 metre in depth and d. allow for drainage underneath to avoid flooding and ensure drainage paths are maintained. *Commercial Gateway* **A25.3** Front boundary security fencing of industrial premises facing a primary or secondary street shall be high quality lateral RHS / tube steel, which is finished in black gloss powder coating or similar dark gloss colour and no higher than 2.4 metres. **A25.4** For developments that include front boundary security fencing that is closed during operating hours, access gates are to be set back from the public roadway a sufficient distance to allow a service vehicle to stand without hindering vehicular or pedestrian traffic on the public road or footpath. **A25.5** Side and rear boundary security fencing of industrial premises shall be standard metal chain fencing, and not higher than 2.4 metres.	**B25.1** Fencing is designed to enhance the visual amenity of the precinct and ensure that drainage flow paths are maintained, in accordance with **Chapter 2 – Precinct design principles**.	**U25.1** Security fencing, cyclone mesh and chain wire fencing forward of the building line and not suitably screened with landscaping. **U25.2** Fencing in flood-prone areas that forms blockage to the conveyance of floodwaters.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Lighting			
PC26 Ensure lighting: a. is energy efficient and maximises on site comfort, safety and security; b. avoids impacts to surrounding sensitive receivers; and c. for 24 hour developments does not compromise night time amenity of sensitive receivers.	**A26.1** Development achieves compliance with Australian Standards 4282:2019 for outdoor lighting. **A26.2** Development ensures lighting is located, directed and shielded to avoid glare directly to surrounding habitable areas. **A26.3** Main building entry lighting includes: a. solar lit bollards or pole top lights along the main building entrance path b. controlled uplighting (timer) to selected trees along the primary vehicle access c. appropriately illuminated (backlighting, uplighting) business signage, as required and d. security and sensor lighting, as required. **A26.4** Car park lighting: a. is designed to ensure safe and continuous access to the main building entrance/s b. includes solar lit bollards or pole top lights along pedestrian path/s c. includes security and sensor lighting, as required. **A26.5** All night time activities are internalised without any need to light external spaces beyond walkways and car parking areas. **A26.6** Development utilises smart lighting for external lighting of areas used infrequently that are motion activated or dimmed to reduce lightspill when not in use.	**B26.1** Lighting is provided along the main building entry, primary vehicle accesses and in car parks which contribute to the achievement of a safe night-time environment for staff and visitors as well as supporting an active and connected precinct, in accordance with **Chapter 2 – Precinct design principles**.	**U26.1** Development that does not mitigate lightspill to sensitive receivers that are adjacent or within direct line of sight. **U26.2** Development that creates dark corners or pockets, risking user safety. **U26.3** Development that does not appropriately light pedestrian pathways creating slip or trip hazards and risking user safety.

6.1.9 Service and storage areas

Service and storage areas are important to the operation of any development and should be both functional and practical. The location and siting of service and storage areas should be considered early in the development of concept plans.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Service and storage areas			
PC27 Service and storage areas: a. are functional and practical and b. do not detract from the visual amenity or operational efficiency of the precinct or surrounding areas.	**A27.1** Service and storage areas are: a. located behind the main building line and to the rear or side of buildings, where possible b. appropriately sealed or treated and c. screened from view so that they are not visible or prominent from public vantage points. Screening structures are a maximum height of 3 metres. Note: Screening can use a range of approaches including landscaping, perforated metal screens, fencing and other creative approaches that integrate screening into the site appearance so as not to be a dominant element of the site's presentation to a street. **A27.2** Service and storage areas include a dedicated area set aside for waste storage and collection based on calculated waste and recycled material generation rates for the particular business, building size, and potential future expansion. Note: The issuing authority may require a waste management plan to be prepared which details the waste management and minimisation activities to be carried out during operation of the premises / development.	**B27.1** Service and storage areas do not detract from the visual quality of the precinct, in accordance with Chapter 2 – Precinct design principles.	**U27.1** Waste collection within the public right of way. **U27.2** Waste collection within the site's car parking and pedestrian movement areas where user safety is at risk or compromised. **U27.3** Waste, chemical and hazardous goods storage areas within drainage easements and/or on flood prone land.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Erosion and sediment control			
PC27 Continued	**A27.3** Waste storage and collection areas are: a. flexible in their design to allow for source separation and future changes in the operation, tenancies and uses b. located away from primary street frontages, where applicable c. suitably screened from public areas to reduce the impacts of noise, odour and visual amenity d. designed and located to ensure the access and manoeuvring area is suitable for the collection vehicle and allow the vehicle to enter and exit the site in a forward direction, where possible and e. provide grease traps where there is a likelihood of liquid waste entering the drainage systems. **A27.4** Service and storage areas are located and sized to take into account potential synergies with neighbouring businesses as part of a circular economy where waste transfer to and from sites can occur in an efficient manner. **A27.5** Communal storage / collection facilities are located and sized: a. where the design makes it difficult for all tenants to have ready access to a collection point or b. where the site characteristics restrict vehicle entry. **A27.6** Service and storage areas include space and facilities for bin washing that are bunded and connected to a treated wastewater system.		

6.1.10 Signage

Business signage should be integrated into the building and site design. Signage should be considered at the primary access and on the building (where appropriate) to assist in wayfinding. Business signage across the precinct should be of a high quality (avoiding visual clutter), reflective of the precinct's goals, and consistent in approach.

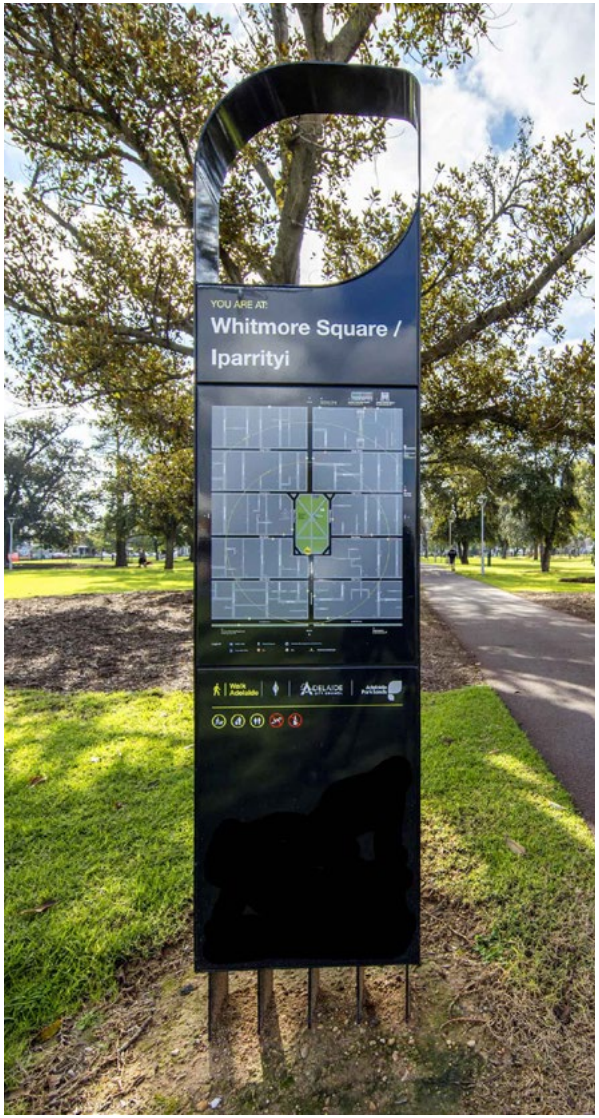
Wayfinding signage will enhance the experience and functionality of each business within the precinct, as well provide an avenue for connection to country through Wiradjuri design and storytelling.

It is important that Wiradjuri design elements and storytelling within any wayfinding signage is prepared in consultation with the local indigenous community so that it accurately and respectfully presents the history and culture of the Wiradjuri people.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Business signage			
PC28 Business signage visible from the public realm contributes to legible, coherent and visually attractive identification of businesses and locations throughout the precinct.	**A28.1** Building signage: a. is limited to a logo/company badge/name b. is made from suitable materials such as acrylic letters / logos or recycled materials that maintain a high quality visual appearance for the anticipated life of the sign c. is integrated with the building design by virtue of the location of signage panels and colour and materiality of any visible structural supports d. is located within the overall building frontage or corner and does not extrude beyond any roof line e. is no more than 10 per cent of the building façade f. is visible from the primary street frontage and g. complies with Australian Standard 1319-1994. **A28.2** The site is limited to one freestanding pylon sign being of a height of the building/s it relates to, with a maximum height of 9 metres, maximum width of 2.5 metres and maximum advertising area of 15 square metres per advertising face and limited to advertisements for all relevant businesses on the site (including where multiple tenancies apply).	**B28.1** Additional signage may be appropriate where it can be demonstrated that it is: a. complementary to the scale of the lot and buildings on the site; b. compatible with the signage that is within the streetscape; c. needed to provide directions and identification to additional entries on the site, particularly if located on another street frontage; d. needed to aid in identifying key building entry points to particular elements of the land use activity (such as reception and other departments), or separate buildings on the site; and e. consistently sized and designed as a suite with a common appearance and materiality.	**U28.1** Signage that: a. is roof mounted or applied to roof materials b. flashes, moves or is animated in any way and/or c. incorporates LED screens. **U28.2** Large and obtrusive signage that detracts from the visual character of the precinct. **U28.3** Proliferation of signage along site frontages. **U28.4** Provision of third-party advertisements within the precinct. **U28.5** Signage that encroaches into turning paths and/or does not meet height clearances for the highest design vehicle.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC28 Continued	**A28.3** The site is limited to one entry sign per access to a maximum height of 1.5 metres and a length of 4 metres and located within either a landscaped garden bed or mulched area and integrated as part of the site fencing. **A28.4** Where illuminated: a. include illumination, time automation and overrides as required b. include sensors to control lighting in concert with natural daylighting c. utilise the most energy efficient LED fittings including light colour control, dimming and output. Note: The Roads Authority must be consulted early in the Activation Precinct Certification process with regards to signage within 250 metres of, and visible from, a classified road, and appropriate approvals obtained where required.		

Adelaide Park Lands
Main feature entry signage
Courtesy of Studio Binocular and AtoB Wayfinding



Adelaide Park Lands
Secondary signage with map
Courtesy of Studio Binocular and AtoB Wayfinding

Adelaide Park Lands
Cyclist and pedestrian scale signage
Courtesy of Studio Binocular and AtoB Wayfinding

6.2 Specific development requirements

This section provides assessment criteria that apply to specific development and uses within the Regional Enterprise Zone including development on rail and intermodal development and solar energy farms.

6.2.1 Solar energy farms

This section applies to development for solar energy farms within the precinct.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Solar energy farms			
PC29 Solar energy farms are appropriately located to: a. minimise any off-site visual impacts on surrounding areas, including the potential for any glare or reflection and b. reduce impact on land that was previously used for agricultural purposes.	**A29.1** Landscaping is provided for screening of Solar energy farms which comprises: a. a minimum 15 metre wide privately owned and maintained landscaped buffer to the perimeter of the site, as well as an access road at the perimeter of the solar arrays b. tree species with dense canopies and a minimum mature height of eight metres and c. locally sourced, minimum 100 litre (formal) sized native trees with middle level strata shrubs native to the area in accordance with Section 3.4 – Planting palates between the trees. **A29.2** Solar energy farms are designed to run with the existing land form to reduce earthworks and are not positioned on land with a slope greater than 10 per cent. **A29.3** The visual appearance of all ancillary infrastructure (including paint colours) blends in as far as possible with the surrounding landscape.	Not applicable.	Not applicable.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC29 Continued	**A29.4** Development provides a decommissioning and rehabilitation plan to ensure that the land is rehabilitated and restored to existing condition or better following completion of the development. Note: The preparation of a landscape plan prepared by a qualified landscape architect or consultant that illustrates the proposed landscape design will be required. Note: Landscaped buffers should be informed by the site's natural features and landscape and reflect the bioregion and vegetation typologies of the precinct in accordance with Chapter 3 – Precinct revegetation strategy.		
PC30 Solar energy farm design and operations are resilient to flood events.	**A30.1** Development ensures a. solar panels and supporting electrical services are located either outside of the flood planning area as shown in Map 8.2; or b. suitable mitigation is undertaken to avoid flood impact on solar panels and other infrastructure placed in the flood planning area as shown on Map 8.2, including locating equipment above the flood planning level. **A30.2** Fencing within the sub-precinct that limits flow of water across the site is avoided. Note: A flood risk management report that demonstrates how flood risk will be managed and mitigated prepared by a suitably qualified engineer will be required.	Not applicable.	**U30.1** Site design and operations that can result in avoidable damage or disruption from flood events.

6.2.2 Thermal electricity generating work

This section applies to development for thermal electricity generating works in the precinct.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Thermal electricity generating work			
PC31 Thermal electricity generating work is appropriately located within the Resource Recovery and Recycling (west) sub-precinct.	**A31.1** Thermal electricity generating work is located in the Resource Recovery and Recycling (west) sub-precinct that: a. maximise freight and logistics opportunities including proximity to the rail interface and b. supports a range of other resource recovery and recycling activities including materials recovery facilities, food and garden organics collection facilities and other recycling and sorting plants. Note: The State Environmental Planning Policy (Precincts-Regional) 2021 provides that the Planning Secretary is the consent authority for development for the purposes of thermal electricity generating works on land within the Regional Enterprise Zone. Development consent must not be granted for development for the purposes of thermal electricity generating works unless the consent authority is satisfied that the development is consistent with the NSW Energy from Waste Policy Statement published by the Environment Protection Authority in January 2015.	Not applicable.	**U31.1** Thermal electricity generating work located outside the Resource Recovery and Recycling (west) sub-precinct.

