Regional Growth NSW
Development Corporation

PARKES SPECIAL ACTIVATION PRECINCT
DELIVERY PLAN (STAGE 1)

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

Aerial of canola fields near Parkes

Introduction

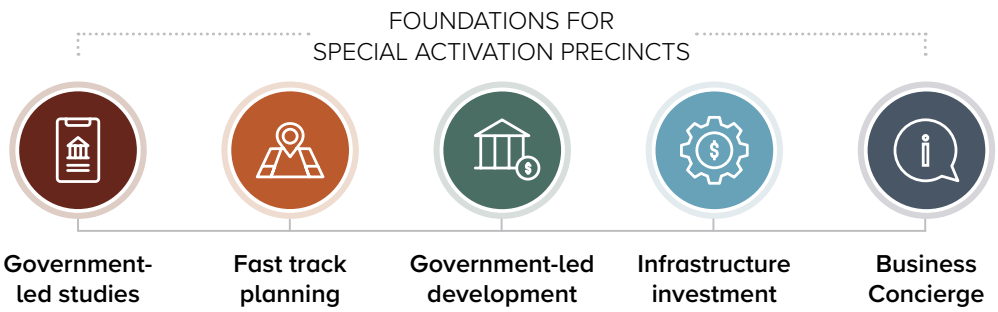
1

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

The CSIRO Radio Telescope at Parkes at twilight
Image courtesy of Destination NSW

1.1 What is a Special Activation Precinct?

Special Activation Precincts are dedicated areas within regional NSW which have been identified by the NSW Government for the capacity of their existing endowments to drive economic growth. They bring together planning and investment support services to drive jobs and economic activity.



The precincts will create jobs, attract businesses and investors and fuel economic development to ensure our regions are well placed to grow and meet the needs of regional communities.

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

The precincts offer investors access to fast-track planning approvals, government-funded infrastructure and business support services to reduce the time and cost of setting up business.

The precincts enable businesses to establish and grow with confidence knowing that the right planning framework and infrastructure investment is in place.

1.2
What is a delivery plan?

A delivery plan is a statutory document, referenced by the *State Environmental Planning Policy (Activation Precincts) 2020* (Activation Precincts SEPP), and is required before any development can occur within a Special Activation Precinct.

This delivery plan has been prepared by Regional Growth NSW Development Corporation (the corporation) and must be consistent with the master plan. It sets out criteria for:

- precinct design
- landscaping
- infrastructure planning and delivery
- proposal assessment.

Who will use this delivery plan?

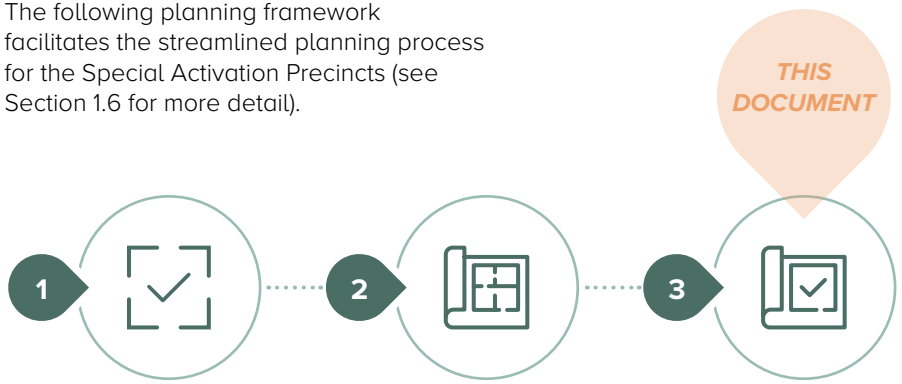
The delivery plan will be used by:

the corporation and assessment authorities to assess 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 the Special Activation Precincts (see Section 1.6 for more detail).



Activation Precincts SEPP

- zone
- objectives
- land uses

The Parkes Special Activation Precinct master plan

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

The Parkes Special Activation Precinct (Stage 1) delivery plan

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

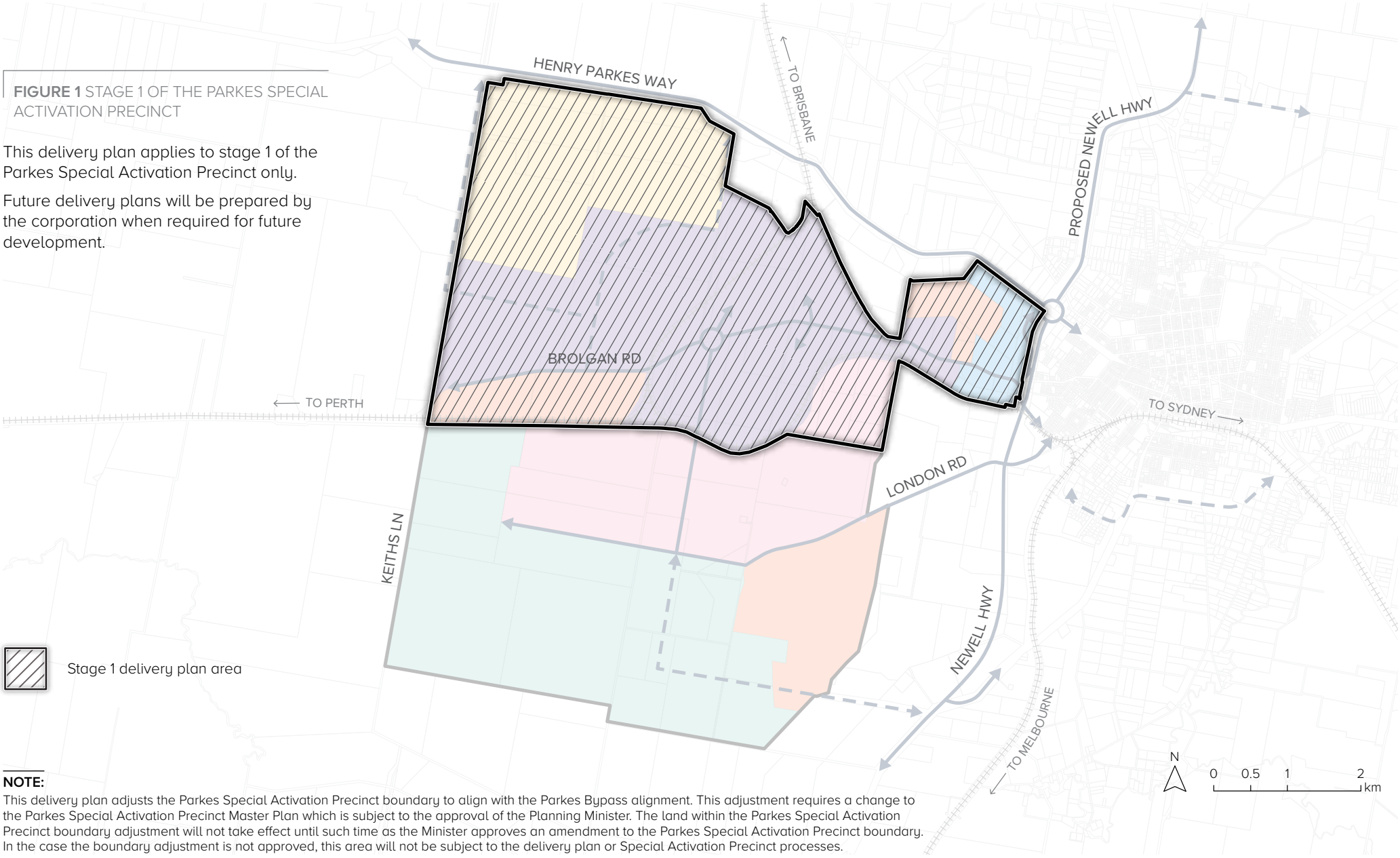
Parkes township with views across the canola fields
Image courtesy of Destination NSW

Where does this delivery plan apply?

FIGURE 1 STAGE 1 OF THE PARKES SPECIAL ACTIVATION PRECINCT

This delivery plan applies to stage 1 of the Parkes Special Activation Precinct only.

Future delivery plans will be prepared by the corporation when required for future development.



NOTE:
This delivery plan adjusts the Parkes Special Activation Precinct boundary to align with the Parkes Bypass alignment. This adjustment requires a change to the Parkes Special Activation Precinct Master Plan which is subject to the approval of the Planning Minister. The land within the Parkes Special Activation Precinct boundary adjustment will not take effect until such time as the Minister approves an amendment to the Parkes Special Activation Precinct boundary. In the case the boundary adjustment is not approved, this area will not be subject to the delivery plan or Special Activation Precinct processes.

How to use this delivery plan

1

Introduction (this section)

This section sets the context for the Parkes Special Activation Precinct, master plan and delivery plan. It also sets out the planning framework and process for proposals in the Parkes Special Activation Precinct. Read this section:

- to understand how the delivery plan fits within the broader legislative framework
- to know how to make an application and understand the process development proposals will go through to obtain an Activation Precinct Certificate.

2

Design guidelines

This section helps inform and guide planning and design in accordance with the delivery plan. Read this section if you want to understand the design and building standards for development within the Parkes Special Activation Precinct.

3

Infrastructure

This section sets the context of the infrastructure needs and expectations for the precinct. Read this section if you want to understand:

- the staging approach for the delivery of infrastructure in the Special Activation Precinct
- the objectives and principles guiding infrastructure planning and design within the precinct
- development contributions that may apply.

4

Monitoring, reporting and compliance

This sections outlines the monitoring, reporting and compliance program for the precinct. Read this section if you want to understand:

- how the corporation will undertake precinct wide monitoring 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.

5

Assessment criteria

This section sets out the performance criteria and how proposals will be assessed. Read this section if you want to:

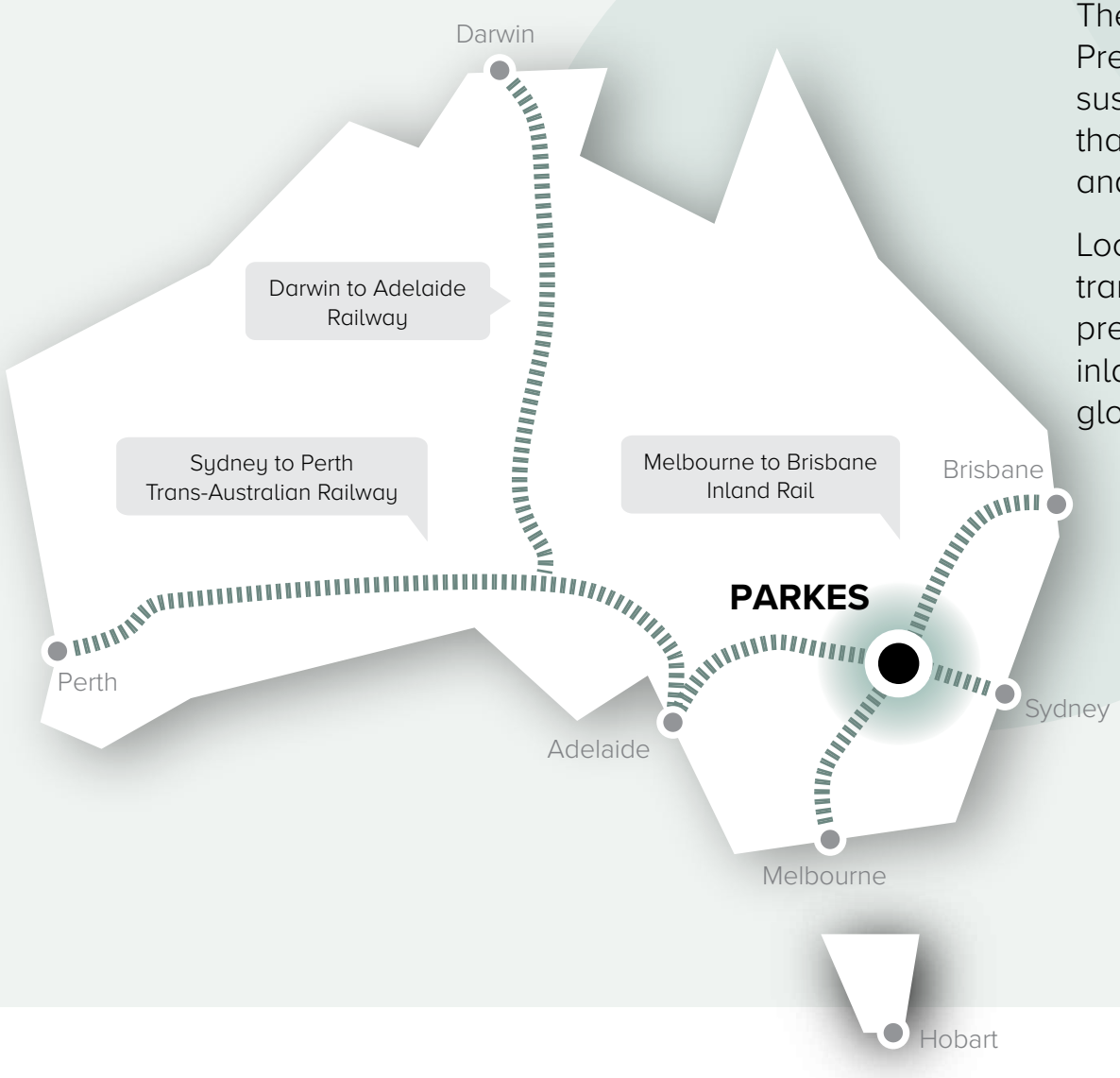
- know what you can do within sub-precincts
- understand how a proposal will be assessed
- understand what design options may be available to you.

6

Mapping

This section sets out all of the mapping relevant to Sections 2, 3 and 4. Use this section in conjunction with the design guidelines, infrastructure planning and assessment criteria for site specific development.

1.3
Vision and aspirations for the 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 aims to offer 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 in New South Wales
- Australia's first United Nations Industrial Development Organization eco-industrial park 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.

1.4 Parkes Special Activation Precinct master plan

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 Activation Precincts SEPP requires that a delivery plan must 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.

FIVE PRINCIPLES underpin the planning for the Parkes Special Activation 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 UNIDO Eco-Industrial Park embedding the principles of circular economy and sustainability in all development.

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 2 PARKES SPECIAL ACTIVATION PRECINCT MASTER PLAN

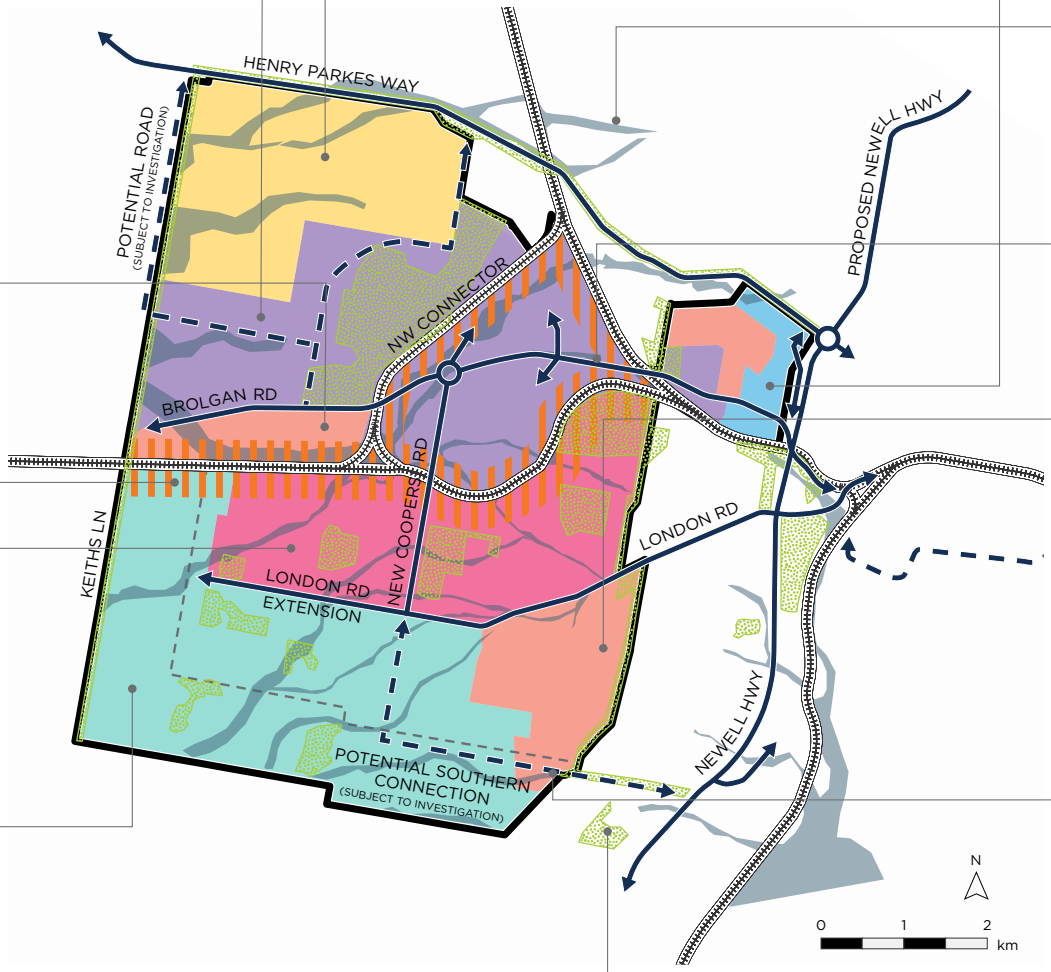
The Regional Enterprise sub-precinct
is located at the cross-section of new and existing rail lines. It will accommodate a range of businesses including rail and road transport terminals, warehousing, advanced manufacturing and food processing businesses.

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

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.

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.

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.



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.

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

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.

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

New or upgraded trunk roads within precinct
will be delivered by the corporation or as part of private development.

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.

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.

Railway

1km odour buffer zone

1.5 Performance-based planning approach

This delivery plan adopts performance-based planning assessment criteria to assess development proposals.

This approach provides flexibility in approaches to achieving desired outcomes and allows for innovative solutions.

It also considers the differing risk levels for development and provides clarity for proponents and the community regarding the evaluation of alternative solutions.

Assessment criteria is organised in tables (see example below).

What are performance criteria?

Performance criteria set the requirements for development proposals. They nominate required outcomes for development and are organised around topics such as land use, sustainability and cultural heritage

A range of potential solutions has been identified against each performance criteria:

- **'Acceptable solutions'** are recommended or preferred approaches to achieving performance outcomes but are not mandatory.
- **'Alternative solutions'** recognise there is likely to be more than one way of achieving an outcome. These will typically include negotiable elements and guidance on how alternative solutions will be considered by the authority.
- **'Unacceptable outcomes'** list undesirable outcomes for the precinct.

EXAMPLE Performance-based assessment table showing how solutions are presented against the performance criteria

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC1.1 Development that supports 24 hour use of land without compromising night time amenity of sensitive receivers through light spill.	**A1.1.1** All night time activities are internalised without any need to light external spaces beyond walkways and car parking areas. **A1.1.2** Development that complies with AS/NZS 4282:2019 for outdoor lighting.	**B1.1.1** Exceedance of light spill criteria is marginal and it can be demonstrated that sensitive receptors will not be unduly impacted. **B1.1.2** Mitigation measures (such as screens or mature landscaping) are integrated into the site, or at the location of the sensitive receptor.	**U1.1.1** Development that does not mitigate light spill to sensitive receivers that are adjacent or within direct line of sight. **U1.1.2** High light emitting land uses and activities close to sensitive receptors.

1.6
Activation Precinct Certification process

A key aim of the Activation Precinct Certification process is to facilitate a responsive streamlined planning pathway that will enable economic development. This will ensure that our regions are well placed to grow and meet the needs of regional communities while providing certainty and confidence to businesses regarding the required outcomes of the precinct.

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

Under the *Environmental Planning and Assessment (EP&A) Regulation 2000*, an Activation Precinct Certificate is required to accompany all development applications or applications for a Complying Development Certificate within a Special Activation Precinct.

The corporation is only able to issue an Activation Precinct Certificate if it is of the opinion that the proposed development is consistent with the master plan and delivery plan.

IN THE PRECINCT complying development must:

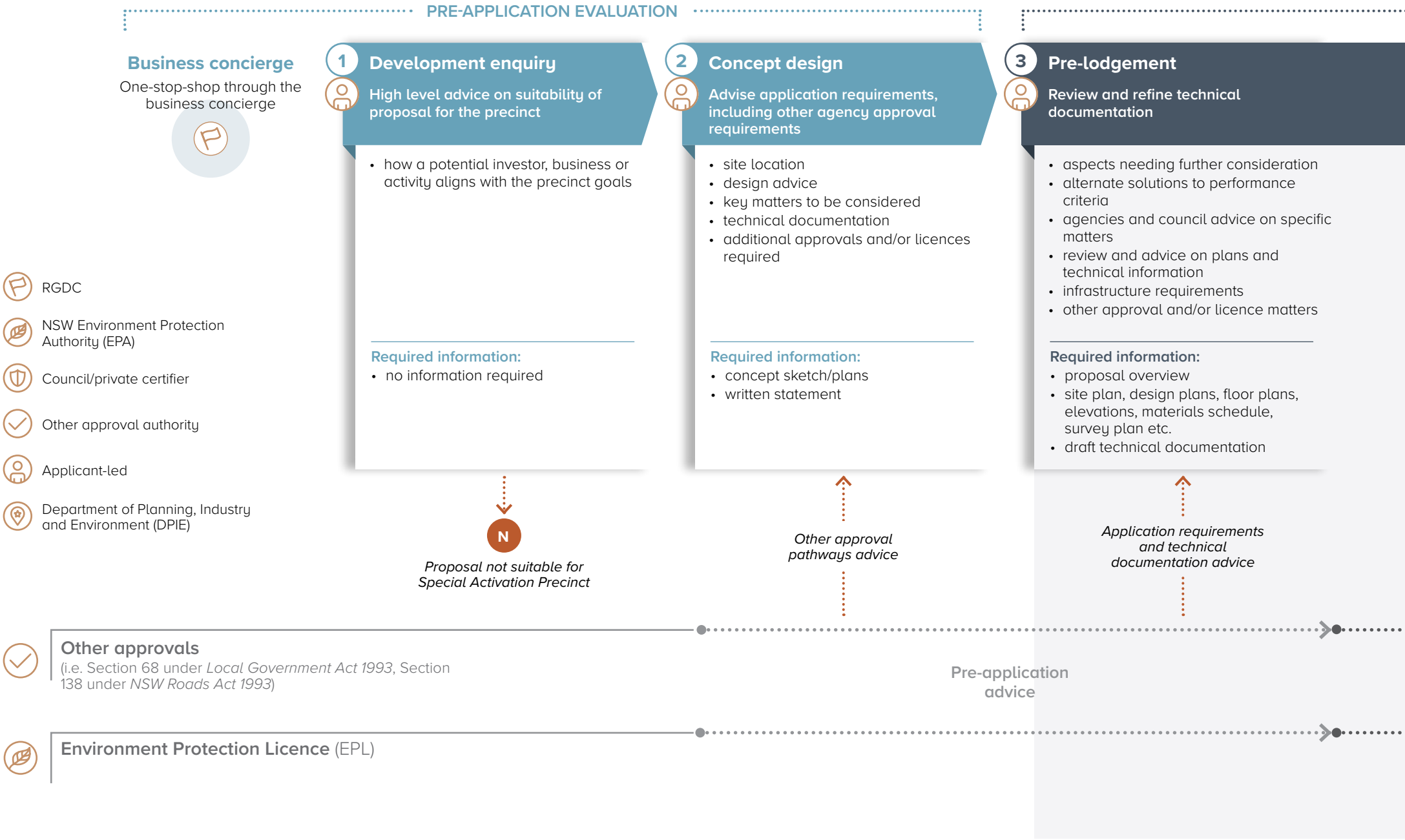
not be located on land identified as an environmentally sensitive area

not be located on land on which a heritage item or Aboriginal object or place of Aboriginal heritage significance is located

be consistent with the relevant provisions of the Building Code of Australia

not be for the purpose of remediation work within the meaning of *State Environmental Planning Policy No 55 – Remediation of Land*.