6.2.3 Intermodal and rail terminal facilities overlay

This section applies to development identified in the intermodal and rail terminal facilities area as shown in Map 8.1.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Rail and Intermodal			
PC32 Development in the rail and intermodal area preserves opportunities for rail and transport infrastructure crucial to maintaining the precinct's competitive advantage as a rail-focused freight and logistics hub. This includes the transfer of containers, goods and other materials between road and rail and provides complementary and adjacent industrial development, including warehousing and transport businesses and rail siding.	**A32.1** Development is established to take advantage of proximity to appropriate transport routes and does not adversely impact on the safe and efficient functioning of the rail corridor as well as integrated rail and road transport routes. Note: Development requiring rail access shall consult with the relevant rail infrastructure provider as part of preparing the application for an Activation Precinct Certificate. **A32.2** Land within the intermodal and rail terminal facility area (Map 8.1) to be used for: a. container storage, collection and transfer or b. road and rail infrastructure facilities distribution centres or c. other facilities that directly support the transport of goods to and from rail. **A32.3** Rail spurs and sidings, including the uploading, loading or discharge of freight carried by road or rail are designed by a suitably qualified engineer in accordance with appropriate design and structural standards.	**B32.1** Uses and facilities that are ancillary to freight and logistics activities provided they do not compromise the area for future road and train transport movements. **B32.2** Short term land uses that are able to make use of land within the intermodal and rail terminal facility overlay while not required for freight and road and rail activities. **B32.3** Subdivisions that provide for freight access along the corridor through alternative means to public roads, such as rights of way.	**U32.1** Land uses that could otherwise be established within sub-precincts outside of the intermodal and rail terminal facility area, particularly where there is land and infrastructure capacity. **U32.2** Land uses and buildings that would prevent the 24 hour operation of rail and road freight movements and transfer activities. **U32.3** Development that prevents the continuous movement of freight along rail corridors in the precinct.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC32 Continued	**A32.4** Development that consists of the construction or installation of any of the following items are designed by a suitably qualified engineer in accordance with the appropriate design specifications and structural standards: a. a bridge used for a purpose other than a road b. a rail-mounted crane, crane rails for a rail mounted crane or a fixed crane c. a ship loader, unloader, or cargo handling facilities d. a dry bulk storage silo e. road and rail terminal facilities f. a stacker-reclaimer, stacker or reclaimer g. a conveyor system. **A32.5** Industrial development and support services: a. take advantage of the access to key rail and road networks and b. maximise opportunities for the clustering and co-location of synergistic developments, including supporting infrastructure.		

6.2.4 Drainage investigation area

This section applies to development in the drainage investigation area in the Resources and Recycling sub-precinct as shown in Map 8.3.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Drainage investigation area			
PC33 Development in the drainage investigation area ensures activities and enabling infrastructure: a. does not release pollutants and maintains downstream water quality during flood events and b. does not increase flood risk onsite or elsewhere.	**A33.1** Where changes to flowpaths or waterways are proposed, development (including enabling infrastructure) is supported by a drainage master plan prepared in accordance with the NSW Floodplain Development Manual (2005, or as updated) which demonstrates how: a. activities within this area are located above the Flood Planning Level b. mitigation infrastructure proposed addresses flood risk c. development does not increase flood risk onsite or elsewhere and d. development avoids release of pollutants during floods.	Not applicable.	**U33.1** Development (including enabling infrastructure) that adversely affects flood behaviour or flows, or does not adequately mitigate flood risk. **U33.2** Unmitigated release of contaminants because of placement of uses or activities within the Flood Planning Area.

6.3 Sustainability

The master plan has been prepared to ensure that development maximises sustainability opportunities and aligns with the United Nations Industrial Development Organisation (UNIDO) eco-industrial park framework. An Eco-Industrial Park is a place where businesses work together to achieve enhanced environmental, economic and social performance through collaboration. This collaboration can achieve a circular economy and promote its principles; circulating products and materials at their highest value, eliminating waste and pollution and regenerating nature. Collaboration between precinct tenants makes this possible by exchanging materials, by-products, energy, water, information, services and human resources. These opportunities exist across the life of a project from facility and product design through to operations.

This section sets out the assessment criteria for maximising sustainability and circular economy opportunities within the Regional Enterprise Zone.

Note: While not a mandatory requirement, obtaining a green certified rating for any buildings in the development such as Green Star or LEED is encouraged, and can be used as a means of demonstrating compliance with the Sustainability Performance Criteria.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Sustainability			
PC34 Development supports and contributes to the principles of the UNIDO Eco-Industrial Park framework and working towards net zero outcomes.	**A34.1** Development is a signatory to the Parkes Special Activation Precinct ISO 14001 accredited EMS aligned with the UNIDO eco-industrial park framework. This includes the business implementing an ISO 14001 accredited operations EMS. **A34.2** The applicant commits to contributing data in accordance with the precinct EMS including signing data sharing agreement. Note: Access to the Parkes Special Activation Precinct ISO 14001 accredited EMS and associated guidance material can be obtained from RGDC. **A34.3** Development demonstrates how it will contribute towards a carbon neutral precinct by either: a. having a Net Zero ready design where energy efficiency has been maximised or b. has developed a Net Zero action plan which takes into account technological and financial feasibility,	**B34.1** The applicant: a. commits to developing an EMS within 6 months from the date of commencing operations or provides a copy of an existing EMS for the development and b. commits to contributing data in accordance with the precinct EMS. **B34.2** The applicant commits to working with RGDC to develop a Net Zero action plan which details practical steps and continuous improvement towards achieving net zero over time.	**U34.1** Development does not demonstrate a commitment to the principles of the UNIDO Eco-Industrial Park framework and a carbon neutral precinct.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC34 Continued	**A34.4** Applicant can demonstrate process of due diligence in the selection of industrial process equipment which considers how Net Zero will be achieved. Electrification is prioritised wherever technologically and financially feasible, followed by low emission alternatives. Note: Access to the Parkes Special Activation Precinct Sustainability Technical Guidance can be obtained from RGDC		
Note: At a business level, what is required under the EMS will respond to the nature and complexity of their business. Chapter 7 outlines the monitoring and reporting approach of the precinct. RGDC will assist businesses with technical support (e.g. expert assistance to align to the precinct EMS) and practical support (e.g. templates).			
PC35 Development supports emission reduction and reduction in grid demand through the use of renewable energy.	**A35.1** Development: a. maximises energy capture and reuse through solar PV or b. utilises an equivalent or better alternative onsite renewable energy generation system and/or c. utilises/connects to an offsite renewable energy resource. Note: Information on the proposed electricity demand and consumption and percentage proposed to be delivered via renewables (onsite and offsite) will be required.	Not applicable.	Not applicable.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC36 Opportunities for establishing a circular economy are enabled through infrastructure and the colocation of industries requiring transport and utility/service connections.	**A36.1** Development: a. provides space for required service corridor easements in accordance with **Chapter 4 – Infrastructure** b. contributes to the clustering of like land uses with similar transport, utility and service infrastructure needs, where applicable and c. takes advantage of existing and proposed shared systems relating to resource handling and storage, fuel or water storage, on-site energy generation, resource processing and the use of bi-products from other businesses, where applicable. **A36.2** The applicant commits to sharing data on main material inputs and outputs to support identification of business-to-business material trading opportunities.	Not applicable.	Not applicable.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC37 To minimise the overall environmental impacts of waste by: a. encouraging development to facilitate ongoing waste avoidance b. encouraging development to embed circular economy principles into its planning and operations c. requiring on-site waste separation and other design and siting standards which assist waste collection and management d. encouraging building designs and construction techniques that minimise waste generation e. maximising opportunities to reuse and recycle building and construction materials as well as other waste in the ongoing use of a premise and f. reducing the demand for waste disposal.	**A37.1** Development has: a. identified basic resource flows within and outside the precinct that will contribute to reducing waste to landfill and promote the use of recycled and reclaimed materials or b. waste and resource management systems in place which aim to reduce waste to landfill and maximise the use of recycled and reclaimed materials, uses local suppliers, selects products that are suited for disassembly of the structure at its end-of-life, and uses materials that can be reused or recycled easily. Note: The identification of resource flows is scalable depending on the size and nature of the business i.e. may be simply demonstrated through a diagram. **A37.2** Development incorporates the use of recycled or reclaimed materials in construction where possible. Note: The issuing authority may require a waste management plan to be prepared which details the waste management and minimisation activities to be carried out during demolition and/or construction of the development.	Not applicable.	**U37.1** Development that maximises waste to landfill.

6.4 Environment

This section provides the assessment criteria related to protecting and enhancing the rural landscape character, cultural heritage places, sites and objects and land with high biodiversity values within the precinct.

An Environmentally Sensitive Areas map is contained within the Precincts-Regional SEPP for the Parkes Special Activation Precinct identifying land of environmental importance where complying development cannot occur. The master plan seeks to protect and enhance these biodiversity values.

6.4.1 Landscape character

The landscape design for the development proposal should be developed with regard to the natural features of the site in which the development is proposed.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Landscape character			
PC38 Protect the rural landscape character and natural topography and features such as drainage lines and waterways of the precinct.	**A38.1** Development is designed and sited to: a. retain and enhance areas of remnant vegetation communities and vegetation corridors as shown in Figure 3.2 in accordance with **Chapter 3 – Precinct revegetation strategy** b. maintain significant landscape features such as the rocky outcrops c. maintain existing mature trees where possible or provide a reasonable strategy for replanting mature trees d. identify indigenous heritage features which should be retained in place on site and e. avoid or minimise alteration to natural features such as drainage lines and waterways, hill tops and ridgelines. **A38.2** Development accommodate open space and landscape that support the establishment of vegetated corridors including: a. trails as shown on Figure 3.3 and b. the following principles set out within the master plan: • the Quarry to Creek Green + Ochre Grid corridor of linked spaces • three green north-south spines that retain existing bush roads, stock routes and mature vegetation • a green entry to the Parkes precinct adjacent the Newell Highway.	Not applicable.	**U38.1** Development that does not integrate site specific solutions.

6.4.2 Heritage

Heritage items and conservation areas have special qualities that make them significant.

Development needs to take care to protect the particular themes, features or characteristics that make the item or area significant by:

- celebrating and protecting the precinct's history and landscape values, particularly its occupation by First Australians and their connection to the land;
- ensuring Aboriginal culturally significant places and artefacts are protected, maintained and enhanced; and
- promoting development and precinct design that recognises its Connection to Country.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Wiradjuri cultural heritage			
PC39 Aboriginal culturally significant places, sites and objects are protected.	**A39.1** Development avoids impacts to Aboriginal cultural heritage and is undertaken in accordance with the precinct's Aboriginal Cultural Heritage Management Plan. Note: Access to the precinct's Aboriginal Cultural Heritage Management Plan can be obtained from RGDC. **A39.2** Development retains in place and integrates scarred trees, stone quarry, identified artefact sites and other indigenous cultural heritage places of importance within landscaped and public areas of sites so that they are publicly accessible. **A39.3** Development promotes the history and landscape values of the site by considering story-telling and memory through site layout, building design and/or interpretative signage. Note: The Aboriginal Cultural Heritage Management Plan provides further guidance on how development may promote the history and landscape values of the precinct.	**B39.1** Where development cannot avoid impacts to Aboriginal cultural heritage, development undertakes an Aboriginal cultural heritage assessment. Note: Part 6 of the National Parks and Wildlife Act 1974 (NPW Act) provides specific protection for Aboriginal objects and declared Aboriginal places by establishing offences of harm. Harm is defined to mean destroying, defacing or damaging an Aboriginal object or declared Aboriginal place, or moving an object from the land. Anyone proposing to carry out an activity that may harm an Aboriginal object or a declared Aboriginal place must investigate, assess and report on the harm that may be caused by the activity they propose. The Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW provides guidance on the process to follow when investigating and assessing whether Aboriginal cultural heritage values and objects are present and the harm a proposed activity may cause to them. It also includes the requirements for an Aboriginal cultural heritage assessment report. Where necessary an Aboriginal Heritage Impact Permit will be required after development consent is granted. The application for an Aboriginal Heritage Impact Permit may be commenced before development consent is granted.	**U39.1** Aboriginal culturally significant places and sites are harmed, except where an Aboriginal Heritage Impact Permit has been issued.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC39 Continued	**A39.4** Development incorporates indigenous art, murals and interpretive signage within elements such as: a. car parks b. landscaped frontages and edges c. on large uninterrupted walls and bridge structures visible from public areas and d. key entrances, information points and community and visitor focal points. **A39.5** An indigenous memorial garden using Wiradjuri planning principles is established within a prominent location adjacent to the principal precinct gateway at Brolgan Road.		
Historic heritage			
PC40 Protect the heritage significance of historic buildings including associated fabric, settings and views by avoiding impacts and allowing for the ongoing use.	**A40.1** Approval is given under section 58 for a matter or thing referred to in section 57 of the Heritage Act 1977 for carrying out works on or within the curtilage of an item listed on the State Heritage Register. Note: An exemption may apply depending on the nature of the proposed works. Heritage NSW must be consulted for any works proposed to be carried out on or within the curtilage of an item listed on the State Heritage Register as part of the Activation Precinct Certification Process. The process for seeking approval under section 58 of the Heritage Act 1977 should commence at the earliest possible time and should run in parallel with the Activation Precinct Certification Process where possible. Note: A statement of heritage impact will be required for carrying out works on or within the curtilage of an item lists on the State Heritage Register.	Not applicable.	**U40.1** Historic buildings are damaged or destroyed.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC40 Continued	**A40.2** A statement of heritage impact is prepared in accordance with the Statements of Heritage Impact published by the NSW Heritage Office for carrying out works on or within the curtilage of a local heritage item. Note: Council should be consulted for any works proposed to be carried out on or within the curtilage of an item listed as a local heritage item as part of the Activation Precinct Certification Process.		
PC41 Protect the memory of the precinct's topography, particularly small hills.	**A41.1** Development retains and protects small hills of cultural significance in place and: a. leaves these spaces in either public open space or publicly accessible areas of sites that enable appreciation and interpretation by all or b. maintains the land topography with minimal cutting and filling of land (less than one metre) and c. undertakes site cutting and filling away from identified small hills of cultural significance.	**B41.1** Cutting and filling is limited within development sites. **B41.2** Extent of cutting and filling is limited to building areas only where this can be achieved for the operation of sites.	Not applicable.