Activation Precinct Certification process



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

Optional parallel approval pathways

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

Information request
Evaluation period pauses

Refine for consistency
Evaluation period stops and starts again

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

Applicant liaises with corporation on modifications after APC issued

Lodgement and assessment

APPLICATION FOR DEVELOPMENT CONSENT

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 DPIE.
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.

Business concierge

The business concierge will support streamlined planning and approvals by offering a one-stop-shop 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.

Applicant-driven process

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

The Activation Precinct Certification process reinforces this role by providing the flexibility for investors to follow a process that meets their particular needs – providing for an applicant-driven process.

It is the intention of the business concierge to offer a one-stop shop service to investors to undertake additional approval and licence processes in parallel with the Activation Precinct Certification process. The corporation will engage with other government agencies, regulatory bodies and the council to discuss any additional approval requirements at Step 2 – Concept design.

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

PRE-APPLICATION EVALUATION

1 2 3 4 5

STEP 1: Development enquiry

The corporation 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.

1 2 3 4 5

STEP 2: Concept design

The corporation will provide advice on what is needed to prepare an application.

The corporation will undertake a concept design evaluation and provide advice on:

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

The corporation will prepare a ***tailored application 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.

The corporation will also coordinate other government agencies, regulatory bodies and 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 supporting information needed for the concept design evaluation includes:

- concept design plans/sketches
- written statement.

APPLICATION EVALUATION AND DETERMINATION

STEP 3: Pre-lodgement

Pre-lodgement is a chance for investors to seek early feedback and/or discuss their proposal with the corporation in more detail. A pre-lodgement provides the opportunity for a pre-evaluation to identify where changes may be required before lodgement, and where the development proposal and supporting technical documentation may need to be adjusted to ensure consistency with the master plan and delivery plan.

The intent of a pre-lodgement is to promote decision-ready applications which support a streamlined planning pathway for development consistent with the master plan and delivery plan.

It gives all parties (i.e. the corporation, investor 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 any alternate solutions to meet the performance criteria provisions
- review *technical documentation* that will be required for the formal lodgement of an application
- 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 may include:

- proposal overview
- site plan, design plans, floor plans, elevations, materials schedule, survey plan
- draft *technical documentation* that will be required as part of the application.

STEP 4: Application

The corporation will confirm that an application has been made in the approved form (against the *tailored application checklist*).

If an applicant decides to seek parallel approval pathways, the relevant application forms, technical documentation and fee can be progressed at the same time as the application is made for the Activation Precinct Certificate.

STEP 5: Evaluation and determination

An Activation Precinct Certificate will be issued for development that is consistent with the master plan and delivery plan.

In most instances, the corporation will issue the Activation Precinct Certificate.

The corporation will determine whether a development is consistent with the master plan and delivery plan on the basis of the submitted *technical documentation*.

If the development is consistent with the master plan and delivery plan, the corporation will issue an Activation Precinct Certificate, which confirms:

- the proposed development is consistent with the master plan and delivery plan
- the determination is made on the basis of the attached 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 the corporation).

If the corporation is of the opinion that the development is not consistent with the master plan and delivery plan for the land, the applicant will be given an opportunity to modify the application to ensure that it is consistent.

An Activation Precinct Certificate is valid for three years.

Timeframes

The 30 day *evaluation period* commences only when an application for an Activation Precinct Certificate is taken to be made in the form approved by the corporation and satisfies the requirements under clause 11(3) of the Activation Precincts 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.

The corporation may issue one or more requests for information. The evaluation period excludes any period between a request for additional information and the applicant's response to the information request.

Other referrals and concurrences

The corporation will work with investors to identify upfront any requirements for referrals or concurrences as part of the concept design step or pre-lodgement step.

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

Typically, other referrals and concurrences will not be required as part of an Activation Precinct Certificate. The type of referral or concurrence will dictate when it will be required.

Modifications to proposals

There may be circumstances when an applicant wishes to make changes to their development proposal either:

- during Step 5 – Evaluation and determination
- between receiving an Activation Precinct Certificate and making an application for a development consent
- during the development consent process
- after a development consent is issued.

For any modifications made to a development proposal during Step 5 – Evaluation and determination, the 30 day evaluation period will stop and recommence from day one.

For modifications made after an Activation Precinct Certificate is issued, the applicant will need to seek written advice from the corporation to confirm whether the modified development proposal is:

- consistent with the development proposal the subject of the current Activation Precinct Certificate, and
- consistent with the master plan and delivery plan.

A new application for an Activation Precinct Certificate will be required for a modified development proposal that the corporation considers:

- to not be consistent with the development proposal the subject of the current Activation Precinct Certificate, and/or
- the modified development proposal is not consistent with the master plan and/or delivery plan.

Section 68 approvals

Section 68 of the *Local Government Act 1993* specifies a range of activities where approvals are required to be obtained 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 into 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.

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 the corporation 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 council (or other roads authority) prior to the activities being undertaken.

As part of the Activation Precinct Certification process the corporation will engage with the local council (or other roads authority) to provide advice on approval requirements during Step 2 – Concept design.

The applicant will be able to make an application for a Section 138 approval when they make an application for an Activation Precinct Certificate.

Complying Development Certificate

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

An application for a Complying Development Certificate on land within a Special Activation Precinct must be accompanied by a current Activation Precinct Certificate.

The ordinary process under the *Environmental Planning and Assessment (EP&A) Act 1979* will apply for evaluating and determining an application for a Complying Development Certificate.

Development Application

As a result of site or development specific constraints, certain developments will be required to obtain development consent through the development application pathway. The Planning Secretary is the consent authority for these developments.

An application for a Development Application on land within a Special Activation Precinct must be accompanied by a current Activation Precinct 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 one-stop-shop business concierge service, the corporation will coordinate and engage with the EPA during the Activation Precinct Certification process. This will ensure that a proposed development is designed and planned for consistency with the master plan and delivery plan and to also satisfy the requirements for an EPL.

The corporation will engage with the EPA on whether an EPL will be required during Step 2 – Concept design. If an EPL is required, advice from the EPA will be sought on the:

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

The corporation will engage with the EPA on the review of the proposed development and technical documentation during Step 3 – Pre-lodgement. The corporation will coordinate and engage with the EPA to resolve any issues upfront to promote a decision ready application for an EPL.

Once the development proposal and technical documentation are considered to be decision-ready, the applicant will be able to make an application for the EPL when they make the application for an Activation Precinct Certificate.

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

1.7
Proposal documentation requirements

A clear and detailed proposal will ensure a streamlined approval process.

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

Proposals should include the following information:

General

- proponent details
- landowners' consent
- proposal overview
- site plan
- floor plan
- elevations
- materials schedule (if not on elevations)
- plans and/or a report that demonstrates how the proposal addresses the performance criteria provisions.

Infrastructure

- site-based stormwater and flooding information and management plan
- proposed electricity demand and consumption and percentage proposed to be delivered via onsite renewables
- proposed gas demand and percentage to be delivered via hydrogen
- proposed potable water and non-potable water demands and percentage to be delivered via onsite water systems
- 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, Industry and Environment

The corporation will coordinate this process with proponents.

Environmental

- ISO 14001 accreditation or information including intent to pursue and proposed timing
- EMS framework or information including intent to pursue and proposed timing
- copies of sustainability and environmental policies or commitments to meet the United Nations Sustainable Development Goals
- a list of suggested synergistic businesses which could support the proponent's operations, or be supported by the proponent's operations, to assist with circular economy mapping
- confirmation of proposed building rating/certification (e.g. Green Star), if applicable.

Additional documentation and information explaining the proposal and how it is consistent with performance criteria may be required in some instances.

Precinct design guidelines

2

This section applies to all proposals for change of land use and construction of buildings, structures, private roadways, driveways and new subdivisions.

Aerial view of Parkes

2.1 How to use these guidelines

These guidelines outline the objectives and principles for site planning, location, building architecture, landscape design, street design, subdivisions and sustainability.

The master plan incorporates design principles to ensure the precincts have a sense of place, history and spirit to pass onto the next generation. This includes valuing hierarchy (cultural and practical elements of the landscape such as rivers and hills), promoting a diverse landscape and connecting people to country.

These guidelines provide the opportunity to shape a new international benchmark by blending smart design, ecological sustainability and worker and visitor amenity.

The guidelines are designed to simplify the design process and delivery of new development in the precinct.

FOUR TOPICS are covered in this section:

1 **Planning your site**
including locating buildings, planning access for people in cars, on bikes and walking, planning for a circular economy and connecting to precinct infrastructure

2 **Building design**
including form, scale and size of buildings, environmental design, facades and materials, daylight and natural ventilation, windows and shading, awnings, service areas, lighting, and circular economy and sustainability

3 **Landscape design**
including developing a site landscape design, species lists and material palettes, car parks, loading areas, access driveways, external feature lighting and water sensitive design

4 **Street design**
including design standards for streets within the precinct

Each topic outlines the key information, standards and expectations of the precinct.

- **Introduction** explaining the relevance and importance of each stage of the design
- **Overview** of key elements
- **Design requirements** for each element
- **Submission requirements** for development proposals
- **Precedents** from around the world illustrating the standards and vision for the project.

2.2
Planning your site

Development within the precinct should bring to life the vision and aspirations for the Parkes Special Activation Precinct.

Understanding site

The first step is to understand the site's existing features, the prevailing topography, sight lines, hills, natural features and existing vegetation.

This will assist with planning the site for development, servicing, access and use. The corporation can assist you with detailed terrain analysis including light detection and ranging and/or digital elevation models for your site.

Setbacks

Effective setbacks from the street, side and rear boundaries and other buildings on the same site, are essential to allow for space between buildings for access and environmental elements (drainage, biodiversity, vegetation protection), as well as establishing a precinct character.

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.

Buildings should also be appropriately separated on smaller lots or in strata subdivision developments. This will ensure that buildings contribute to a high amenity built form consistent with the rural eco-industrial character of this precinct.

Building size

Developments with more than one building have an opportunity to create a family of approaches, considering the design as a whole as well as being scaled appropriately to each other.

Site coverage

Site coverage limits are in place to ensure the landscape and rural character is retained and enhanced. These are outlined in the Site Layout Design requirements.

Creating primary access

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

Building configuration and orientation

Buildings orientated towards the street aid in providing a sense of arrival.

Active and arrival functions within buildings, such as office or administration spaces, should be located at the front of the subject building.

In all cases, the environmental performance of the building should be considered to ensure efficiency in design and operations.

Summary

Critical to each site is the retention of existing biodiversity corridors.

This should form part of the planning process for your site and should inform the location of buildings, setbacks, site coverage and access points, ensuring an integrated and sustainable precinct.

There are four requirements for planning your site:

- site layout
- site access
- circular economy
- precinct infrastructure.

These form part of the requirements for the assessment of your Activation Precinct Certificate.

The consideration, analysis and development of effective site planning is critical to shaping a positive functional outcome, as well as meeting the vision and aspirations for the precinct.

2.2.1 Site layout

Overview

Site planning should consider the following:

- Site
- Existing features
- Setbacks
- Building scale
- Site coverage
- Primary access

Design requirements

Site

Consideration of the existing topography, drainage and sight lines from streets is essential in planning buildings, orientation, access and visual amenity.

Building entries should be clearly identifiable and legible from the street and form a clear strategy for branding and wayfinding for all visitors, workers and customers.

Existing features

Sites may include existing site features that must be retained as part of the site planning. This includes significant stands of vegetation, ecologically rich biodiversity zones, culturally significant trees and natural features, hill tops, and drainage lines.

The corporation will work with proponents to ensure proposals meet the precinct's outcomes including the retention of existing features where appropriate.

Setbacks

Setbacks along road frontages need to respond to the context, including:

- the type of road – larger setbacks will apply to main roads compared to local roads
- the site frontage and overall site size to provide for other functions, car parking and landscaping and buffers between sites; the scale of buildings proposed, with taller and larger buildings requiring larger setbacks.

A minimum 15 metre setback applies to the Newell Highway, Brolgan Road and Condobolin Road. A minimum 10 metre setback applies to all other roads in the precinct. A minimum 15 metre setback applies to side and rear boundaries adjoining rural land and for lots greater than 1 hectare. All other side and rear setbacks must meet National Construction Code setbacks.

Building scale

The size and scale of all buildings (including outer buildings) should be suited to the development, be visually consistent and avoid overly ornate features.

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.

Building height will be considered in context to ensure views and vistas are retained and human scale is maintained. Height elements in buildings is encouraged at key sites, to denote points of entry or prominent locations.

Site coverage

Site coverage should consider implications from buildings and hardstand areas (associated with parking, manoeuvering and external display and storage) for stormwater runoff, the intent for achieving a spatial landscape character and appropriate setbacks from boundaries.

- Buildings and hardstand areas should generally occupy no more than 70 per cent of the site.

Primary access

All developments should have a primary access point for clear access for visitors, workers and customers. Entry points are the primary location for site branding and signage.

Submission requirements

A site plan must include the following information:

- existing topography
- existing and proposed contours
- existing features including remnant vegetation, stands of trees, hill tops, drainage lines etc
- biodiversity areas (if applicable)
- culturally sensitive areas (if applicable)
- proposed building location/s
- proposed site coverage including building/s, landscape and access
- primary access points
- easements
- infrastructure requirements, including stormwater infrastructure and internal vehicle movements.

2.2.2 Site access

Overview

Site access should include the following:

- Primary access
- Pedestrian pathway
- Site/street threshold
- Connection to shared use path
- Materials
- Accessibility

Design requirements

Primary access

Creating a single and visible vehicle access point and a single pedestrian entry point to the site is a key part of the precinct's design objectives for each development.

A development's primary access includes precinct branding, development signage, legibility of entry and orientation.

Additional entries may be permitted on secondary roads provided the additional access doesn't create any safety issues.

Pedestrian pathway

Pedestrian and cyclist entry should be aligned with the vehicle driveway, separated with a simple landscaped median, connected to the primary building's main entry and primary access.

The landscaped median should include a connected canopy of trees, featuring deciduous species to provide shade in the warmer months and solar access in the cooler months, creating a pleasant, suitably scaled and landscaped experience for all users.

Site/street threshold

A clear and legible threshold should be provided at the primary access and should integrate signage, branding and feature landscaping.

Sensitively designed, bold and simple signage integrated with low level landscaping should be provided.

Connection to shared use path

A simple connection to the shared use path should be provided if applicable, including precinct wayfinding signage.

Materials

Refer to Sections 2.3.3 and 2.4.7 for materials for paving and landscape palettes.

Accessibility

Site access needs to consider all users and comply with Australian Standard 1428.4.1:2009.

Surface treatments, pathways, lighting and provision of seating or rest points (for large sites) should all contribute to improved access for all users.

Submission requirements

An access plan should include the following information:

- primary access point for both pedestrian and vehicle access
- secondary access point (if required or applicable)
- details of the following elements:
  - driveway width/length
  - pedestrian pathway, including connection to the primary building's main entry
  - landscaped median including species
  - materials
  - entry threshold design including signage design, landscaped threshold and connection to shared use path (if applicable)
  - lighting details
  - access for fire fighting purposes and other emergency vehicles
  - CPTED techniques / assessment
  - accessibility provisions for people with disabilities and mobility difficulties.

Precedents

Winery, USA
Strong pathway and planting features framing entry

Courtesy of Munden Fry Landscape Associates, photographer Joe Fletcher

Civic Centre and Library, Adelaide
Strong canopy statement defines entry and provides pedestrian shelter

2.2.3 Circular economy

Overview

Site planning should support the development of a circular economy. Circular economy planning should address the following:

- Logistics
- Co-location
- Shared systems
- Easements
- Precinct land use

Design requirements

Logistics

Site planning should show consideration of the movement of freight, resources, and materials throughout the precinct.

The scheduling of logistics which may dictate the size and location of entry and exit points, and resource storage and handling areas should also be considered.

Co-location

Site planning should show consideration of the design and logistics handling arrangements for adjoining businesses, to ensure coordination and sharing if feasible.

All businesses are encouraged to work together and co-design their facilities to maximise the advantages of co-location.

Shared systems

The hosting of facilities such as resource handling and storage, fuel or water storage, onsite energy generation, and resource processing should be considered.

These facilities could be operated by another business or a specialist third party for mutual benefits.

Service corridors

Site planning should provide for circular economy service corridors. These corridors allow the transmission of resources (energy, water, or other process fluids and solids) from one business to another.

Precinct land use

Site planning should allow adequate separation between buildings, easements, and adjacent lots for the future expansion of the site, installation of shared systems and co-location of synergistic businesses in the future.

Submission requirements

- A site plan that illustrates:
  - the proposed logistics movements
  - co-location opportunities with adjoining businesses
  - locations of shared systems, or space allocation for future shared systems
  - interface with circular economy infrastructure, services and corridors
  - space allocation for future expansion or future business co-location.
- A circular economy strategy that describes and illustrates the intended approach to circular economy, and how the design requirements are intended to be met. This may be illustrated by a simple supply chain diagram which identifies opportunities for local circular economy initiatives.

2.2.4 Precinct infrastructure

Overview

Site planning should integrate with the following precinct infrastructure:

- Water harvesting
- Recycled water
- Trade waste
- Electricity
- Gas and hydrogen
- Telecommunications and digital connectivity

Design requirements

Water harvesting

All roof rainwater shall be harvested, stored, and used onsite.

Stormwater runoff should also be retained on site, treated where necessary with discharge not to exceed pre-development flows or concentrations.

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.

Recycled water

The precinct will include a recycled water network integrated into the infrastructure network. Where a connection is available to this network onsite, this should be used for all non-potable water uses in preference to potable water.

Trade waste

Where a shared trade waste connection is available, this shall be used in preference to onsite trade waste treatment, unless the site is hosting a waste to energy or bio-processing system.

A trade waste approval may be required from Council or the Department of Planning, Industry and Environment depending on the proposed trade waste.

Electricity

Energy infrastructure will be provided across the precinct. The precinct electricity network is considering connection to a microgrid network. Once established, all electricity systems, including onsite energy generation systems, will be connected to the precinct microgrid network. This will allow it to operate as part of an integrated system (and future microgrid/virtual power plant).

Smart metering is to be utilised throughout the precinct. This will provide a two-way communications network allowing the microgrid to initiate grid import/export and stability control of the building's solar PV systems.

The use of roof mounted solar PV is to be maximised to capitalise on renewable energy opportunities.

Final PV sizing and installation should be determined based on the needs of the site, onsite storage and local network opportunities.

Gas and hydrogen

Gas reticulation will be available to service the precinct.

Hydrogen reticulation, generation, supply, use and storage is also expected to be implemented across the precinct. Consideration should be given to the generation, storage, supply or use of hydrogen by the development.

Telecommunications and digital connectivity

The precinct will provide state-of-the-art digital connectivity and telecommuncations networks. This will ensure that businesses will be able to share data. This will also help alignment with circular economy and carbon accounting purposes.

Submission requirements

An infrastructure plan that illustrates:

- the water capture, storage, and use systems
- the trade waste systems including any onsite treatment or waste to energy systems
- the extent and size of onsite solar PV systems
- the extent and size of any gas systems, including its hydrogen readiness
- the precinct data communications requirements.

2.3 Building design

Development within the precinct should be aesthetically pleasing and bring to life the vision, principles and goals for the Parkes Special Activation Precinct.

Building form

Creating bold yet integrated buildings is a core part of the vision for the precinct.

Buildings that are designed for form to follow function will set a defining character for the precinct, representing the aspirations and setting an international benchmark in design and delivery.

Environmental design

Passive and active environmentally sustainable development is a key outcome for the precinct. All buildings should contribute to the precinct's ambition to become Australia's first UNIDO Eco-Industrial Park.

Facades

Well designed and executed facades to all sides of buildings are an essential requirement for all development within the precinct.

Sunshading and awnings

Considerable weather variations require effective sun, rain and wind protection as well as external shaded areas.

Service areas

Service areas require a considered and integrated design treatment, ensuring functions can work effectively while being aesthetically pleasing.

Lighting

Internal and external lighting should maximise efficiency as well as comfort and safety. Evening feature lighting should not cause undue light pollution.

Business 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 consistent in approach.

Wayfinding signage

Wayfinding signage should be integrated with business signage to ensure ease of access for visitors, workers and customers to any site. Wayfinding signage across the precinct should be consistent in approach.

Summary

There are eight requirements for building design:

- building form
- environmental design
- facades, materials and finishes
- awnings and sunshades
- service areas
- lighting
- business signage
- wayfinding signage.

These form part of the requirements for development assessment.

2.3.1 Building form

Overview

Building design should provide for a strong built form which reflects the rural character of the precinct and considers:

- **Building size and footprint**
- **Building frontage and primary entrance**
- **Building layout**
- **Passive and active surveillance**

Design requirements

Building size and footprint

Consideration should be given to the dimensions of the proposed building, orientation to the site, overall footprint, site coverage and establishment of functional areas, including:

- buildings should consist of a simple shape in plan, reflective of intended function without ornamentation or irregular shapes
- buildings should present to the street and on corner sites address both streets
- lean-to structures added to the main building should be a minimum height of seven metres
- adaptable reuse in the future for alternative land uses (eg floor to ceiling heights)
- building footprints, dimensions and construction should allow for buildings to be scalable and expand over time.

Building frontage and primary entrance

A primary entry point should provide:

- visual interest from the street, creating an active frontage, using creative, simple and bold elements to create an easy to see entrance for all users
- provide good surveillance from the street and active areas
- provide onsite car parking to meet the needs of visitors, workers and customers
- allow for end-of-trip facilities including secure bike storage lockers and shower rooms.

Building layout

Plans should outline the functional areas, zones, service areas, offices, working areas and amenities to illustrate the broad concept.

Passive and active surveillance

Site plans should aim to enhance crime prevention through passive and active surveillance achieved through design. Crime Prevention through Environmental Design principles should be applied where feasible including:

- passive surveillance of street and public areas
- visibililty of parking areas from adjacent properties
- building design which limits the ability for unauthorized entry
- clear demarcation between the public and private realm
- eliminating areas with minimal or no surveillance
- building design and site layout which avoids entrapment areas
- building design which allows for open sight lines.

Submission requirements

Architectural plans should include the following information:

- floor plans
- roof plans
- elevations from all sides
- sections
- 3D model of building for inclusion in the precinct digital twin
- lighting.

2.3.2 Environmental design

Overview

Every building in the precinct should consider the environment in its design. Environmental matters of significance include:

- Orientation
- Natural daylight
- Passive solar shading
- Natural ventilation

Design requirements

Orientation

All buildings should be oriented to minimise energy usage and maximise site and environmental benefits. Design considerations include:

- orienting long building sides to north and south
- minimising long east and west walls
- glazing to northern sides to benefit from winter solar access
- building wings to assist in shading pedestrian entries or service entrances.

Natural daylight

Workplaces benefit from natural daylight as it reduces pressure on artificial lighting, minimises ongoing energy costs and enhances staff wellbeing. To maximise natural daylight, all buildings should:

- incorporate skylights, light wells and atriums including roof lighting strips to all warehouse and process/manufacturing areas
- locate working spaces and offices to perimeter areas and non-habitable areas to the centre of buildings
- provide daylight to all areas people work and inhabit
- include sunshading, baffles, screens and operable elements.

Passive solar shading

Shade structures are highly visible items and should be of suitable quality and be integrated into the facade and architecture. All buildings should consider:

- awnings which can be oversailing roof canopies, light shelves, vertical and/or horizontal louvres or screens
- avoiding or minimising unshaded west and east facing high mass walls
- 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
- landscaping for valuable shade during summer and to allow for the permeation of winter sun.