6.4.3 Biodiversity and vegetation

The precinct is generally isolated from any surrounding areas of biodiversity value and connectivity is mostly restricted to roadside corridors. Development should be designed and sited to maximise opportunities for biodiversity and habitat creation through on site landscaping and open space.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC42 Protect and enhance areas of high value biodiversity through landscaping and open spaces.	**A42.1** Development is to be sited, designed and managed to: a. avoid and minimise impacts on threatened species by avoiding and minimising the clearing of native vegetation and b. protect and enhance areas of remnant biodiversity as shown in Figure 3.2. **A42.2** Development retains trees and grasslands where possible, and incorporates them into site landscaped areas. Note: The issuing authority may require a written advice statement to be prepared by a suitably qualified person which confirms that the development proposal will not directly or indirectly impact on areas of high value biodiversity. Note: The issuing authority may require an arborists report to be prepared by a suitably qualified arborist where any Tier 1 and/or Tier 2 trees are to be removed or may be affected by the development proposal. Note: A landscape plan will be required for all development proposals. Note: At such time that there is a biodiversity certification order, applicants will be required to ensure they meet any conditions of the biodiversity certification order and implement the terms of any biodiversity certification agreements. Note: Development consent is required under the Regional Precincts SEPP for clearing of native vegetation on land identified within an environmentally sensitive areas as outlined in the Parkes Activation Precinct Environmentally Sensitive Areas map.	**B42.1** Where development is likely to impact native vegetation and areas of high value biodiversity, it demonstrates: a. there is no feasible alternative and b. planting of additional native species in other locations on the site will be undertaken at a rate of 10:1 in accordance with Section 3.4.1 – Biodiversity focused revegetation. Note: A suitably qualified person must prepare a report that identifies any potential adverse impact the proposed development may have on the following: a. a native vegetation community b. the habitat of any threatened species, population or ecological community c. a regionally, state or nationally significant species of plant, animal or habitat d. a habitat corridor e. a wetland f. the biodiversity values within a reserve, including a road reserve or a stock route and g. a description of any proposed measures to be undertaken to ameliorate any such potential adverse impacts.	**U42.1** Avoidable removal of areas of high value biodiversity or Tier 1 and Tier 2 trees.

Note: Biodiversity Offsets Scheme (BOS) under the *Biodiversity Conservation Act 2016* applies to:

- local development (assessed under Part 4 of the *Environmental Planning and Assessment Act 1979*) that triggers the BOS threshold or is likely to significantly affect threatened species based on the test of significance in Section 7.3 of the Biodiversity Conservation Act 2016
- state significant development and state significant infrastructure projects, unless the Secretary of the Department of Planning and Environment and the environment agency head determine that the project is not likely to have a significant impact
- biodiversity certification proposals
- clearing of native vegetation in urban areas and areas zoned for environmental conservation that exceeds the BOS threshold and does not require development consent and
- clearing of native vegetation that requires approval by the Native Vegetation Panel under the Local Land Services Act 2013.

At such time that there is a biodiversity certification agreement, the BOS credit obligation is taken to be retired, and the Activation Precinct certificate can be issued without further burden on applicants.

6.4.4 Groundwater

The controls in this section provide protection for groundwater.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC43 Protect groundwater quality, flows and drainage patterns during demolition, construction and ongoing operation phases of development. Note: Where applicable, a development must obtain the appropriate water licence in accordance with the Water Management Act 2000 and consider the relevant Water Sharing Plan.	**A43.1** Development that the issuing authority considers has the potential to contaminate groundwater is supported by a Groundwater Management Plan prepared by a suitably qualified person. The Groundwater Management Plan is prepared in accordance with best practice groundwater management requirements in developing site specific usage, drainage, and mitigation measures for the site. Note: Under section 120 of the POEO Act, it is an offence to pollute waters. However, sections 121 and 122 of the POEO Act provide a defence against a prosecution under section 120 where the pollution was regulated by a licence or regulation which was complied with fully. The definition of 'water pollution' in the POEO Act sets out general and specific circumstances that constitute pollution. At its broadest, this means a prohibition on placing anything in waters that changes their chemical, biological or physical nature. **A43.2** Development proposals that will temporarily or permanently interfere with groundwater flows and impacts the water table will require a hydrogeological report to be prepared by a suitably qualified hydrogeological and/or geotechnical engineer. **A43.3** Development within 750 metres of an existing registered bore for stock, domestic, irrigation and/or water supply use must ensure that the proposed works do not create an aquifer interference activity as designed within the *Water Management Act 2000*. Note: Consultation with DPE Water in undertaken early in the Activation Precinct Certification process and appropriate licences or approvals obtained where required. Note: The *Water Management Act 2000* defines an aquifer interference activity as that which involves any of the following: • the penetration of an aquifer • the interference with water in an aquifer • the obstruction of the flow of water in an aquifer, NSW Aquifer Interference Policy 2 | DPI-NSW Office of Water, September 2012 • the taking of water from an aquifer in the course of carrying out mining or any other activity prescribed by the regulations and • the disposal of water taken from an aquifer in the course of carrying out mining or any other activity prescribed by the regulations.	Not applicable.	**U43.1** Extraction of groundwater. **U43.2** Direct seepage of untreated stormwater or industry liquids into the ground.

6.5 Environmental hazards

The design and construction of development should recognise environmental hazards and constraints of the site. This section applies to land that is subject to environmental hazards including flooding, bushfire and contaminated land within the precinct.

6.5.1 Flood risk management

The assessment criteria in this section apply to land that is identified as flood prone on Map 8.2.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC44 Development is compatible with the flood function and the flood hazard of the land.	**A44.1** Development within the Flood Planning Area, shown in Map 8.2: a. ensures buildings are not located within FPCC 1 or 2 as shown in Map 8.3 b. ensures building floor levels and flood sensitive equipment (including electric motors and switches) are located at or above the Flood Planning Level as shown in Map 8.4 c. ensures utilities and services (e.g. electrical and telecommunications services) are adequately flood proofed. Note: Further information in relation to the flood planning level can be obtained from RGDC.	**B44.1** Development within the Flood Planning Area may be considered appropriate where it is unable to meet the minimum levels but is supported by a flood risk management report prepared by a suitably qualified person that demonstrates how flood risk will be managed and mitigated.	**U44.1** Buildings and other structures located within a floodway. **U44.2** Buildings (and the operations within them) or supporting structures with a high capital value of machinery or materials being at risk of damage from flooding. **U44.3** The following sensitive development are not located on flood prone land (as defined by the extent of the Probable Maximum Flood on Map 8.2: a. educational establishments b. emergency services facilities c. hotel or motel accommodation d. information and education facilities and e. data centres, data hubs or data storage.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC45 Development will not significantly alter flow distributions and velocities to the detriment of other properties or the environment of the floodplain.	**A45.1** Filling: a. is not undertaken in FPCC 1 or 2 as shown in Map 8.3 and b. if undertaken in the balance of the Flood Planning Area as detailed in Map 8.2, demonstrates no adverse changes to flood behaviour, flow distributions, or environmental impacts and c. only uses clean fill. **A46.2** The use of structural controls (including fences) that physically alter the flow behaviour is minimised. Note: A flood engineering statement, prepared by a Chartered Professional Engineer with expertise in flood risk management will be required as part of any development addressing filling within the Flood Planning Area.	**B45.1** Where alterations to flow behaviour are unavoidable or required to avoid other impacts (such as discharge of hazardous materials), these are carefully designed through a flood engineering report (including site specific flood study and mitigation assessment).	**U45.1** Large scale bulk earthworks to make land available for development below the Flood Planning Level. **U45.2** The use of large-scale mitigation infrastructure on private land that substantially alters the natural flow of floodwaters across the precinct.
PC46 Development will not increase the potential for hazardous material to pollute the environment during flood events. Note: Hazardous material is any item or agent (biological, chemical, radiological, and/or physical) that has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors.	**A46.1** Hazardous materials are: a. not stored on land within FPCC 1 or 2 as shown in Map 8.3 and b. located above the Flood Planning Level as shown in Map 8.4 and c. stored or contained in a way that is designed to avoid release of the materials during floods. Note: Further information in relation to the flood planning level can be obtained from RGDC.	Not applicable.	**U46.1** Release of hazardous materials during flooding events (including rarer flood events up to and including the Probable Maximum Flood). This includes pollutants such as onsite effluent or tailings treatment or chemical storage.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see

PC47 Development will not adversely affect the safe and efficient evacuation from the land or impact the capacity of existing evacuation routes for the surrounding area.	**A47.1** Development does not result in isolation or create evacuation challenges for users.
	Note: The issuing authority may require a site-based flood emergency response plan to be prepared by a suitably qualified person.
	Each flood emergency response plan should include as a minimum:
	• a map showing the extent of flooding on the site (up to and including the PMF)
	• a map showing a rising evacuation route to an emergency evacuation shelter
	• a map showing marshalling points on the site in the event of a flood (that can be displayed throughout the site)
	• a summary poster of actions required in a flood (A3 poster) to be displayed around the site
	• details of:
	  • pre-flood planning
	  • during flood actions–including trigger levels for action that are linked to data from an easily accessible water level gauge (and associated actions) and
	  • post flood recovery actions
	• reference to any relevant aspects of the latest version of the Parkes Flood Emergency Sub Plan.
		Not applicable.	**U47.1** The placement of sensitive, vulnerable or critical uses within the Flood Planning Area:
			a. community facilities
			b. centre-based child care facilities
			c. educational establishments
			d. emergency services facilities
			e. research stations (flood vulnerable activities only).

6.5.2 Bush fire protection

Development within a bush fire prone area must conform to the specifications and requirements of the current version of Planning for Bush Fire Protection 2019 (PBP) or latest version thereof published by the NSW Rural Fire Service.

It is noted that the Parkes Shire Council LGA – Bush Fire Prone Land Map will identify whether the land in the precinct is bush fire prone land. Map 8.9 of the delivery plan aligns with the Parkes Shire Council LGA – Bush Fire Prone Land Map, however provides further detail in relation to the bush fire hazard.

The following bush fire protection assessment criteria are in accordance with the requirements for PBP.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC48 Development on grassland as shown in Map 8.9 includes asset protection from the grass fire hazard.	**A48.1** Where development is not within 50 metres of grassland no further assessment is required. Note: As land within the Regional Enterprise Zone develops and clearing occurs, the grass fire risk will change. In instances where there is no longer a grass fire hazard within 50 metres of the development, due to clearing and development of land in the precinct, then no further assessment of the grass fire hazard will be required. Representations are made to the issuing authority that demonstrate that the proposed development is not within 50 metres of grassland. **A48.2** Development within 50 metres of grassland must comply with the requirements of: a. the latest version of PBP and b. *Rural Fires Act 1997* (including requirements for bush fire safety authority for development for a 'special fire protection purpose').	Not applicable.	Not applicable.
PC49 Development on bush fire prone land (excluding grassland) as shown in Map 8.9 includes asset protection from the bush fire hazard.	**A49.1** Where development is not within 100 metres of bush fire prone land (excluding grassland), no further assessment is required. **A49.2** Development within 100 metres of bush fire prone (excluding grassland), as well as land identified as access constrained, must comply with the requirements of: a. the latest version of PBP and b. *Rural Fires Act 1997* (including requirements for bush fire safety authority for development for a 'special fire protection purpose'). Note: A certificate will be required to be provided by a person who is recognised by the NSW Rural Fire Service as a qualified consultant in bush fire risk assessment stating that the development conforms to the relevant bush fire specifications and requirements. Note: Fire access trails may be considered in certain circumstances for land management purposes, but not as a substitute for perimeter roads or where sealed roads can be provided.		

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC49 Continued	**A49.3** Outdoor storage of hazardous materials is more than 30 metres from any identified bush fire prone land (excluding grassland). **A49.4** Bush fire prone land (excluding grassland) should be reserved for low value activities such as hardstand areas, which also contribute to the separation of built form from hazard sources. **A49.5** Buildings and facilities are separated from each other to minimise potential for building-to-building ignition.	Not applicable.	Not applicable.
PC50 Development for a special fire protection purpose minimises risk to life and property from bush fire.	**A50.1** Development for a special fire protection purpose must comply with the requirements of: a. the latest version of PBP and b. *Rural Fires Act 1997*. Note: A bushfire hazard assessment and management plan will be required in accordance with PBP for a special fire protection purpose. Note: A bush fire safety authority will be required in accordance with section 100B of the Rural Fires Act 1997 for development of bush fire prone land for a special fire protection purpose.	Not applicable.	**U50.1** Development of a special fire protection purpose that would compromise existing or future envisaged industrial development within the Regional Enterprise Zone.

6.5.3 Managing development on contaminated land

The assessment criteria in this section ensure that development adequately addresses contaminated land.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC51 Development adequately addresses contaminated land.	**A51.1** The site is suitable, or can be made suitable, for the proposed development having regard to land contamination in accordance with section 4.6 of *State Environmental Planning Policy (Resilience and Hazards) 2021* (Resilience and Hazards SEPP) and recorded on the Parkes Special Activation Precinct Contaminated Lands Register. Note: Access to the Parkes Special Activation Precinct Contaminated Lands Register can be obtained from RGDC's spatial web portal. A Preliminary Site Investigation, which informed the master plan, identified potential contaminated land risks primarily associated with former land uses in a small number of specific locations, including mining at the Westlime quarry and the wool processing evaporations ponds near the SCT Logistics facility. Note: The master plan provides that Category 1 and 2 remediation works are required to be undertaken in accordance with Resilience and Hazards SEPP. Category 1 remediation works will require a development application. Category 2 works will need to be undertaken separately as development without consent in compliance with Resilience and Hazards SEPP, and not as part of an application for Complying Development under the Precincts-Regional SEPP. The Precincts-Regional SEPP requires that an Activation Precinct certificate cannot be issued unless the issuing authority has considered whether the land is contaminated and is satisfied the subject land is suitable for the proposed development or will be after remediation.	Not applicable.	Not applicable.

6.6 Environmental impact management

This section applies to development that may have an environmental impact including development that is potentially hazardous or offensive, requires an environment protection licence or may emit noise, odour and/or substances into the air and have the potential to impact on sensitive receivers.

6.6.1 Potentially hazardous and offensive development

The following section applies to development considered as potentially hazardous or offensive in accordance with the State Environmental Planning Policy (Resilience and Hazards) 2021.

It also relates to any applications for the expansion or modification to a potentially hazardous or potentially offensive industry.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Potentially hazardous and offensive development			
PC52 Potentially hazardous and potentially offensive industries are appropriately managed to protect human health, property and the biophysical environment.	**A52.1** A preliminary hazard analysis is undertaken in accordance with sections 3.11 and 3.12 of the Resilience and Hazards SEPP. Note: Clauses 12 and 13 of Resilience and Hazards SEPP apply to an application for an Activation Precinct certificate that relates to complying development in the same way as they apply to an application for development consent. **A52.2** Development that is a potentially hazardous and potentially offensive industry: a. has been identified as either low, medium or high risk by the Department of Planning and Environment and b. complies with the Resilience and Hazards SEPP. Note: Any development that is determined to be hazardous or offensive, is prohibited in the precinct. The master plan requires that prior to an Activation Precinct certificate being issued, potentially hazardous development must be identified as either low, medium or high risk by the Department of Planning and Environment. Potentially hazardous development that is high risk is not complying development and will require a development application. The Department of Planning and Environment should be consulted, and written advice sought on whether a proposed development that is a potentially hazardous industry or a potentially offensive industry is low, medium or high risk prior to making an application for an Activation Precinct certificate. RGDC will require the Planning Secretary's approval to issue an Activation Precinct certificate.	Not applicable.	**A52.1** Development that is determined to be hazardous or offensive.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC53 Storage of dangerous goods on site must be done in a safe manner.	**A53.1** Dangerous goods, as defined by the Australian Dangerous Goods Code, must be stored and handled strictly in accordance with: a. all relevant Australia Standards b. for liquids, a minimum bund volume requirement of 110% of the volume of the largest single stored volume within the bund and c. the Environmental Protection Manual for Authorised Officers: Bunding and Spill Management – technical bulletin. Note: In the event of an inconsistency between the requirements listed in a. and b. above, the most stringent requirement must prevail to the extent of the inconsistency.	Not applicable.	**U53.1** Storage of dangerous goods on site results in unacceptable health and safety risks.

6.6.2 Air quality and odour

Development should ensure that sensitive receivers both inside and outside the precinct are protected from unacceptable air quality and odour impacts. The key strategy for protecting receivers outside the precinct boundary is through ensuring high impact developments are concentrated at the centre of the precinct.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Air quality			
PC54 Development that is a scheduled activity listed in Schedule 1 of the POEO Act reduces the risks to human health and the environment by reducing the discharge of substances into the air to the maximum extent achievable. Note: The Environment Protection Agency should be consulted with early in the Activation Precinct Certification process to determine whether an assessment is required.	**A54.1** Development that produces air emissions and requires an environment protection licence under the POEO Act for a scheduled activity: a. identifies the potential air quality risk and determines the level of assessment and management required. Guidance on how the air quality risk can be determined is contained within the SAP Assessment Framework – AIR b. is designed to achieve the impact assessment criteria contained in the *Approved Methods for Modelling and Assessment of Air Pollutants in NSW, 2017* (the Approved Methods) (or as updated) c. complies with the prescribed discharge concentration contained in the *Protection of the Environment Operations (Clean Air) Regulation 2010* (the Clean Air Regulation) (or as updated); and d. is designed to include best management practices to minimise the emission of air pollutants to the maximum extent achievable.	Not applicable.	**U54.1** Development is not designed to achieve the impact assessment criteria in the Approved Methods. **U54.2** Development is not designed to achieve the prescribed discharge concentrations contained in the Clean Air Regulation. **U54.3** Toxic air pollutants and particles are not minimised through the implementation of best practice process design and/or emission control.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC54 Continued	Note: The Environment Protection Authority should be consulted to discuss the potential air quality risk of the development and determine the level of air quality assessment and management required. Note: The SAP Assessment Framework - AIR is under development in 2022/2023 and expected to be in place in 2023. **A54.2** Development undertakes monitoring and reporting as required by their EPL and commits to providing RGDC an annual statement setting out how the EPL requirements has been complied with. Note: An operational environmental management plan should identify the environmental impacts, and management activities and controls related to managing and minimising air emissions, including how the environmental management activities and controls will be monitored and reviewed. As part of an environment protection licence, an annual return is required to be provided to the EPA. An extract of the part of the annual return which sets out how any site-based air quality monitoring and reporting regime required by the licence has been complied with may be provided to RGDC to satisfy A60.2.		
PC55 Non-scheduled activities reduce the risks to human health and the environment by reducing the discharge of substances into the air to the maximum extent achievable.	**A55.1** Development that produces emissions to air: a. identifies the potential air quality risk and determines the level of assessment and management required. Guidance on how the air quality risk can be determined is contained within the SAP Assessment Framework – AIR b. is designed to achieve the impact assessment criteria contained in the Approved Methods for Modelling and Assessment of Air Pollutants in NSW, 2017 (the Approved Methods) (or as updated)	**B55.1** Prior to the finalisation of the SAP Assessment Framework and/or where the issuing authority considers that a development may produce air emissions that could result in adverse effects to human health and amenity or to the surrounding air quality, the development: a. is designed to achieve the impact assessment criteria contained in the Approved Methods (or as updated)	**U55.1** Non-scheduled activities that emit air impurities that exceed the 'standards of concentration' required by the Clean Air Regulation or do not satisfy the requirements of A55.1 or B55.1.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC55 Continued	c. is designed to include best management practices to minimise the emission of air pollutants and particles to the maximum extent achievable and d. implements an ongoing monitoring and reporting requirements as outlined in the SAP Assessment Framework - AIR. Note: The SAP Assessment Framework - AIR is under development in 2022/2023 and expected to be in place in 2023.	b. complies with the relevant prescribed discharge concentration contained in the Clean Air Regulation for scheduled activities c. is designed to include best practice process design and/or emission controls to minimise the emission of principal toxic air pollutants and particles to the maximum extent achievable and d. implements an ongoing air quality monitoring and reporting regime prepared by a suitably qualified person and commits to providing RGDC an annual statement setting out how the site-based air quality monitoring and reporting regime has been complied with. Note: A site-specific air quality impact assessment prepared by a suitably qualified person in accordance with NSW EPA's Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales will be required. An operational environmental management plan should identify the environmental impacts, and management activities and controls related to managing and minimising air quality emissions, including how the environmental management activities and controls will be monitored and reviewed.	
Odour			

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC56 Development is designed to not cause offensive odour as defined by the POEO Act.	**A56.1** Development that produces odour emissions: a. identifies the potential odour risk and determines the level of assessment and management required. Guidance on how the odour risk can be determined is contained within the SAP Assessment Framework – AIR b. located based on the identified odour risk level and in accordance with the Odour Map provided in the SAP Assessment Framework – AIR and c. implements an ongoing monitoring and reporting requirements as outlined in the SAP Assessment Framework – AIR. Note: The SAP Assessment Framework - AIR is under development in 2022/2023 and expected to be in place in 2023.	**B56.1** Development identified as high risk with the potential for adverse odour impacts: a. will require an odour impact assessment prepared by a suitably qualified person in accordance with the NSW EPA's Technical Framework: Assessment and management of odour from stationary sources in NSW b. is designed to include best management practices to reduce the emission of air pollutants to the maximum extent achievable and c. prepare an odour management plan including details of odour mitigation measures to be incorporated as part of the development. **B56.2** Development implements an ongoing odour emissions monitoring and reporting regime prepared by a suitably qualified person and commits to providing RGDC an annual statement setting out how the site-based odour emissions monitoring and reporting regime has been complied with.	**U56.1** Development that involves odour emissions results in offensive odour impacts at the nearest existing sensitive receiver outside of the precinct.

6.6.3 Noise

Development should ensure that sensitive receivers both inside and outside the precinct are protected from unacceptable noise impacts. The key strategy for protecting receivers outside the precinct boundary is through ensuring high noise emitting developments are concentrated at the centre of the precinct.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Noise			
PC57 To minimise impacts on the acoustic amenity of noise-sensitive receivers. Note: The Environment Protection Authority should be consulted with early in the Activation Precinct Certification process to determine the level of assessment required. Guidance on how the noise impact risk can be determined and the associated level of assessment required is contained within the SAP Assessment Framework - NOISE.	**A57.1** Development that produces noise emissions must: a. identify the potential noise impact risk and determine the level of assessment and management required. Guidance on how the noise impact risk can be determined is contained within the SAP Assessment Framework - NOISE b. be designed to achieve impact assessment criteria established in accordance with the NSW EPA Noise Policy for Industry (2017) (NPfI) (or as updated) and c. be designed to include best management practice (BMP) and best available technology economically available (BATEA) to minimise noise emissions. **A57.2** Development that has the potential to significantly impact sensitive receivers will require a noise impact assessment prepared by a suitability qualified person in accordance with the NSW EPA Noise Policy for Industry (2017) (NPfI) (or as updated) to be submitted with the application for an Activation Precinct Certificate.	Not applicable.	**U57.1** Development is not designed to achieve the noise outcomes in accordance with the NSW EPA Noise Policy for Industry (2017) (NPfI) (or as updated). **U57.2** Noise emissions are not minimised through the implementation of BMP and BATEA. **U57.3** Development that will generate significant noise impact at noise-sensitive receptors.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC57 Continued	**A57.3** Where the issuing authority determines that on-site noise monitoring is required, commit to providing RGDC an annual statement setting out how the site-based noise monitoring and reporting regime has been complied with. Note: The SAP Assessment Framework - NOISE is under development in 2022/2023 and expected to be in place in 2023. Note: An operational environmental management plan should identify the environmental impacts, and management activities and controls related to managing and minimising noise emissions, including how the environmental management activities and controls will be monitored and reviewed. As part of an environment protection licence, an annual return is required to be provided to the EPA. An extract of the part of the annual return which sets out how the site-based noise monitoring and reporting regime has been complied with may be provided to RGDC to satisfy A63.1(b).		

6.6.4 Biosecurity

Development within the precinct should ensure appropriate biosecurity measures are in place to protect our economy, environment and community.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Biosecurity			
PC58 Development addresses biosecurity requirements to protect the environment and community from the negative impacts of pests and diseases, weeds and contaminants.	**A58.1** Development complies with the relevant Department of Primary Industries biosecurity guidelines (https://www.dpi.nsw.gov.au/biosecurity/managing-biosecurity). Note: The Department of Primary Industries should be consulted and written advice sought on development for intensive agriculture, waste disposal or resource management facilities and any other development that may impact on biosecurity. The issuing authority may require an emergency disposal and biosecurity protocol prepared by a suitably qualified person.	Not applicable.	**U58.1** Development results in an unacceptable biosecurity risk.

6.7 Savings provisions

6.7.1 Existing land uses

Under the Precincts-Regional SEPP, an issuing authority can only issue an Activation Precinct certificate for land only if there is a master plan and delivery plan that applies to the land concerned. The intent of these controls is to ensure that development or extensions to existing land uses that were existing before the commencement of the master plan can occur where appropriate.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Existing land uses			
PC59 Expansion of existing development occurs where it does not compromise the development of the precinct.	**A59.1** For existing uses that were existing before the commencement of the master plan, the following documents continue to apply to the expansion of existing land uses on land within the Precinct: a. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 and b. Parkes Development Control Plan. Note: The expansion of existing land uses may include: • the development of buildings and structures that supports existing farming and primary production uses on the associated land while the farming use is in transition or the land is not included within stage 1 of the precinct or • minor extensions, additions or alterations to existing habitable buildings within the precinct such as: a. verandahs b. decks c. carports and garages or d. living areas. **A59.2** Temporary land uses on land that would support the active use of the land. Examples include: a. farming and primary production activities or b. special events.	Not applicable.	**U59.1** Intensification of existing or establishment of new sensitive land uses that compromise the development of the precinct. Note: Sensitive land uses include Community facilities, Centre-based child care facilities, Educational establishment, Emergency services facilities, Sewerage systems, Water supply systems. **U59.2** Development of structures or land uses that compromise the establishment of important road, rail or open space / vegetation connections for the current or future stages of the precinct.