Natural ventilation

Natural ventilation is the primary measure for cooling all buildings.

All buildings should:

- provide access to fresh air, cross ventilation and air flow
- include operable windows/roller doors to allow for cross ventilation
- consider roof ventilation measures to allow for heat to rise and disperse.

Where natural ventilation is prohibited due to process/manufacturing requirements, indirect evaporative cooling and/or economy cycle ventilation should be used to reduce energy consumption associated with air conditioning.

Thermal control

The building is the primary measure to reduce thermal loads.

All buildings should:

- be thermally insulated (including buildings that are not air conditioned)
- have light coloured external finishes with a roof solar reflective index greater than 64 to minimise the heat island effect.

Precedents

Submission requirements

Architectural plans should include the following information:

- glazing, wall and insulation materials and ratings
- landscaping species and placement
- details of any mechanical heating and cooling systems proposed.

Central Arizona College, Maricopa
Use of passive solar shading integrated into the building design

Courtesy of Bill Timmerman

Parks Victoria Depot, VIC
Use of laminated timber, greening of building

Courtesy of Archier (design), photographer Peter Bennetts

Clarinda Street, Parkes

2.3.3 Facades, materials and finishes

Overview

Building facades should contribute to the precinct's overall character. This includes:

- Facades
- Walls
- Roofs

Design requirements

Facades

Facades must:

- express the intended function of the building and its component uses
- present a resolved form and design and represent the uses in each part of the building
- form a coherent whole as part of a complex of buildings
- include identifiable entrances that are scaled appropriately
- include external shading and passive design features with a distinct function
- consider greening and/or green walls to northern facades.

Facades – street

All buildings should consider and incorporate transparent street facades, focused around the primary access and pedestrian entry points.

This includes:

- glass, screen printed, sandblasted or cast panels, colour or super graphic backed glass, high performance 'low-e' glass
- integrated solar shading devices such as louvres, mesh screens, awnings, timber screens and devices for climbing plants
- green walls to north facing facades.

Facades – side feature or corner sites

All other facades should feature bold and simple elements, which are consistent with the function and form of the building/s including:

- bold and consistent colours to key features
- textured paint
- galvanised steel
- pre-rusted steel cladding
- smooth finished concrete
- exposed aggregate/sandblasted concrete
- corrugated metal sheeting (galvanised, powder coated)
- metal faced composite panels
- metal rain screens
- perforated metal screens
- terracotta/stone facade screens
- stack bonded concrete blocks
- stone facades using local stone
- timber features
- recycled or innovative materials.

Walls

All buildings that include long walls of a continuous or uninterrupted length should have a considered approach to their design and finishes.

Side and rear walls should include:

- pre-cast concrete with simple elements such as oxide coloured pigments, relief details, exposed aggregate, sandblasting, broom finish, or allowances for simple mesh cladding for growing plants (depending on orientation)
- textured paint
- framed cladding
- rain screens (assist reducing heat absorption)
- framed corrugated metal sheeting
- insulated/composite panels
- recycled or innovative materials.

Glazing purpose and shading

All external fenestrations should be designed to serve a purpose. External roof overhangs or devices that oversail windows but do not shade them should be avoided.

Roofs

All roofs should consider and incorporate high quality materials that respond to the natural topography and climate of the precinct. This includes:

- interesting roof lines and shapes that complement the built form aesthetics of a regional enterprise hub
- shading opportunities and integration with other built form features such as awnings, screens, light shelves, canopies and vertical or horizontal louvres
- light coloured roof treatments and materials to reduce heat gain in summer and reduce cooling energy levels and costs
- integration of skylights, particularly in commercial or visitor spaces, to maximise natural light
- integration of solar PV and stormwater harvesting requirements.

Overview

The use of colour is important to create a distintive precinct. Proponents should consider:

- **Colour**

Design requirements

Colour

Colour and material palettes must reflect the nature of the proposal. The colour and materials palette should be coordinated and appropriate to the Parkes Special Activation Precinct.

This includes:

- a range of subtle and natural colour tones complemented by the limited use of highlight colours
- avoiding the use of primary colours to large sections of facade which can render an overly synthetic building presentation and one that has a higher likelihood of dating rapidly.

All buildings should consider the impact of colour on an integrated precinct experience.

Bold colour can assist in branding and orientation of buildings and pedestrian entrances in selected areas of a building.

Tonal and recessive colours ensure larger industrial buildings recede in the broader landscape.

The approach to colour is based on a 70/20/10 application to all buildings.

This includes:

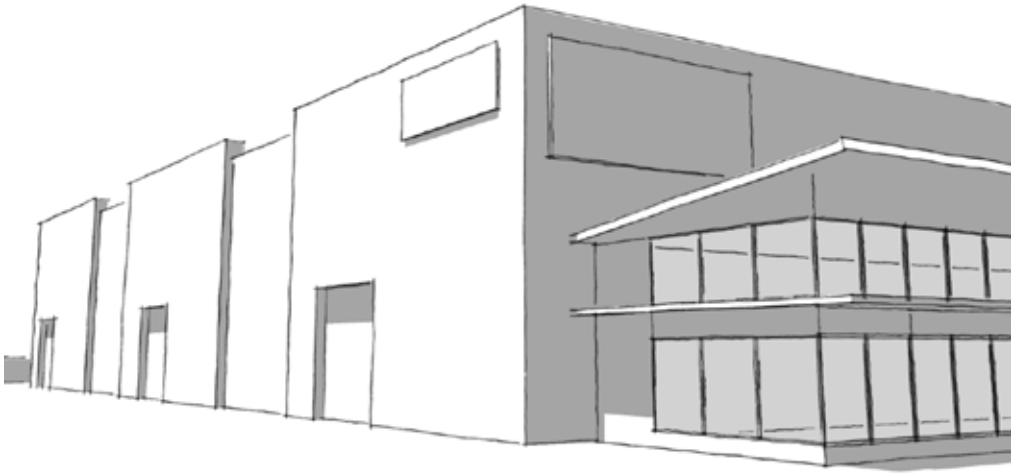
- 70 per cent of the building should be tonal and recessive colours to assist large buildings to blend into the broader landscape. This would apply to most areas of large industrial buildings, stores, etc. Allowable colours include:
  - Colorbond Woodland Grey, Bushland, Jasper, Ironstone, Blueridge, Night Sky, Deep Ocean (or similar)
- 20 per cent of the building should be colour which is used to highlight and express architectural features building entrances or principal office areas etc. Allowable colours include:
  - the Colorbond colours above as well as white, black, darker greys or tonal variations.
- 10 per cent of the building can use bolder colours including corporate colours.

Submission requirements

Architectural finishes schedule must include the following information:

- all relevant materials proposed to be used, including finishes and colour options
- green walls, including proposed planting species, watering and maintenance systems (where applicable)
- labelled elevations with colour and material selections clearly outlined.

Precedents

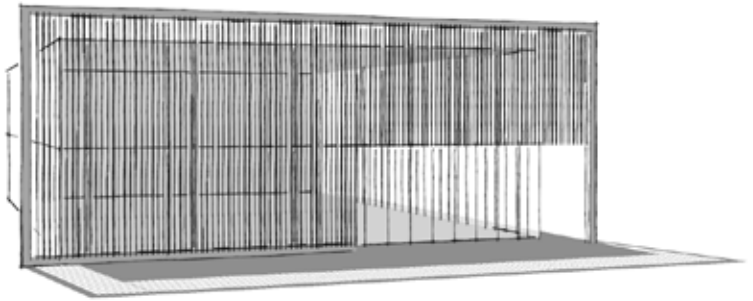


Modulation
Facade broken into repeated elements using articulation and material changes.

Human Scale
Lower building forms presented to street screen large bulky elements and provide more comfortable pedestrian environment.

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.

Drill Core Reference Library, Tonsley, SA
'Cor-ten' steel panels and precast concrete



Rain screens
Screens can be an effective way of providing shading, whilst also making a bold architectural statement.

Emphasise entries
Use architectural features to emphasise entries within facades to aid in wayfinding. This is particularly important for sites with multiple buildings.

2.3.4 Awnings and sunshadings

Overview

Sunshading is an important environmental consideration for the performance of all buildings. Proponents should consider:

- **Sunshading**
- **Awnings**

Design requirements

Sunshading

Sunshading devices should:

- prevent penetration of any direct sunlight into regularly occupied work areas such as offices and manufacturing/warehouse areas
- minimise penetration of sunlight into any part of any building between 10am and 3pm between 21st November – 21st March
- be integral to the design of the building.

Awnings

Awnings are to be used where people will congregate outdoors and should provide shade and rain protection. They can be used on buildings to assist defining entrances.

Awnings should:

- extend to the edge of any footpath or access
- extend a minimum of 2.5 metres from the building facade and have a minimum height of three metres from a footpath where used for outdoor seating areas/ lunch areas
- form an integral part of the architecture.

Awnings may also:

- be cantilevered or supported by posts as required (to be considered as part of the architecture of the building)
- be widened (min 500mm) by using posts where the additional width is used as an arbour
- for climbing plants to create additional shade and heat reduction to the footpath and building.

Submission requirements

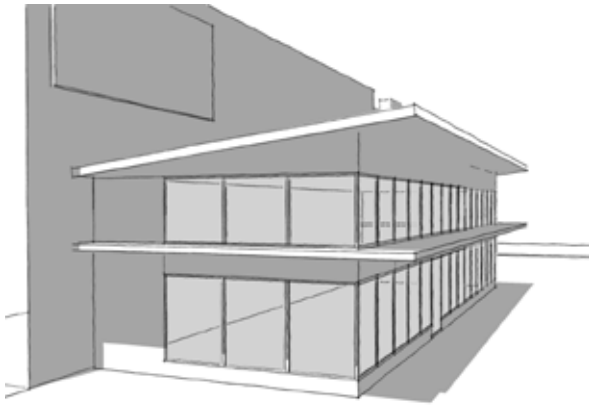
Architectural plans should include the following information:

- details on elevations, documenting depth, height and angles (if applicable) of awnings and sunshadings.
- details on the materials used to construct awnings and sunshadings.

Precedents

Central Arizona College, USA
Cantilevered walkway (sunshading) connecting buildings

Courtesy of Bill Timmerman

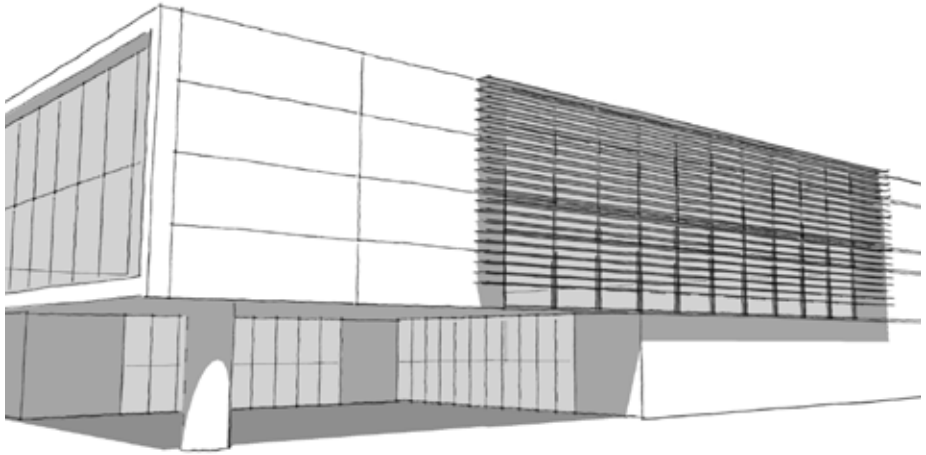


Awnings and canopies
Awnings and canopies integrated into the facade act as both shading devices, as well as features that add interest to the building, provide depth and shadowing which relieves the form and scale of facades.

Window hoods and awnings
Provide effective localised shading to windows.

Modulation
Screens can aid in modulating facades and breaking up mass of continuous materials and finishes (including glazing).

Detailing
Screens can be integrated into the architectural language and provide interest to facades.



Central Arizona College, USA
Sunshading to building entrance

Courtesy of Bill Timmerman

2.3.5 Services areas

Overview

Service areas are important to the function of the precinct. They should be functional and practical. Proponents should consider the location and siting of:

- Service areas

Design requirements

Service areas

Service areas should be located behind the main building line and can use a range of screening options.

They should:

- be designed to be completely or partially screened from the street with a minimum screen height of 2.1 metres
- have a dedicated area set aside for bin storage based on calculated waste and recycled material generation rates for the particular industrial business and building size
- include bin washing facilities that are bunded and connected to a treated wastewater system
- be suitably enclosed, covered and maintained to prevent polluted wastewater runoff from entering the stormwater system
- be accessible for waste collection by the largest truck likely to service the development and allow the vehicle to enter and exit the site in a forward direction
- use a range of approaches including landscaping, perforated metal screens, fencing and other creative approaches
- be screened internally with large folding or roller doors
- include visually permeable elements
- consider graphic style orientation and wayfinding devices on walls and screens.

Submission requirements

Site plans documenting:

- extent of service area enclosures
- details of screening measures (physical structures or landscaping)
- lighting locations and details (including height, and shrouds to be applied).

Waste management plan documenting:

- anticipated waste demands of the selected uses and activities
- equivalent bin types, sizes and numbers to accommodate anticipated demands
- frequency of collection across the waste streams, including vehicle type being used.

2.3.6 Lighting

Overview

Lighting of buildings is to provide a safe work environment whilst being environmentally sensitive and requires consideration of:

- **Internal lighting**
- **External evening lighting**

Design requirements

Lighting must be considered as part of the overall design of a development.

Internal lighting must be energy efficient and utilise daylight as outlined in Sections:

- 2.3.2 Environmental design
- 2.3.4 Awnings and sunshading.

Sensitive and efficient evening lighting of the building should be considered as part of the precinct's 24/7 operations.

Regulatory and safety lighting is also a requirement as per the Building Code of Australia and development standards.

Internal lighting

Internal lighting should:

- be controlled by a lighting management system and be clearly labelled and accessible for building users
- include time automation and overrides as required
- include sensors to control lighting in concert with natural daylight
- comply with Australian Standard AS/NZS 1680.0-2009 for interior light and safe movement
- use the most energy efficient LED fittings including light colour control, dimming and output.

External lighting

External lighting should:

- ensure adequate light coverage for external pathways and work areas for safety
- be controlled by a lighting management system and timer
- include sensor or safety lighting
- include car park and pathway lighting
- consider feature lighting to selected features as part of the precinct's character
- consider uplighting of selected existing trees or new landscapes
- consider feature lighting of building
- consider solar and low energy lighting
- minimise light pollution through lightspill mitigation measures such as:
  - lighting heights, angles and spread
  - installation of shrouds to lighting
  - external screens to the area being lit.

Submission requirements

Lighting plans should include lighting locations, lux levels, lightspill extents and any mitigation measures (such as shrouds).

Precedents

Patrick Autocare, Perth, WA
Lighting used within transparent cantilevered feature

Courtesy of DnA Architects, photographer Acorn Photo

2.3.7 Business signage

Overview

User-centred signage will enhance the experience of visitors and workers in the Parkes Special Activation Precinct.

The key signage types to consider include:

- Site signage
- Building signage
- Signage content and finish

Design requirements

Signage is to be consistent with the building and landscaping.

Site signage

There are two forms of site signage permitted within the precinct being a freestanding pylon and an entry sign. The requirements for site signage include:

- freestanding pylon signage being limited to one sign per site and having a maximum height of 8 metres and width of 2.5 metres
- entry signage being limited to one sign per access having a maximum height of 1.5 metres
- all site signage having an combined area of no more than 15m^2
- include advertisements for all relevant businesses on the site
- be located within either a landscaped garden bed or mulched area (this can include gravel mulch)
- include illumination, time automation and overrides as required
- include sensors to control lighting in concert with natural daylighting
- utilise the most energy efficient LED fittings including light colour control, dimming and output.

Building signage

All building signage should:

- be located within the overall building frontage or corner and not extrude beyond any roof line
- be no more than 10 per cent of the building facade
- be no more than one sign on any facade facing a public road
- integrate with the building design:
  - the location of signage panels
  - the colour and materiality of any visible structural supports.
- be visible from the main street
- include illumination, time automation and overrides as required
- include sensors to control lighting in concert with natural daylight
- comply with Australian Standard 1319-1994
- use the most energy efficient LED fittings including light colour control, dimming and output
- not be roof mounted or applied to roof materials.

Signage content and finish

All signage should:

- be limited to a logo/company badge/name
- not flash, move or be animated in any way
- company logo is to be 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 advertisement.

2.3.8 Wayfinding signage

Overview

Wayfinding signage will enhance the experience and functionality of each business within the Parkes Special Activation Precinct.

Design requirements

Wayfinding signage is located in road reserves and public open space. It should be designed to assist visitors, staff and customers to navigate the precinct and should:

- be designed as a suite and be integrated into the landscaping design
- be appropriately sized to suit users navigating the site
- remain visible during all hours of the day and night either through internal or external illumination
- provide for all users, including those with disabilities through their positioning, size, content.

Precedents

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

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

2.4
Landscape design

Private development requirements

Landscape design should maintain the current rural form of the precinct. There are three approaches to site-based landscape design:

- formal landscaped areas
- informal landscaped areas
- site landscaping.

Formal landscaped areas

Formal landscaped areas are used in high use areas to create a memorable experience for visitors.

This includes primary entry thresholds, main driveways, visitor car parks and small gardens to assist in defining entrances and signage from main streets and roads.

Formal landscaped areas will be irrigated using stormwater captured onsite and recycled water and should be mulched using organic and inorganic mulches.

Informal landscaped areas

Informal landscaped areas should build on sustainability initiatives and are based on the ecology, habitat and biodiversity of the Parkes area.

Informal landscaped areas include transition areas between formal landscaped areas and site landscaping areas, at the side and rear of buildings or around other structures, along fences and secondary car parks.

These areas are to use revegetation practices and will include a mix of endemic plant species and plants native to the precinct.

Informal landscaped areas will form part of the pervious surface for the site.

Site landscaping

All other areas are designated site landscaping and form part of the pervious surface. Plantings in site landscaping areas will focus on endemic, biodiverse landscaping, rehabilitation and restoration.

Pervious surfaces

Pervious surfaces include:

- tree planting
- mulched garden beds with planting
- pervious surface treatments, including compacted rubble, decorative gravels and inorganic mulches/sands
- drainage areas and WSUD treatments
- grasslands and rehabilitated/ revegetated areas.

Submission requirements

Landscape plans should include the following information:

- site plan outlining buildings and other structures, including contours and drainage lines
- identification of pervious surface coverage, including identificaiton of:
  - formal landscaped areas, including primary entry thresholds, main driveways, visitor car parks, secondary car parks
  - informal landscape areas including landscaping to side and rear fences
  - site landscaping areas, including remnant areas and other areas
- location and types of fences and gates
- locations and types of footpaths and other surface treatments (including access driveways, car parks, and other hardstand areas)
- planting plan including plant palette/s detailing species name, size, location, number and extent of works.

2.4.1 Primary street frontage and site interface

Overview

Primary street frontages and site interfaces should create a sense of arrival and welcome.

This will be achieved through the use of:

- **Fences and gates**
- **Formal and informal landscape areas**
- **Side and rear fences**

Requirements

A primary street frontage is the linear edge of the site, facing the main street and incorporating the main entrance for each development.

On corner sites, both street frontages will need to meet these requirements, however only one should be defined as the main entrance.

Site interfaces ensure the open spaces between developments are harmonious.

The primary street frontage and site interface includes the primary entry threshold, and should offer clear views to the main building/s.

Primary street frontage and site interfaces should include fences, formal landscape areas, informal landscape areas and side and rear fences.

Fences/Gates

- Rural fence style at the front of buildings, consisting of hardwood timber post and rail or post and wire fencing to maximum 1800mm height
- Solid block fencing inconsistent with the character of the precinct is discouraged to avoid impacts to drainage flow paths and flooding
- Gates to complement fencing
- Fences should integrate with primary entry thresholds.

Formal landscape areas

- Minimum five metre depth of landscaping from front fences to car parks located in front of the property
- Mulched (organic mulch to a depth of 75mm) and irrigated garden beds are required for all formal landscape areas
- Plant species as per formal plant palette (endemic, locally sourced shrubs, grasses, sedges and groundcovers)
- Existing vegetation of ecological value must be retained and incorporated in landscape plans
- WSUD measures should be considered and incorporated to reduce irrigation demand
- The landscape design should be consistent with the rural character of the precinct.

Informal landscape areas

- Minimum three metre depth of landscaping from side and rear fences for lots one hectare and greater
- Plant species as per informal plant palette.

Side and rear fences

- Side and rear fences should be similar in style to the rural style at the front of buildings, noting that areas requiring security for operations should have fencing that is a maximum 1800mm high and made from black chain link fencing, black security fencing (or similar) with matching posts and gates (as required)
- All sites should address crime prevention through environmental design principles and security measures as required
- If required, solid fencing should be recessive and use corrugated, powder coated metal panels with a matte finish, in dark grey. Solid fencing should be minimised to areas adjacent to the proposed building or service areas
- If required, solid fencing should allow for drainage underneath to avoid flooding and ensure drainge paths are maintained
- Barbed wire is not permitted for any fencing.

Submission requirements

Landscape plans must include details on the primary street frontage and site interface (including the primary entry threshold and business signage) including materials, colours and species.

2.4.2 Primary entry thresholds

Overview

A primary entry threshold is the main entrance to a development located along the primary street frontage. It includes:

- Driveways
- Formal landscaping
- Trees
- Entrance path
- Lighting

Requirements

Primary entry thresholds create a welcoming experience and should be clearly defined as the main entry through landscaping, lighting and signage.

The formal nature of the entrance creates a connection between the street and the site.

Driveways

- A paved main entrance driveway suitable for access to the main visitor car park and the main building/s
- Designed for tonnage loads
- Materials and colours that reduce heat island effect
- Minimum turning circle to accommodate the largest likely service vehicle for the development
- The separation of light vehicle parking (for staff and visitors) and service areas.

Formal landscape

- Mulched (organic mulch to 75mm depth) and irrigated gardens beds to a minimum width of 1500mm either side of main entrance driveway
- Plant species as per formal plant palette (feature/high presentation including hedging or formal native grasses)
- Existing vegetation of ecological value should be retained and incorporated in landscape plans
- WSUD measures should be considered and incorporated to reduce irrigation demand.

Trees

- Irrigated, semi-mature trees along both sides of the driveway which at maturity will create a connected tree canopy
- Note that tree height and spread at maturity should consider the height of heavy freight vehicles
- Plant species as per formal plant palette.

Entrance path

- Provide a connected path from the primary street frontage to the main building entry with a minimum 1500mm wide path suitable for pedestrian and cyclist access
- Material: compacted sand or cement treated granitic sands, with a maximum slope of 2.5 per cent
- Entrance path should connect to the adjacent street path
- All paths within the primary entry thresholds should be designed for universal access and to the relevant Australian Standards.

Lighting

- Solar lighting bollards/pole top lights along the entrance path
- Controlled uplighting (timer) to selected trees along main entrance driveway
- Business signage as required (backlighting, uplighting)
- Security/sensor lighting as required.

Submission requirements

Landscape plans should include details on the primary entry threshold including materials, colours and plant species.

2.4.3 Secondary and other driveways

Overview

Secondary and other driveways are often required for service access. They should be consistent with the primary entry which can be achieved by including the same:

- **Plants**
- **Materials**
- **Colours**

Requirements

Secondary and other driveways are informal and are not required to meet all of the requirements of a primary entry threshold. They should be clearly defined and consistent with the design of the primary entry threshold.

Driveways

- A paved secondary or other driveway suitable for access to service areas or other buildings
- Designed to accommodate and material selected for tonnage loads
- Materials and colours that reduce heat island effect
- Minimum turning circle to accommodate the largest likely service vehicle for the development
- The separation of light vehicle parking (for staff and visitors) and service areas.