7

Monitoring, reporting and compliance

CSIRO Parkes radio telescope

7

This chapter outlines the monitoring, reporting and compliance program for the Parkes Special Activation Precinct.

7.1 General

The Parkes Special Activation Precinct will be a sustainable hub of high-value production and manufacturing supporting advanced industries and businesses which are connected to the world.

The precinct has been planned with the United Nations Industrial Development Organization (UNIDO) Eco-Industrial Park (EIP) Framework, UN Sustainable Development Goals, Ecologically Sustainable Development (ESD) and circular economy principles embedded. A key component for the precinct is, therefore, the establishment of the monitoring, reporting and compliance program.

The advantages of a comprehensive system monitoring and benchmarking precinct performance include:

- **Performance measurement and improvement**: a comprehensive set of precinct performance indicators help businesses and stakeholders in the precinct to identify opportunities to collaborate and partner on innovative solutions to enhance their processes and operations. Performance monitoring enables the comparison of park performance across time and facilitates the assessment of progress towards achieving precinct objectives.
- **Reporting and communication**: enabling valuable communication between stakeholders and simplifying the process of reporting on precinct performance to key stakeholders both inside and outside the precinct.
- **Allocate and attract funding**: Assisting financial sectors and funding agencies to evaluate the commitments of the precinct when assessing project proposals.
- **Reputational benefits**: promoting and enabling industrial development whilst maintaining social licence and positive relationships with key stakeholders through the ability to effectively communicate the economic, environmental, and social performance of the precinct.

Storm water detention pond, Hume

The program will be developed progressively and implemented through a process of continuous improvement. RGDC will work in consultation with partners, including Parkes Shire Council, the NSW Environment Protection Authority, industry and businesses, the community, and research and conservation sectors.

The delivery plan will be amended or updated as required.

Purpose and objectives

A key component for the success of the precinct will be meaningful monitoring, reporting and compliance measures. This should form a coordinated and integrated program linked to precinct outcomes.

The program will report across different themes, including:

- Sustainability
- Circular economy
- Energy management
- Water management
- Waste management
- Biodiversity
- Environmental health
- Infrastructure
- Operational requirements.
- Social Sustainability

The intent of the program is to coordinate and integrate existing monitoring, modelling and reporting systems across these themes to avoid duplication. For example, where existing Environmental Protection Licences are in place for industry across the precinct, RGDC will seek to structure its data requirements to align with what is monitored and reported on under those licences. Similarly, RGDC will seek to align its data requirements with major reporting schemes such as the National Greenhouse and Energy Reporting (NGER) Scheme and National Pollutant Inventory (NPI).

The program's principal purpose is to evaluate whether the precinct is on track to meet its targets, objectives and outcomes. It will also help to identify emerging issues and risks and enable timely and suitable responses, management updates and mitigation measures.

The program ensures decisions regarding the protection and management of the precinct are based on sound evidence, set best practice standards, are consistent with the principles of transparency and accountability and are underpinned by a partnership approach.

Objectives for the program are to:

- enable the early detection of trends, changes, threats and risks within the precinct, driving adaptive management
- evaluate the effectiveness of key themes, including the establishment and development of sustainability and circular economy outcomes
- ensure monitoring, reporting and compliance functions are meaningful and focus on actions that will effectively deliver measurable improvements
- enable the identification of partnership and precinct wide project opportunities that deliver improvements in sustainability performance and benefits to participants
- track and inform the performance of the precinct against domestic and international benchmarks
- collaborate and consult with local community members, industry experts and business leaders to ensure the needs are being met as the precinct is developed and operated.

Principles

The following principles will apply to the monitoring, reporting and compliance program across the precinct:

- monitoring is linked to management targets, objectives and outcomes in the precinct
- collaboration is essential between industry, businesses, research, education, academic and other partner organisations
- information and data are transparent, accountable, comprehensive, stored securely, and accessible in an appropriate format according to different permission levels
- the program will build on and align with existing systems, and not duplicate or replace systems
- the program will cover the lifespan of the precinct and be responsive as it develops and grows
- program design will be evidence based and scientifically defensible. This should also feed back into an adaptive management cycle to provide management and mitigation measures that respond appropriately to the precinct outcomes or other risks and drivers
- the program should be reviewed regularly, at least every five years as a result of findings in the precinct.

Collaboration and partnerships

A collaborative approach with partner organisations that use or generate precinct monitoring, reporting or compliance data will be fundamental to successfully establishing and implementing management and mitigation measures. This involvement is critical to ensuring the program is underpinned by the best available science and expertise.

The partnership approach underpinning the program will leverage knowledge and funds to deliver increased efficiencies, benefits to participants and improved alignment and coverage of monitoring, reporting and compliance functions.

Adaptive management

The precinct is underpinned by strong environmental protection, sustainability and circular economy principles. Sound monitoring, reporting and compliance data can be used to assess and update adaptive management responses.

Any data obtained through the lifecycle of the precinct will continue to inform and update the management and mitigation measures within the precinct.

This allows the precinct to have living management and mitigation measures that respond appropriately to changing drivers or risks.

Monitoring

The program will measure and report progress towards achieving the precinct outcomes, objectives and targets, and guide adaptive management.

Baseline monitoring

At the appropriate time, monitoring will be undertaken to compile baseline conditions and this baseline will be used to assess the extent of impact from the growth of the precinct. For cumulative impacts, this baselining will be led by RGDC (in partnership with appropriate organisations) and for operations this will be co-ordinated by RGDC for the precinct but implemented by businesses at their facility level. Examples include monitoring to assess amenity considerations such as noise, odour and air quality, effective and efficient water and energy management, and the uptake and implementation of sustainability and circular economy opportunities.

Compliance monitoring

Compliance monitoring will be undertaken by the responsible party in relation to any licence or approval that may apply to the land. This may include an environment protection licence or development consent, and relate to, but is not limited to, the conditions specified in the licence or approval.

Reporting

Consistent reporting of information will help track and evaluate the precinct against its outcomes, objectives and targets. Standardised processes will be implemented to ensure data and information is recorded consistently.

An annual report on the implementation and operation of the precinct will be prepared and made publicly available. RGDC will prepare this report and provide an assessment of progress in delivering and achieving the precinct's outcomes, objectives and targets.

Compliance

Construction and operation

The two main compliance functions in the precinct are construction and planning, and operational requirements.

The enforcement authority for construction and planning compliance functions will depend on who is responsible for issuing the development consent.

For construction and planning compliance functions, the enforcement authority is:

- Parkes Shire Council for planning related matters for a Complying Development Certificate, such as an already constructed structure
- accredited certifier or Parkes Shire Council for conditions relating to a Complying Development Certificate depending on the level of action required
- Secretary, Department of Planning, Housing and Infrastructure for thermal electricity generating works in the precinct
- Secretary, Department of Planning, Housing and Infrastructure for the removal of trees within land zoned 'environmentally sensitive area' where complying development is not possible.

For operational compliance functions related to matters under the *Protection of the Environment Operations Act 1997*, the enforcement authority is:

- NSW Environment Protection Authority (EPA) for scheduled activities
- Parkes Shire Council for non-scheduled activities.

The NSW Environment Protection Authority (EPA) is the state's principal environmental regulator and is responsible for regulating a wide range of activities and monitoring compliance with legislation and statutory instruments covering air emissions, noise, waste, water quality, forestry, contaminated sites, dangerous goods, hazardous materials and pesticides. The EPA requires regulated industries to report on their compliance. All environment protection licensees must provide an annual compliance statement detailing their compliance with licence conditions over the previous reporting period.

The enforcement authority for operational compliance functions will depend on whether the development is classed as either a scheduled or non-scheduled activity under the *Protection of the Environment Operations Act 1997.*

Roles of RGDC

RGDC is the government agency responsible for the delivery and management of the precinct including:

- the delivery plan and precinct design guidelines
- managing and coordinating major precinct infrastructure works
- supporting existing businesses and attracting new investments to the precinct
- managing and implementing precinct frameworks and strategies.

RGDC has no formal enforcement powers in relation to construction and operational matters in the precinct.

Under its powers in the *Growth Centres (Development Corporations) Act 1974,* RGDC has the ability "to assist councils… with respect to matters concerning the promotion, co-ordination and management" of the precinct.

As such, RGDC will work collaboratively with Parkes Shire Council to implement a mutually beneficial approach for enforcement activities.

For example, where a development is non-compliant with fencing requirements, RGDC would first work with the business as an industry partner to rectify the matter, prior to Council issuing any statutory compliance / enforcement response.

Review of monitoring, reporting and compliance program

A full review of the program will be undertaken and updated every five years if required. The monitoring, reporting and compliance functions can be updated at regular intervals should new management and mitigation measures be incorporated into the adaptive management cycle. This will ensure monitoring, reporting and compliance functions respond appropriately to new information, changing drivers or risks.

The monitoring, reporting and compliance program will be developed progressively in consultation with partners, including Parkes Shire Council, Department of Planning, Housing and Infrastructure, EPA, industry and businesses, the community, and research and conservation sectors.

7.2 Precinct-wide monitoring program

Throughout the delivery of the precinct, RGDC will be responsible for a precinct wide approach to monitoring which will be used to evaluate whether the precinct is on track to meet its targets, objectives and outcomes.

RGDC is committed to improving environmental performance and becoming a leading organisation, nationally and internationally, in sustainable development and implementing the sustainability framework to connect organisations, processes and resources in a circular economy to gain efficiencies and minimise waste.

SUSTAINABILITY FRAMEWORK

Climate resilience
A precinct resilient to climate change

Green infrastructure
Blue and green infrastructure reflecting connection to country

Mobility
A low carbon, active and future ready mobility network

Assurance
A sustainability framework that delivers innovation and attracts investment

Emissions
Industries collaborating to deliver a carbon neutral precinct

Energy
Harnessing innovation to deliver secure, affordable and low carbon energy

Water
A fully integrated water cycle, supporting the needs of the precinct and the environment

Resource optimisation
A circular economy framework for resource efficiency

The **sustainability goals** for the precinct are:

1. to be Australia's first precinct aligned with the UNIDO Eco Industrial Park Framework
2. to develop a Net Zero pathway
3. to foster leadership in all aspects of sustainability.

These commitments are supported by the following sustainability framework which forms part of the master plan.

7.2.1 Operations Reporting Precinct Environmental Management System

To ensure that the UNIDO EIP framework and principles are fully integrated into the precinct operations, and its goals are met, an ISO 14001 Environmental Management System (EMS) is being developed for the precinct. The EMS will be in place to manage the environmental aspects of the precinct's operations (e.g. energy, greenhouse gas emissions, waste, material use, water). This is consistent with UNIDO's recommended approach to implementation.

The precinct EMS is the tool that will help coordinate and implement improvement programs and projects that drive precinct wide performance and deliver benefits for participating businesses.

- RGDC is the government agency responsible for delivering the precinct EMS.
- Each business has a role to play in managing their impacts, as part of the broader precinct performance. For each business this includes implementing an EMS for their operations, or adapting their existing business operations EMS, to align with the precinct EMS. This will facilitate data collection and help identify opportunities for improvements at a business and/or precinct level.

The precinct EMS will contain targets, actions objectives and outcomes to achieve environmental protection, improvements in sustainability and circular economy outcomes. The aim is to ensure the long-term protection and improvement of the precinct's health and resilience, while integrating economic development with ecologically sustainable principles. These targets and actions will be developed through a bottom-up approach, working with businesses to identify initiatives that are technologically viable, financially feasible and make business sense. Precinct wide targets will be developed by aggregating up what has been agreed to by businesses and what is being achieved by precinct wide projects and initiatives.

The EMS will monitor the relevant environmental aspects on an ongoing basis. This will include monitoring and reporting on greenhouse gas emissions data from operations within the precinct to meet the net-zero emissions target.

The EMS will be subject to regular external audits by an approved third-party auditor as per ISO 14001 requirements.

7.2.1.1 Data under the EMS

RGDC will work with businesses to help implement the EMS and to progressively roll out reporting under the EMS as businesses move from establishment to operations. The EMS is about having a *system* in place to implement and monitor performance and identify opportunities for improvements. It is a process of continuous improvement.

Once a business is operating and had time to establish a baseline, businesses and organisations within the precinct will have a responsibility to provide data to RGDC to inform annual reporting on the precinct EMS. The type of operational data that may be required is outlined in the EMS.

The nature and impacts of the individual operations will determine what data is relevant and therefore required. Appropriate metrics and indicators will be reviewed and updated to reflect changes in the precinct, best practice available data and applicable standards and frameworks. Businesses will be required to provide quarterly or annual reports on required environmental data.