Submission requirements

Landscape plans should include details on the secondary or other driveways including materials, colours and plant species.

2.4.4 Car parks

Overview

Car parks are required for all private developments as there will be no on-street parking within the precinct. Car park design should incorporate:

- Parking spaces
- Parking access
- Landscaping
- Pedestrian pathways
- Lighting

Requirements

Visitor car parks should be next to the primary entry threshold and main entrance. The number of car parking spaces will be determined by the corporation based on the maximum number of visitors, staff and customers expected on site at any one time.

Car parks should blend into the landscape, consist of light coloured materials and include tree plantings to reduce heat absorption.

Car parks should also be connected by a primary path to the main building entrance/s.

Secondary car parks, if required, are to include a similar approach in balancing design and function.

Visitor car parks should be clearly defined and include pedestrian path and lighting.

Parking spaces

- Light coloured concrete or segmental or permeable pavers (includes DDA compliant parking)
- Material: light grey/beige insitu concrete or segmental or permeable concrete pavers
- One disabled car space should be provided for every 50 car spaces or as set out in the BCA, whichever provides the higher ratio.

Parking access

- All car parking access lanes (i.e. between rows of car parking spaces) feature bitumen or darker coloured segmental or permeable pavers with suitable edging material (e.g. flush concrete edge) between car parking spaces and lane/access
- Material: bitumen or dark coloured segmental/permeable concrete pavers
- Car parks should allow for vehicles to enter and exit in a forward direction and include adequate turning circles or lane widths.

Landscaping

- One semi-mature tree is to be located between every five continuous car spaces
- Recycled water or onsite stormwater should be used for irrigation
- Mulched or organic mulch to 75mm depth and irrigated garden beds to a minimum width of 1500mm are to be located adjacent to the edge of all car parks and pathways
- Plant species as per formal plant palette detailed in Section 2.4.7 (feature/high presentation including hedging and deciduous trees)
- Existing vegetation of ecological value should be retained and incorporated in landscape plans
- WSUD measures should be considered and incorporated to reduce irrigation demand*.

Pedestrian path

- Provide 1500mm wide pathways to all sides of car park
- Material: light grey/beige insitu concrete or segmental or permeable concrete pavers.

Lighting

- Car park lighting will be designed to ensure safe and continuous access to the main building entrance/s
- Solar lighting bollards/pole top lights to pedestrian path/s
- Controlled uplighting (timer) to selected trees along main entrance driveway
- Business signage can be appropriately illuminated (backlighting, uplighting)
- Security and sensor lighting is required to ensure crime prevention through environmental design principles are appropriately addressed.

Submission requirements

Landscape plans should include details on car parks (both visitor and secondary car parks) including materials, colours and species.

Canola in flower
Image courtesy of Parkes Shire Council

2.4.5 Precinct landscape character

Overview

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

- Trees
- Shrubs
- Grasses and groundcovers

Requirements

The following plant lists have been prepared based on:

- biodiversity and habitat reports undertaken during the master planning of the precinct
- analysis of the relevant NSW bioregions and subregions
- NSW Mitchell Landscapes typologies.

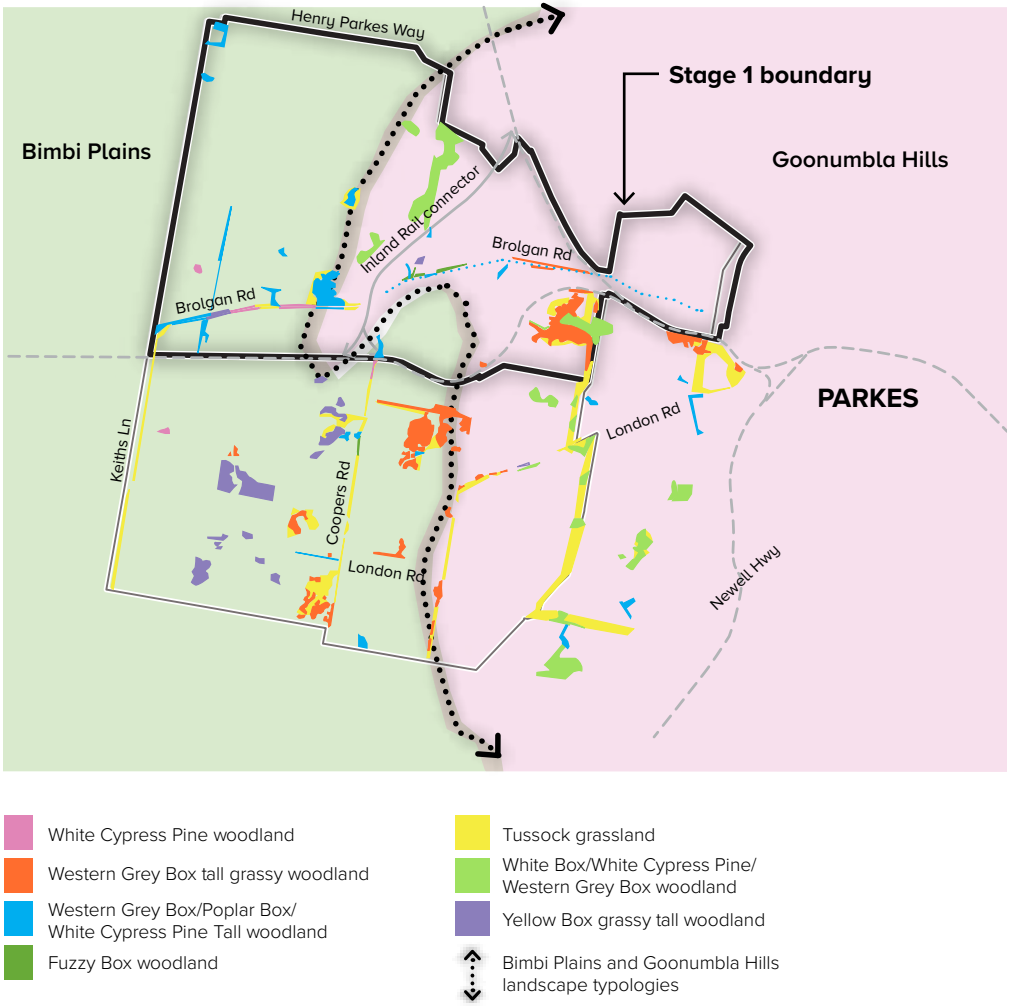
The plant lists are a summary of the key vegetation types in the Parkes region.

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 shows the approximate 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.

FIGURE 3 VEGETATION TYPE BY LOCATION



2.4.6 Site landscaping

Overview

Site landscaping applies to all areas of private development sites. Landscape design should include:

- **Integrated stormwater detention**
- **Planting**

Requirements

Site landscaping should integrate with the natural features and landscape of the site.

A site-specific landscape design should:

- incorporate existing areas to be retained and protected
- define new vegetated and landscaped areas that may form a green grid on the site or link existing vegetated areas.

Site landscaping should reflect the grasslands and open dryland forests of the Parkes region and assist broader efforts to enhance habitat and biodiversity across the precinct.

Integrated stormwater detention

Integrated stormwater detention and/or treatment will be included in the landscape design. These areas should adopt WSUD principles to integrate water cycle management with the natural environment.

Existing drainage lines and channels should be incorporated in the site landscaping (this may require separate and specialist design advice). This ensures, where possible, blue and green infrastructure is integrated across the precinct.

All site landscaping should include:

Planting

Site landscaping should be informed by the site's natural features and landscape and, where possible, retain existing areas of remnant vegetation.

The following sections outline the endemic species within the precinct.

Landscape plans should be developed with regard to the natural features of the area in which development is proposed as well as the plant palettes (refer to Sections 2.4.7 and 2.4.8).

- Locally sourced, minimum 75mm tube stock size native trees
- Grassland species or grass with a mix of native grasses with varying seasonal flowering
- Up to 20 per cent of site landscaping areas should include unirrigated, mulched garden beds with a mixed endemic shrub species mix, tube stock, at three plants/m^2
- Plant species as per site landscaping plant palette or informal plant palette.

Submission requirements

Landscape plans should include details of onsite landscape areas including materials, colours and species.

White Cypress Pine woodland

White Cypress Pine woodland is unique to other recorded vegetation types in the Parkes Special Activation Precinct due to an observed lack of taller eucalypts present; occuring on flat alluvial plains, and low rises within the central and western portions of the study area.

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

Trees

- Callitris glaucophylla (White Cypress Pine)

Shrubs

- Scleroleana birchii (Galvanised Burr)

Grasses and groundcovers

- Scleroleana birchii (Galvanised Burr)
- Grasses and groundcovers
- Austrostipa scabra subs. scabra (Speargrass)
- Digitaria divaricatissima (Umbrella Grass)
- Dysphania pumilio (Small Crumbweed)
- Einadia nutans subs. nutans (Climbing Saltbush)
- Enteropogon acicularis (Windmill Grass)
- Sida corrugata (Corrugated sida)
- Solanum esuriale (Quena)

Western Grey Box tall grassy woodland

This native vegetation is dominated by Western Grey Box trees and associated with floodplain areas, slopes and undulating lower/mid slopes. It has a sparse middle strata and dense grassy understorey, with diversity in native grasses and few weeds due to drought conditions.

Trees

- Eucalyptus microcarpa (Western Grey Box)
- Eucalyptus conica (Fuzzy Box)
- Allocasuarina luehmannii (Buloke)

Shrubs

- Maireana microphylla (Small-leaved Blue Bush)
- Salsola australis and Sclerolaena muricata (Black Rolypoly)

Grasses and groundcovers

- Austrostipa scabra subs. scabra (Speargrass)
- Bothriochloa macra (Red Grass)
- Carex inversa, Einadia nutans subsp. nutans (Climbing Saltbush)
- Enteropogon acicularis (Windmill Grass)
- Lomandra filiformis subsp. filiformis (Wattle Mat-rush)
- Maireana enchylaenoides (Wingless Bluebush)
- Paspalidium constrictum (Knottybutt Grass)
- Sida corrugata (Corrugated sida)
- Solanum esuriale (Quena)
- Rytidosperma caespitosum (Ringed Wallaby Grass)

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

Western Grey Box – Poplar Box – White Cypress Pine tall woodland

This 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 (Poplar Box)
- Callitris glaucophylla (White Cypress Pine)
- Eucalyptus melliodora (Yellow Box)

Shrubs

- Acacia dealbata subsp. dealbata (Silver Wattle)
- Geijera parviflora (Wilga)

Grasses and groundcovers

- Anthosachne scabra (Wheatgrass)
- Austrostipa verticillata (Bamboo Grass)

Fuzzy Box woodland

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

Trees

- Eucalyptus conica (Fuzzy Box)
- Eucalyptus microcarpa (Western Grey Box)
- Eucalyptus melliodora (Yellow Box)
- Callitris glaucophylla (White Cypress Pine)

Shrubs

- Acacia deanei (Green Wattle)
- Maireana enchylaenoides (Wingless Bluebush)
- Maireana microphylla (Small-leaved Bluebush)
- Sclerolaena muricata (Black Rolypoly)

Grasses and groundcovers

- Enteropogon acicularis (Windmill Grass)
- Rytidosperma richardsonii (Straw Wallaby Grass)
- Solanum esuriale (Quena)

A patch of tall grassy woodland within grazing area

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
- Convolvulus erubescens (Blushing Bindweed)
- Rumex brownii (Swamp Dock)
- Sida corrugata (Corrugated sida)
- Solanum esuriale (Quena)
- Wahlenbergia communis (Tufted Bluebell)

White Box – White Cypress Pine – Western Grey Box shrub/forb woodland

This vegetation 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.