7.2.1.2 Annual review process

Table 2 outlines the key elements of the precinct EMS that will be assessed as part of the annual review process:

Life in Parkes
Courtesy of Parkes Shire Council

Assessed as part of the review process:

Review item	Summary
Organisational details	A review of the organisation structure, roles and responsibilities and scope / boundary
Leadership commitment	A review of leadership commitment and the environmental policy to ensure currency
Compliance and legislation	A review of compliance and regulatory requirement to ensure the precinct is not exposed to new legislation or compliance issues
Environmental aspects and impacts	A review of environmental aspects and impacts to ensure all environmental issues are captured
Objectives and targets	A review of objectives and targets to ensure the EMS is aligned with the delivery of the precinct
Support	A review of support systems (resources, training, awareness, communications) to ensure RGDC employees are equipped to manage environmental performance
Performance evaluation	A review of outcomes/data against KPIs to track performance and monitor improvements over time
Operations	A review of the operational aspects of the organisation, along with emergency planning and response
Improvements	A review of the performance and continual improvement outcomes and ensure that existing systems are creating ongoing opportunities for improving environmental performance

7.2.2 Environmental monitoring

Precinct wide environmental monitoring will be undertaken by RGDC in relation to:

- water quality
- groundwater
- air
- noise
- odour.

This is in addition to businesses' site-specific monitoring and reporting under the precinct EMS.

Businesses will be required to provide quarterly or annual reports on required environmental data. This information will be used to monitor the precinct-wide environmental performance.

The objectives and principles of the environmental monitoring is provided:

Water quality

- Water quality will be managed through a precinct wide stormwater management strategy and contaminant management site specific stormwater quality controls.

Groundwater

- RGDC will establish a groundwater baseline register which will provide a central point for all developments that present a risk and may potentially impact on groundwater
- The EMS register will identify developments with a high potential risk to groundwater, and any groundwater monitoring requirements that apply through an Environmental Protection Licence
- The groundwater baseline register will be a live document which will be updated and amended as new development occurs within the precinct

Air quality

- RGDC will work with relevant government agencies (i.e. EPA) to establish unattended monitoring stations within the precinct
- The monitoring stations are capable of measuring ambient air quality levels and can be progressively re-located as more industry is developed or as areas become unsuitable over time
- Annual monitoring reports will be prepared to assess the trends in pollutant levels over time as a means of evaluating the overall performance of the Special Activation Precinct compared with relevant guidelines

Noise

- RGDC will work with relevant government agencies (i.e. EPA) to establish a program which includes monitoring and reporting on noise emissions
- Where monitoring indicates increasing noise levels at or above the cumulative criteria, more frequent attended monitoring may be warranted to identify the issue and determine what if any action may be needed
- Annual monitoring reports will be prepared to assess the trends in noise levels over time as a means of evaluating the overall performance of the precinct compared with relevant guidelines

Odour

- RGDC will work with relevant government agencies (i.e. EPA) to establish a monitoring and reporting program, which includes monitoring and reporting on odour emissions
- Where monitoring indicates increasing odour emissions, more frequent attended monitoring may be warranted to identify the issue and determine what if any action may be needed
- Odour sampling of sources at a site can also be conducted where necessary to determine the total site odour emission rate and compare this with the allowance for the specific parcel of land
- Annual monitoring reports will be prepared to assess the trends in odour emission levels over time as a means of evaluating the overall performance of the precinct compared with relevant guidelines

7.3 Data

Businesses in the precinct will work with RGDC as industry partners to ensure the ongoing health and performance of the precinct can be measured.

Businesses will be required to enter into a data-use agreement setting out how data will be collected, used, stored and shared.

The following policies are referenced as best practice guides for the collection and use of data:

- Standard Technical Requirements for Spatial Datasets and Maps (August 2017) prepared by the Department of Planning, Housing and Infrastructure
- NSW Standard for Spatially Enabling Information (May 2018) prepared by the NSW ICT and Digital Leadership Group.

Where possible, businesses should provide data in accordance with the building SMART international standard as a best practice standardisation tool for digital infrastructure data.

How will the data be used?

The collection, capture and use of reliable data will be paramount to the success of the precinct.

High-quality data will provide for valuable analysis of the precinct at any given time. It allows the precinct's health and performance to be accurately managed and effective identification of partnership and precinct wide projects that will deliver improvements for precinct performance and participants.

This enables RGDC as the precinct custodian to proactively manage and respond to the precinct's needs.

RGDC's approach to the management of infrastructure data is based on the NSW Infrastructure Data Management Framework.

These principles will ensure the clear capture and application of data using common, open standards. This makes the data ideal from a useability perspective, such as through the use of digital twins.

The core principles RGDC will adopt for data management include:

Public good	Deliver public good
Value	Provide ongoing value and insights of infrastructure across the asset lifecycle
Quality	Provide sufficient information to assess data reliability and quality
Adaptability	Be flexible and scalable to allow adaptation to new technology and societal needs
Openness	Be as openly available, accessible and discoverable as possible to maximise value and reuse
Security and privacy	Be secure and private by design and facilitate security and privacy-preserving role-based access
Curation	Have clear responsibilities, ownership and regulation
Standards	Have consistent agreed standards (open where feasible) to enable interoperability
Federation	Enable an interconnected ecosystem of data environments supported by custodians

Intermodal hub on Brolgan Road

8

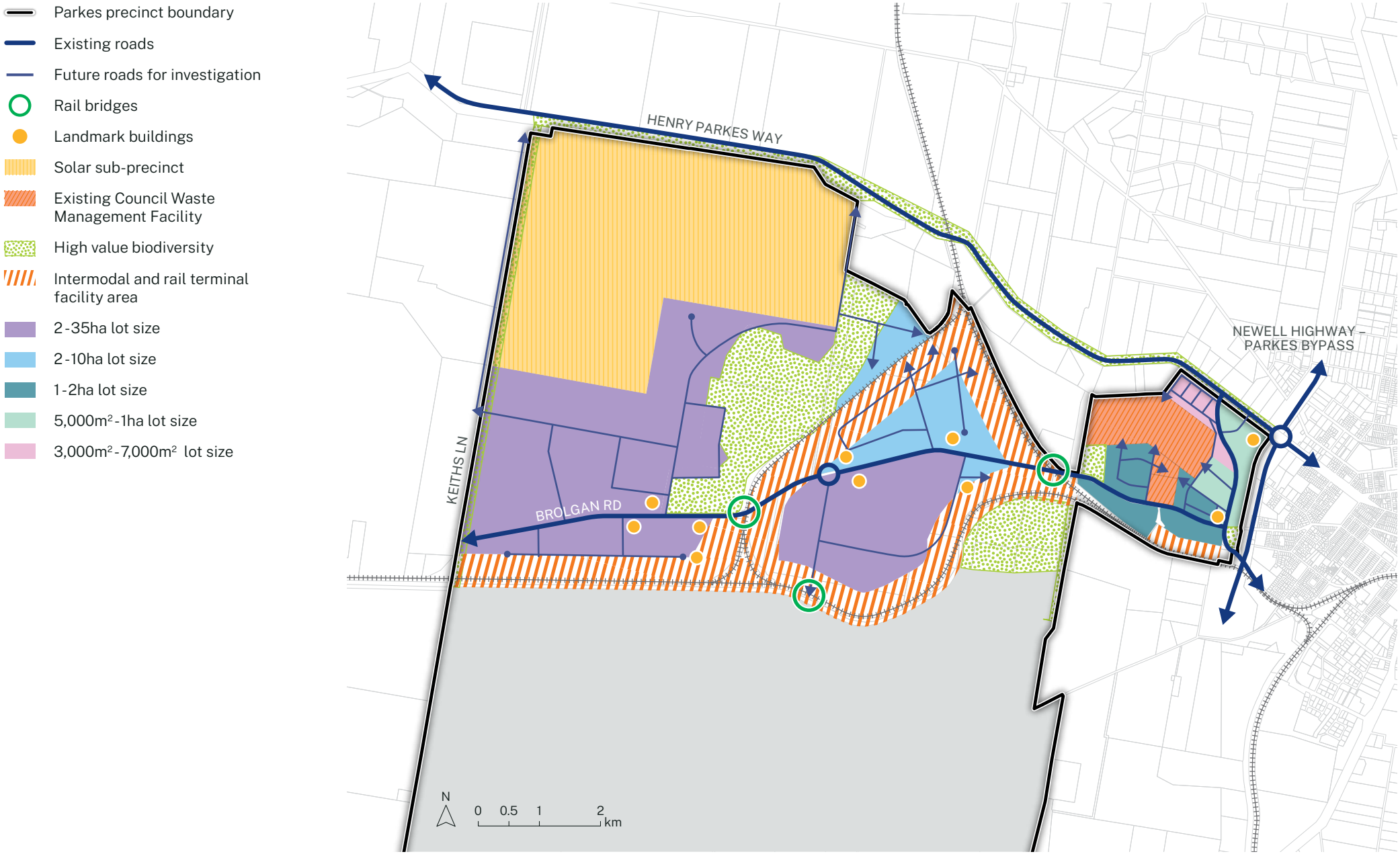
Mapping

Aerial of the canola fields of Parkes

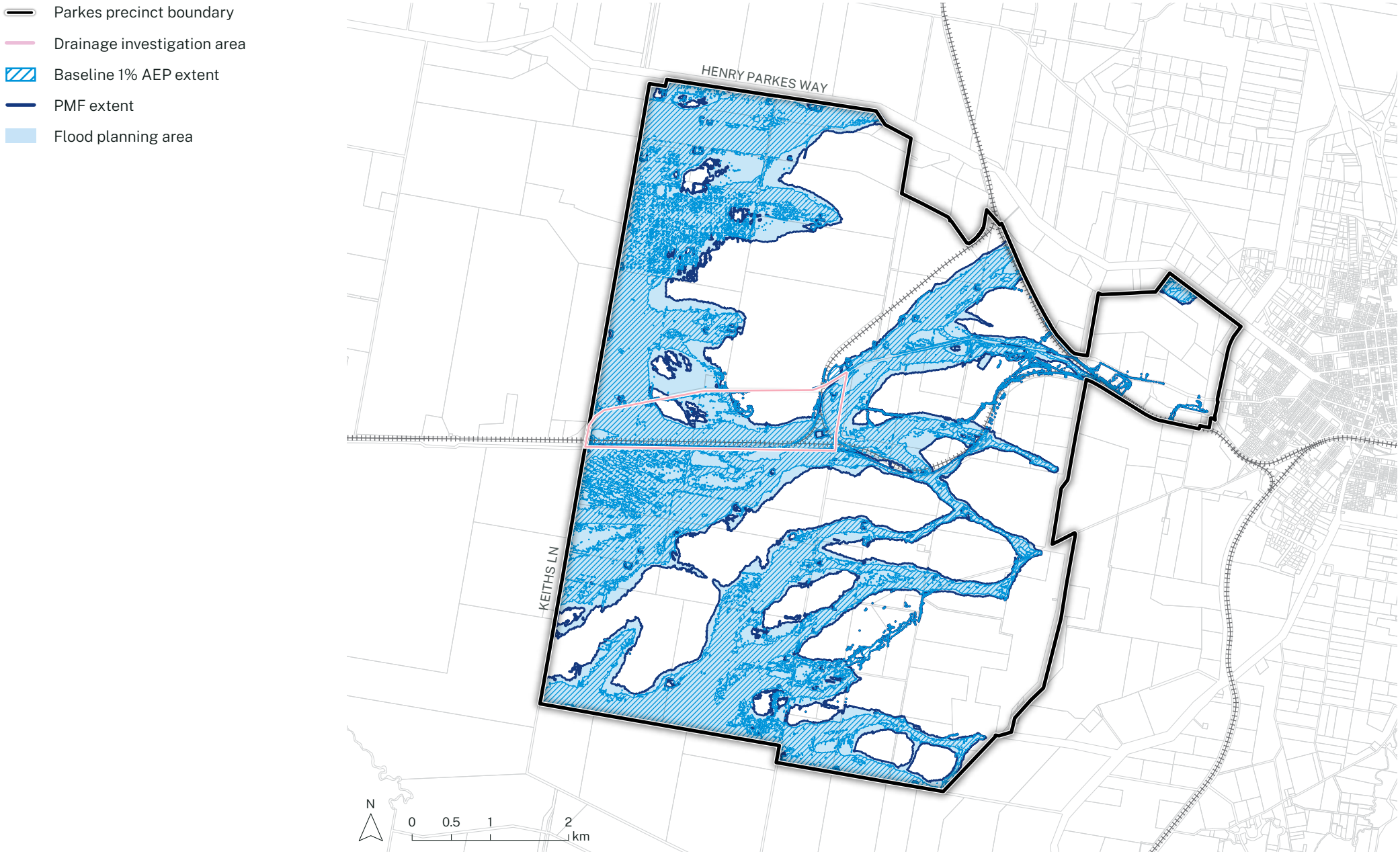
8

This section sets out all the mapping that corresponds with the assessment criteria in Chapter 6.

8.1 Precinct indicative layout plan



8.2 Flood prone land



8.3 Flood planning constraints categories

Parkes precinct boundary

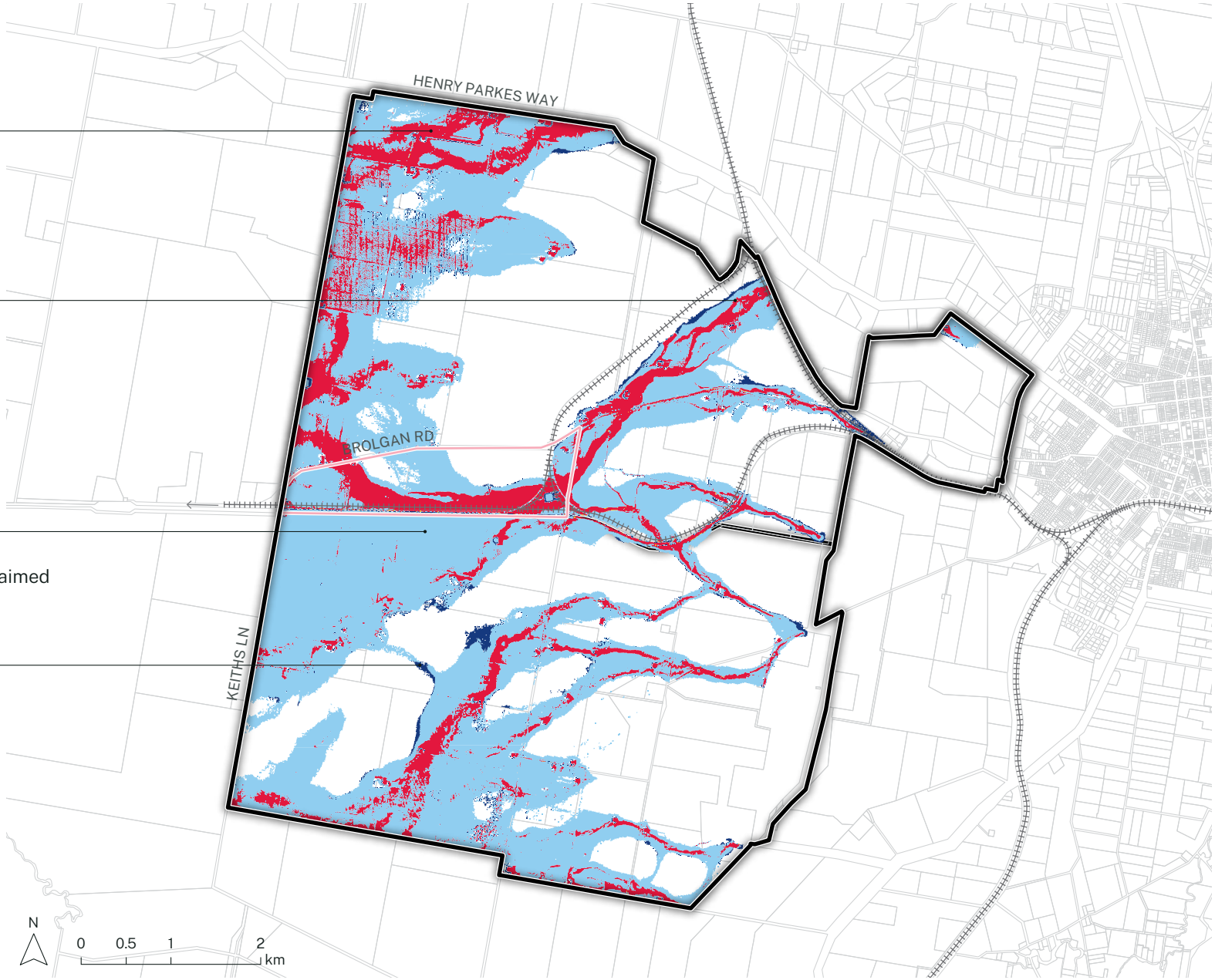
Drainage investigation area

FPCC1
Majority of developments and uses vulnerable to failure and have adverse impacts on flood behaviour.

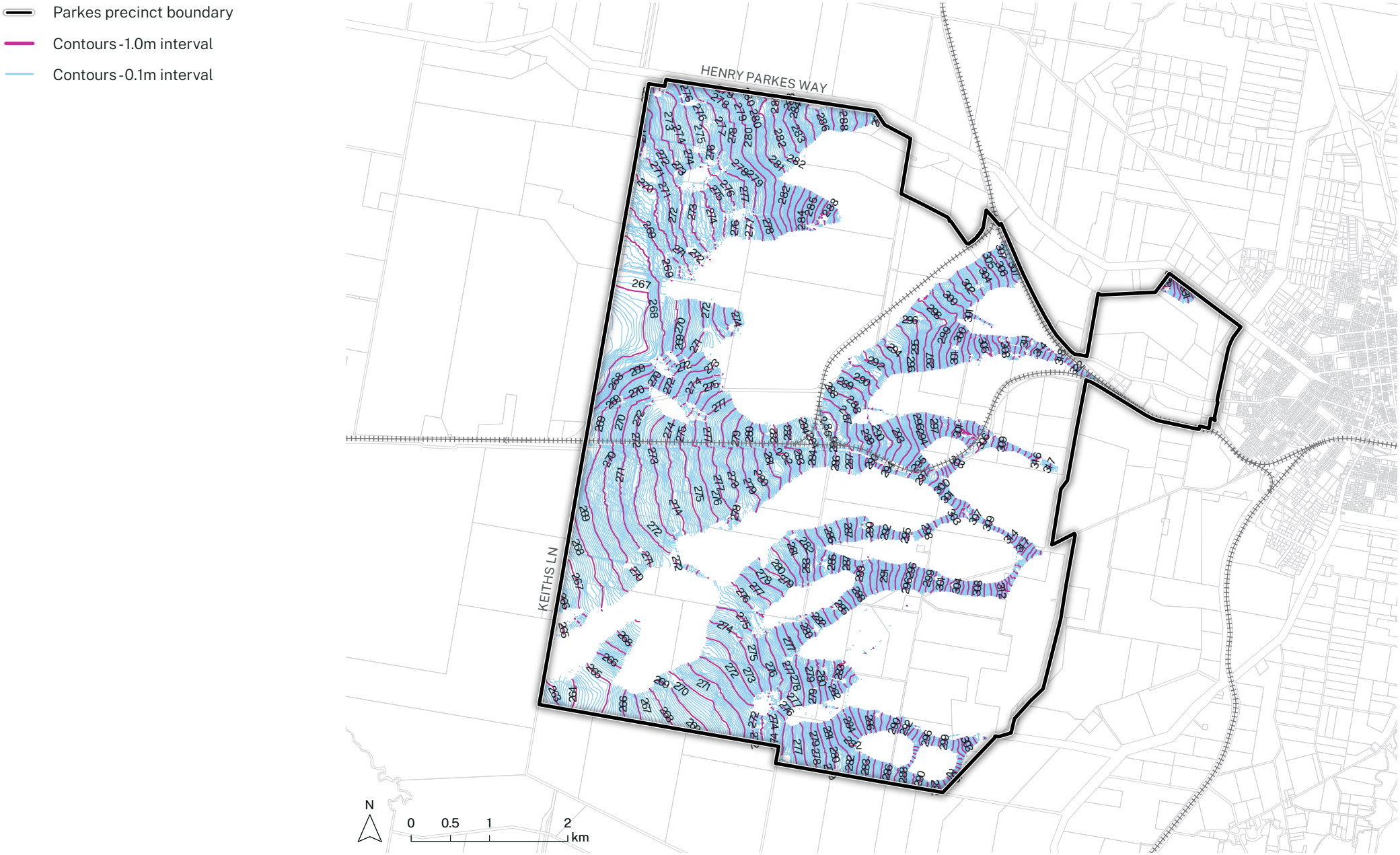
FPCC2
Consider developments compatible with rare flood flows. Many uses and developments vulnerable to flood hazard. Potential severe consequences of isolation and inundation.

FPCC3
Standard land use and development controls aimed at reducing damage and exposure to the DFE.

FPCC4
Consideration for emergency response facilities, key community infrastructure and land uses with vulnerable users.

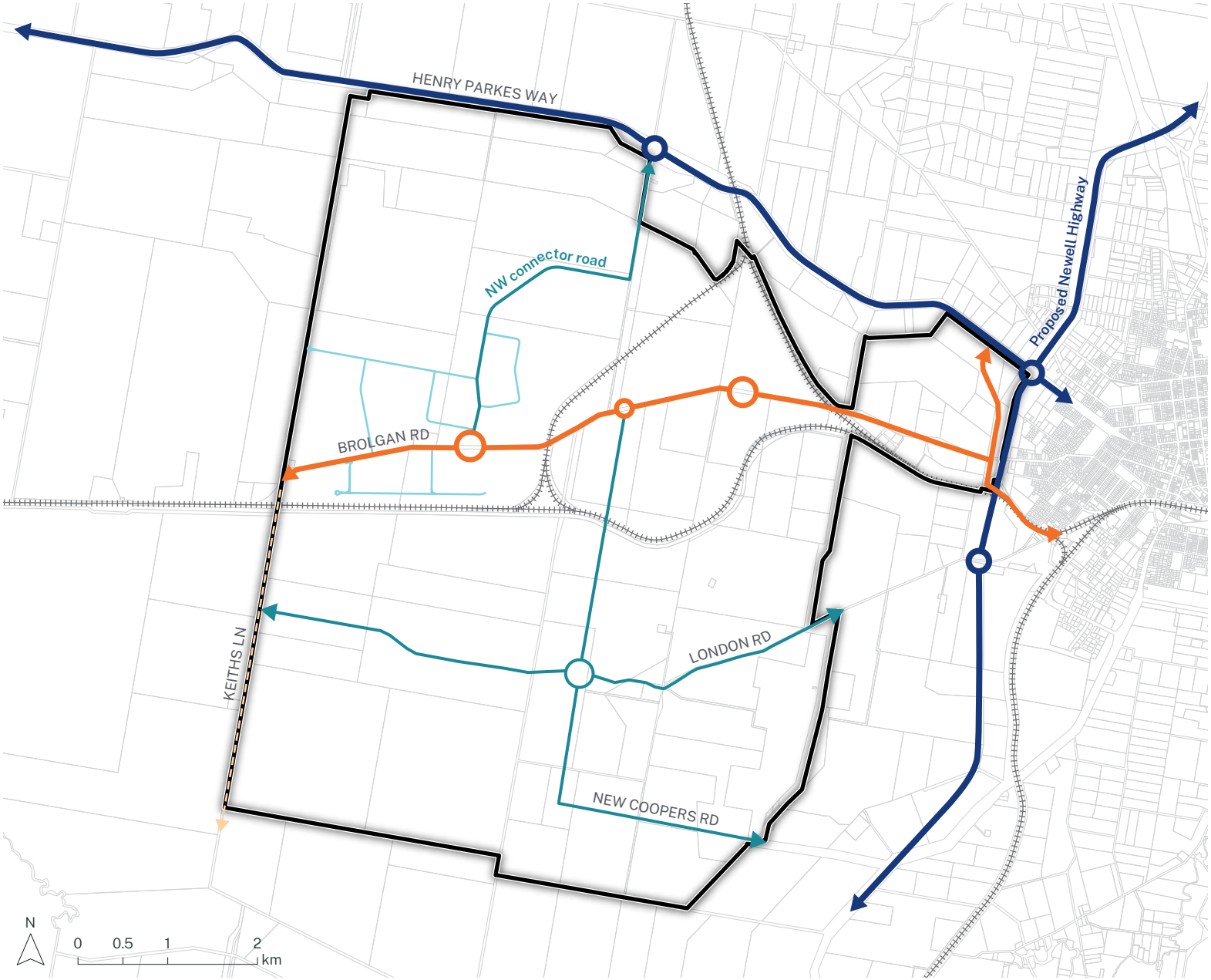


8.4 Flood planning levels

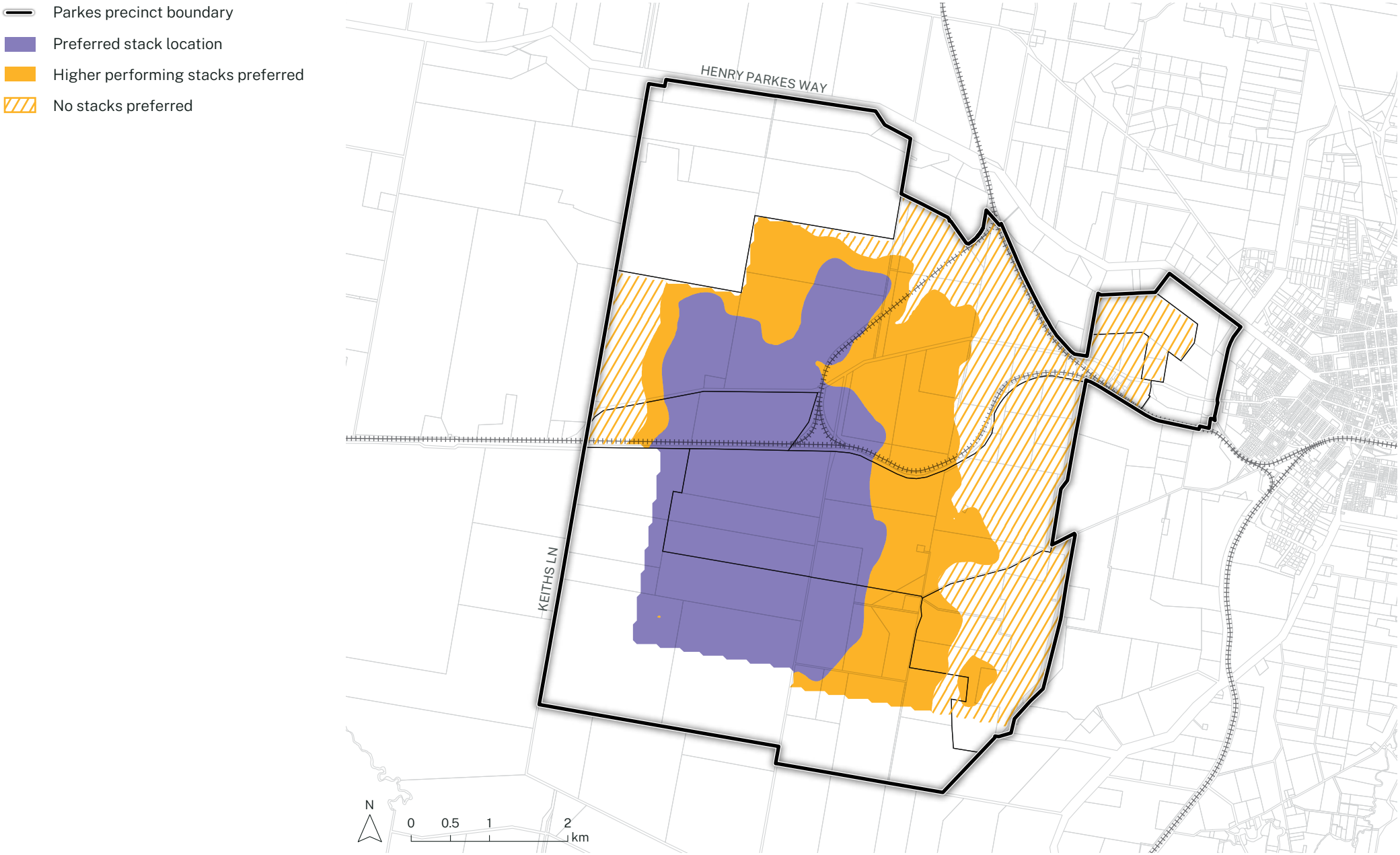


8.5 Road hierarchy

- Parkes precinct boundary
- Collector road (for investigation)
- Rural road
- State road
- Sub-arterial road
- Local road (for investigation)



8.6 Preferred stack locations



8.7 Odour overlay – emission rate

Parkes precinct boundary

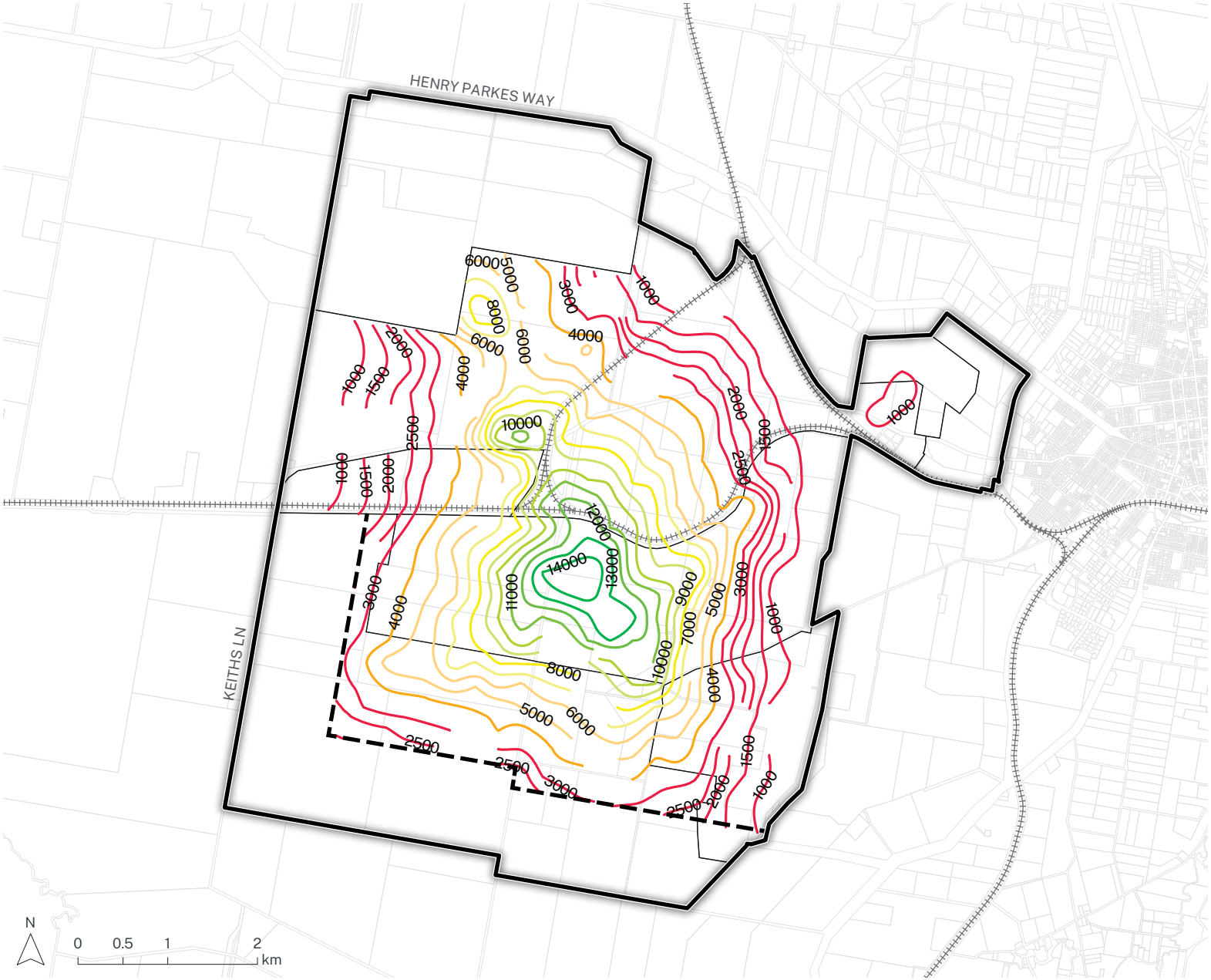
Buffer (1km)

Maximum odour emissions rate (OU/ha)

Preferred odour generating industry locations

Less preferred odour generating industry locations

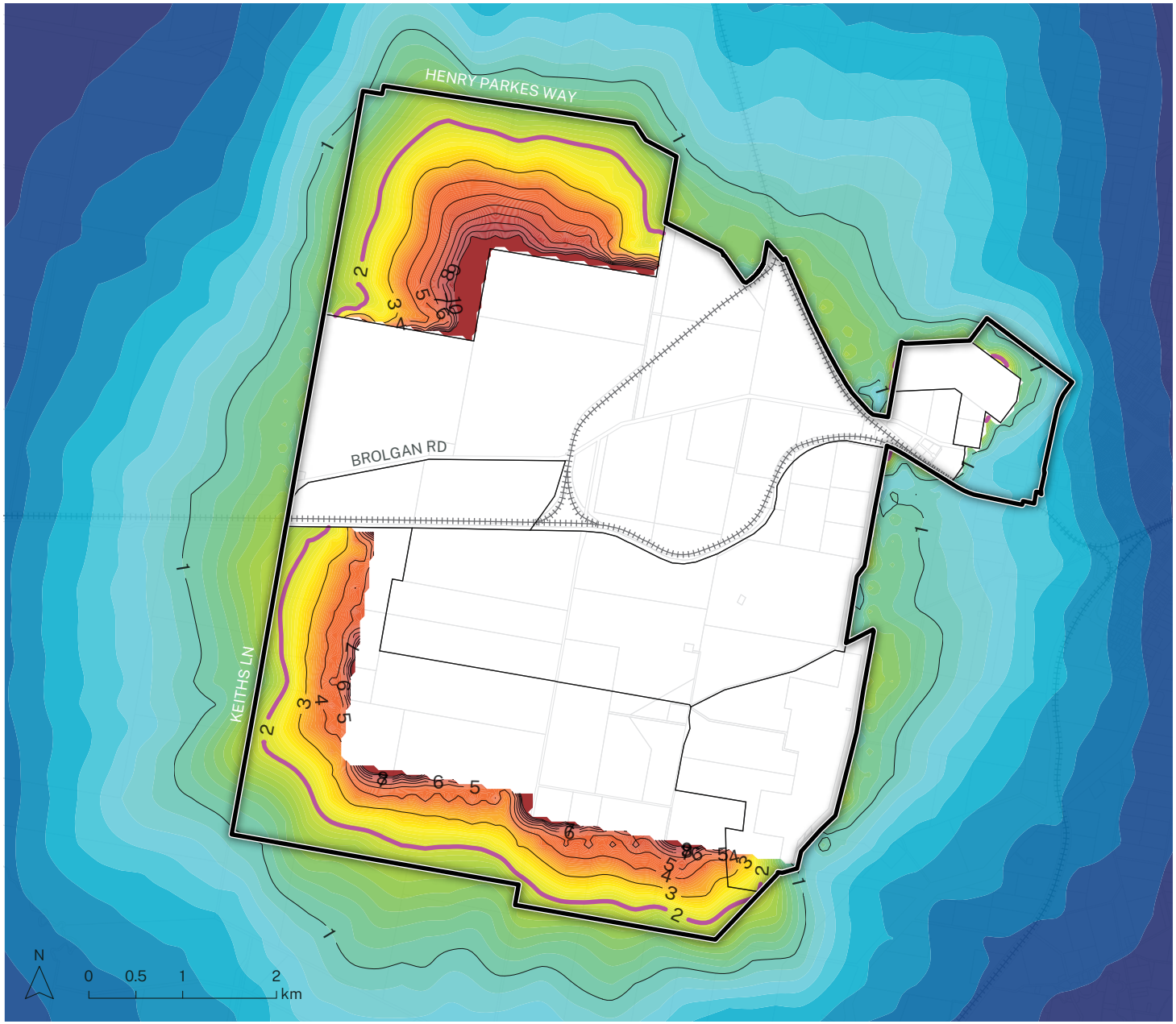
Avoid odour generating industry in these locations



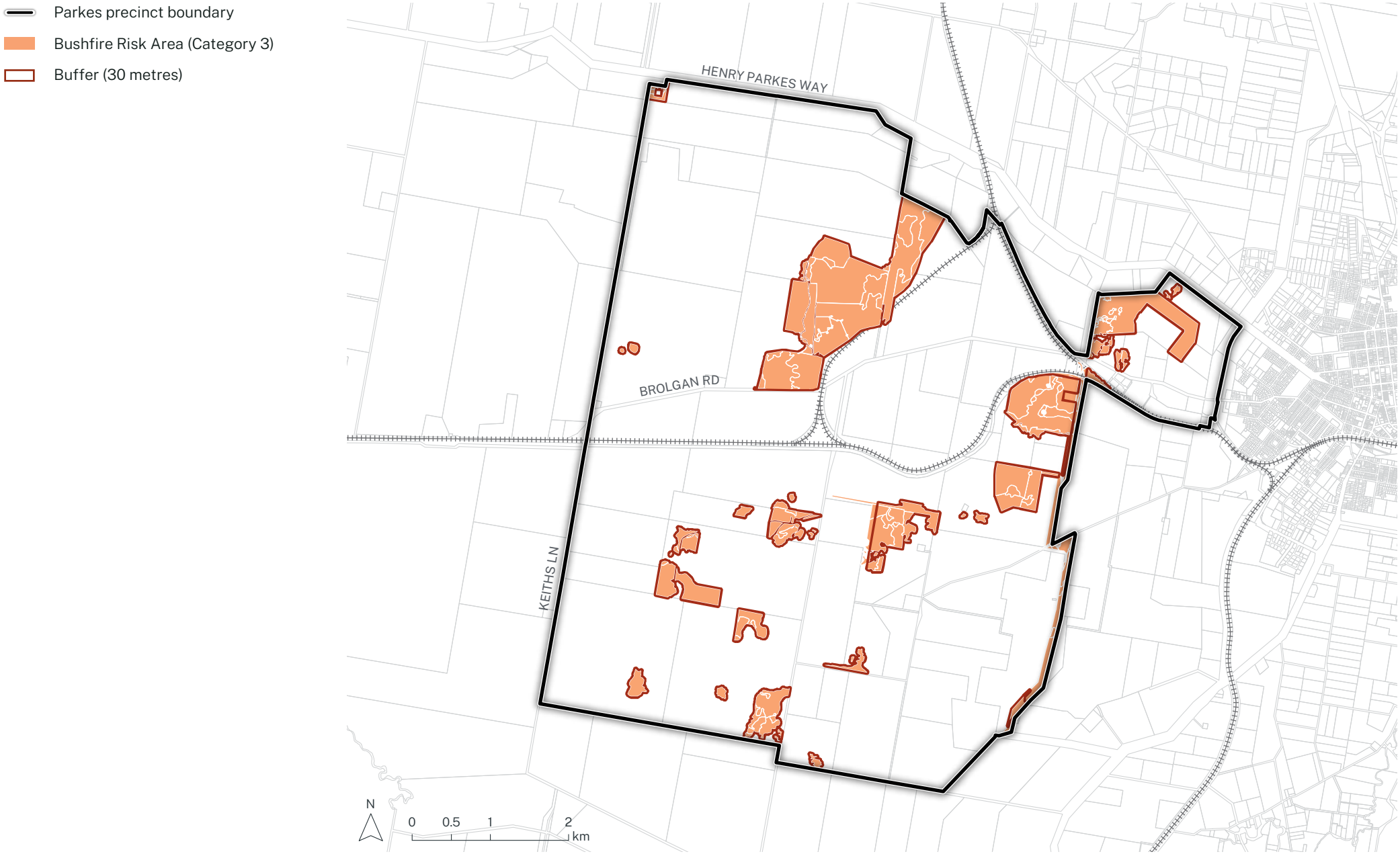
8.8 Extent of impact

Parkes precinct boundary

2 Extent of impact from individual operations (OU)



8.9 Existing and future bushfire risk areas



NSW GOVERNMENT

For more information, contact

activationprecincts@regional.nsw.gov.au
1300 REGION (73 44 66)