Trees

- Eucalyptus albens (White Box)
- Callitris glaucophylla (White Cypress Pine)

Shrubs

- Sparse / scattered - Eremophila mitchellii (False Sandlewood)
- Maireana microphylla (Small-leaved Bluebush)
- Sclerolaena birchii (Galvanised Burr)

Grasses and groundcovers

- Anthosachne scabra (Wheatgrass)
- Bothriochloa macra (Red Legs)
- Austrostipa bigeniculata
- Austrostipa scabra subsp. scabra (Speargrass)
- Chloris truncata (Windmill Grass), Enteropogon acicularis (Windmill Grass)
- Panicum decompositum (Native Millet)
- Boerhavia dominii (Tarvine)
- Calotis cuneifolia (Purple Burr-Daisy)
- Maireana enchylaenoides (Wingless Bluebush)
- Sida corrugata (Corugated Sida)
- Solanum esuriale (Quena)
- Vittadinia cuneata var. cuneata (Fuzzweed)
- Wahlenbergia communis (Tuffed Bluebell)
- Wahlenbergia luteola (Bluebell)
- Xerochrysum viscosum (Sticky Everlasting)

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

Yellow Box Grassy tall woodland

This 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)
- Callitris glaucophylla (White Cypress Pine)

Shrubs

- Atriplex semibaccata (Creeping Saltbush)
- Eremophila debilis (Winter Cherry)
- Maireana microphylla (Small-leaved Bluebush)
- Salsola australis
- Sclerolaena muricata (Black Rolypoly)

Grasses and groundcovers

- Austrostipa scabra subsp. scabra (Speargrass)
- Austrostipa verticillata (Bamboo Grass)
- Digitaria divaricatissima (Umbrella Grass)
- Dysphania pumilio (Small Crumbweed)
- Enteropogon acicularis (Windmill Grass)
- Sida corrugata (Corrugated Sida)

2.4.7 Formal plant palette

Overview

Formal landscaped areas create a memorable experience for users.

The formal plant palette includes a limited number of species that are reflective of the Parkes township and apply to:

- **formal entry thresholds**
- **street interface**
- **car parks.**

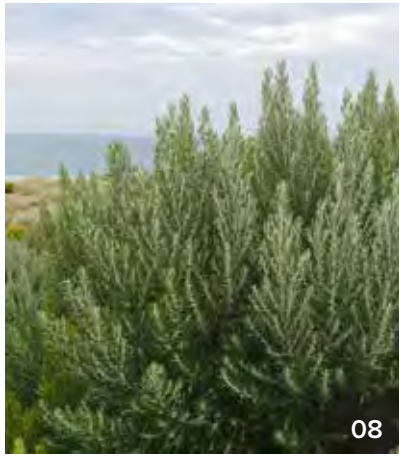
Scientific name	Common name	Min size
Trees		
Acer x freemanii ‘Jeffersred’	Maple	100L
Acer negundo ‘Elsrijk’	Maple	100L
Acmena smithii	Lilly Pilly	100L
Brachychiton populneus	Kurrajong	100L
Brachychiton rupestris	Bottle Tree	100L
Eucalyptus cladocalyx	Nana	100L
Eucalyptus leucoxylon	Yellow Gum	100L
Eucalyptus sideroxylon	Mugga Ironbark	100L
Fraxinus ornus ‘Meczek’	Claret Ash	100L
Geijera parviflora	Wilga	100L
Gleditsia tricanthos var. inermis ‘Sunburst’	Honey Locust	100L
Hymenosporum flavens	Native Frangipani	100L
Lagerstromia fauriei x L.fauriei ‘Natchez’	Crepe Myrtle	100L
Lagerstromia fauriei x L.fauriei ‘Sioux’	Crepe Myrtle	100L
Lagerstromia fauriei x L.fauriei ‘Tuscarora’	Crepe Myrtle	100L
Pyrus calleryana ‘Capital’	Ornamental Pear	100L
Pyrus calleryana ‘Chanticleer’	Ornamental Pear	100L
Zelkova serrata ‘Schmidtlow’ Wireless	Japanese Elm Wireless	100L

01 Kurrajong trees
02 Yellow Gum blossoms
03 Honey Locust tree
04 Lilly Pilly hedge
05 Bottle Tree
06 Murraya hedge


01


02


03



07 Grevillea Scarlet Sprite flowers
08 Coastal Rosemary
09 Kangaroo Paws
10 Callistemon Little John
11 Happy Wanderer flowers
12 Knobby Club Rush

Scientific name	Common name	Min size
Shrubs		
Acmena smithii ‘Forest Flame’	Lilly Pilly	200mm
Brachyscome sp.	Cut-leaf Daisy	200mm
Callistemon ‘Captain Cook’	Bottlebrush	200mm
Callistemon ‘Little John’	Dwarf Bottlebrush	200mm
Callistemon ‘Reeve’s Pink’	Bottlebrush	200mm
Correa reflexa	Native Fuchsia	200mm
Grevillea ‘Canberra Gem’	Grevillea	200mm
Grevillea ‘Juniperina’	Juniper-leaf Grevillea	200mm
Grevillea ‘Scarlet Sprite’	Grevillea	200mm
Grevillea ‘Sandra Gordon’	Grevillea	200mm
Hardenbergia	Happy Wanderer	200mm
Murraya paniculata	Murraya	200mm
Westringia fruticosa	Coastal Rosemary	200mm
Grasses/Sedges		
Anigozanthos sp.	Kangaroo Paws	200mm
Dianella caerulea	Blue Flax-Lily	200mm
Dianella revoluta	Lily	200mm
Dianella tasmanica	Tasman Flax-Lily	200mm
Isolepis nodosa	Knobby Club Rush	200mm
Lomandra longifolia	Mat Rush	200mm
Pennisetum alopecuroides	Fountain Grass	200mm
Ground covers		
Grevillea ‘Bronze Rambler’	Grevillea	200mm
Grevillea ‘Poorinda Royal Mantle’	Grevillea	200mm
Myoporum parvifolium	Creeping Boobialla	200mm
Lawns		
Dichondra	Roll out or seeded	
Dryarna	Roll out or seeded	
Nioaka	Roll out or seeded	

2.4.8 Informal plant palette

Overview

Informal landscaped areas are based on the ecology, habitat and biodiversity of the Parkes region.

Informal landscapes include:

- transition areas
- side and rear of buildings
- along fences
- secondary car parks.

Scientific name	Common name	Min size
Trees		
Acacia melanoxylon	Blackwood	45L
Agonis flexuosa	Willow Myrtle	45L
Allocasuarina verticillata	Drooping She-Oak	45L
Angophora floribunda	Apple Box	45L
Callistemon salignus	Pink Tip Willow Bottlebrush	45L
Callistemon viminalis	Drooping Bottlebrush	45L
Callitris endlicheri	Black Cypress Pine	45L
Callitris glaucophylla	White Cypress Pine	45L
Corymbia ficifolia	Red Flowering Gum	45L
Eucalyptus albens	White Box	45L
Eucalyptus caesia 'Silver Princess'	Gungurru	45L
Eucalyptus conica	Fuzzy Box	45L
Eucalyptus melliodora	Yellow Box	45L
Eucalyptus microcarpa	Western Grey Box	45L
Eucalyptus scoparia	Willow Gum	45L
Eucalyptus steedmanii	Steedman's Mallee	45L
Eucalyptus torquata	Coolgardie Gum	45L
Eucalyptus viridis	Green Mallee	45L
Grevillea robusta	Silky Oak	45L
Melaleuca styphelioides	Prickly-leaved Paperbark	45L
Pittosporum phillyreoides	Butterbush	45L

01 Coolgardie Gum
02 Drooping Bottlebrush
03 Giant Hop Bush leaves
04 Western Golden Wattle
05 White Cypress Pine
courtesy of © djpmapleferryman
06 Grevillea Honey Gem

07 Triandra
08 Pink Tip Willow Bottlebrush
09 Coral Vine
10 Creeping Boobialla
11 Western Grey Box
courtesy of © Murray Fagg
12 Grevillea Robyn Gordon

Scientific name	Common name	Min size
Shrubs		
Acacia buxifolia	Box-lead Wattle	200mm
Acacia cardiophylla	Wyalong Wattle	200mm
Acacia cultriformis	Golden Glow Wattle	200mm
Acacia deadbata subsp. dealbata	Silver Wattle	200mm
Acacia decora	Western Golden Wattle	200mm
Boronia megastigma	Brown Boronia	200mm
Brachyscome sp.	Cut-leaf Daisy	200mm
Callistemon ‘Endeavour’	Bottlebrush	200mm
Callistemon ‘Harkness’	Bottlebrush	200mm
Callistemon ‘Kings Park Special’	Bottlebrush	200mm
Callistemon citrinus	Red Bottlebrush	200mm
Callistemon viminalis	Drooping Bottlebrush	200mm
Cassia artemisioides	Silver Cassia	200mm
Cassia eremophila	Desert Cassia	200mm
Darwinia citriodora	Lemon Scented Myrtle	200mm
Dodonaea viscose	Giant Hop Bush	200mm
Eremophila sp.	Emu Bush	200mm
Eriostemon myoporoides	Long-leaf Wax Flower	200mm
Grevillea ‘Ivanhoe’	Grevillea	200mm
Grevillea floribunda	Seven Dwarfs Grevillea	200mm
Grevillea rosmarinifolia	Rosemary Grevillea	200mm
Grevillea ‘Honey Gum’	Grevillea	200mm
Grevillea ‘Robyn Gordon’	Grevillea	200mm

Scientific name	Common name	Min size
Hakea multilineata	Grassleaf Hakea	200mm
Hardenbergia	Happy Wanderer	200mm
Helichrysum ramosissimum	Yellow Buttons	200mm
Kunzea baxteri	Kunzea	200mm
Leptospermum flavens ‘Cardwell’	Tea Tree	200mm
Maireana microphyalla	Small-leaved Blue Bush	200mm
Melaleuca bracteata ‘Revolution Gold’	Honey Myrtle	200mm
Melaleuca bracteate ‘Revolution Green’	Honey Myrtle	200mm
Melaleuca hypericifolia	Red Flowering Paperbark	200mm
Grasses/Sedges		
Danthonia sp.	Wallaby Grass	200mm
Isolepis nodosa	Knobby Club Rush	200mm
Longifolia cassica	Mat Rush	200mm
Poa labillardierei	Native Tussock Grass	200mm
Poa sieberiana	Grey Tussock Grass	200mm
Themeda	Mingo	200mm
Themeda australis	Trianadra	200mm
Ground covers		
Einadia nutans subs. nutans	Climbing saltbush	200mm
Helichrysum ramossissimum	Yellow Buttons	200mm
Kennedia coccinea	Coral Vine	200mm
Myoporum parvifolium	Creeping Boobialla	200mm

2.4.9 Landscape design precedents

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

2.5 Street design

The Parkes Special Activation Precinct master plan outlines the primary road network and provides the basis for creating the precinct's streets and gateways.

The Stage 1 delivery plan area 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

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.

Environmental design

Climate appropriate and responsive landscape methods are employed to reduce water.

Water sensitive urban design (WSUD) underpins species selection and planting types are designed to minimise irrigation beyond establishment. Recycled water will be used for deep watering in the warmer months.

Summary

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.

Shared cycle and walkway in Parkes

Infrastructure

3

This section identifies principles and objectives to inform design and planning of infrastructure. It applies to both subdivisions and infrastructure proposals.

Pacific National freight train, Parkes

3.1 Introduction

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

This chapter outlines the obligations and considerations for the planning, design and delivery of infrastructure within the precinct. It identifies the anticipated staging for infrastructure delivery, principles to be considered in its placement and design, and an outline of the rationale for development contributions that will apply within the precinct.

Further detailed infrastructure investigations and design will occur as part of the detailed design of subdivisions and development proposals. Therefore, the infrastructure requirements and delivery arrangements reflected within this chapter may be amended to reflect outcomes of these investigations, and other arising technologies and demands.

INFRASTRUCTURE in this delivery plan includes:

- roads and transport infrastructure
- rail
- water
- sewerage
- stormwater management
- open space (including trails/paths)
- electricity supply and generation
- gas/hydrogen
- telecommunications
- other circular economy requirements
- green infrastructure
- lighting
- active and public transport

3.2
Local and regional infrastructure

LOCAL INFRASTRUCTURE

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

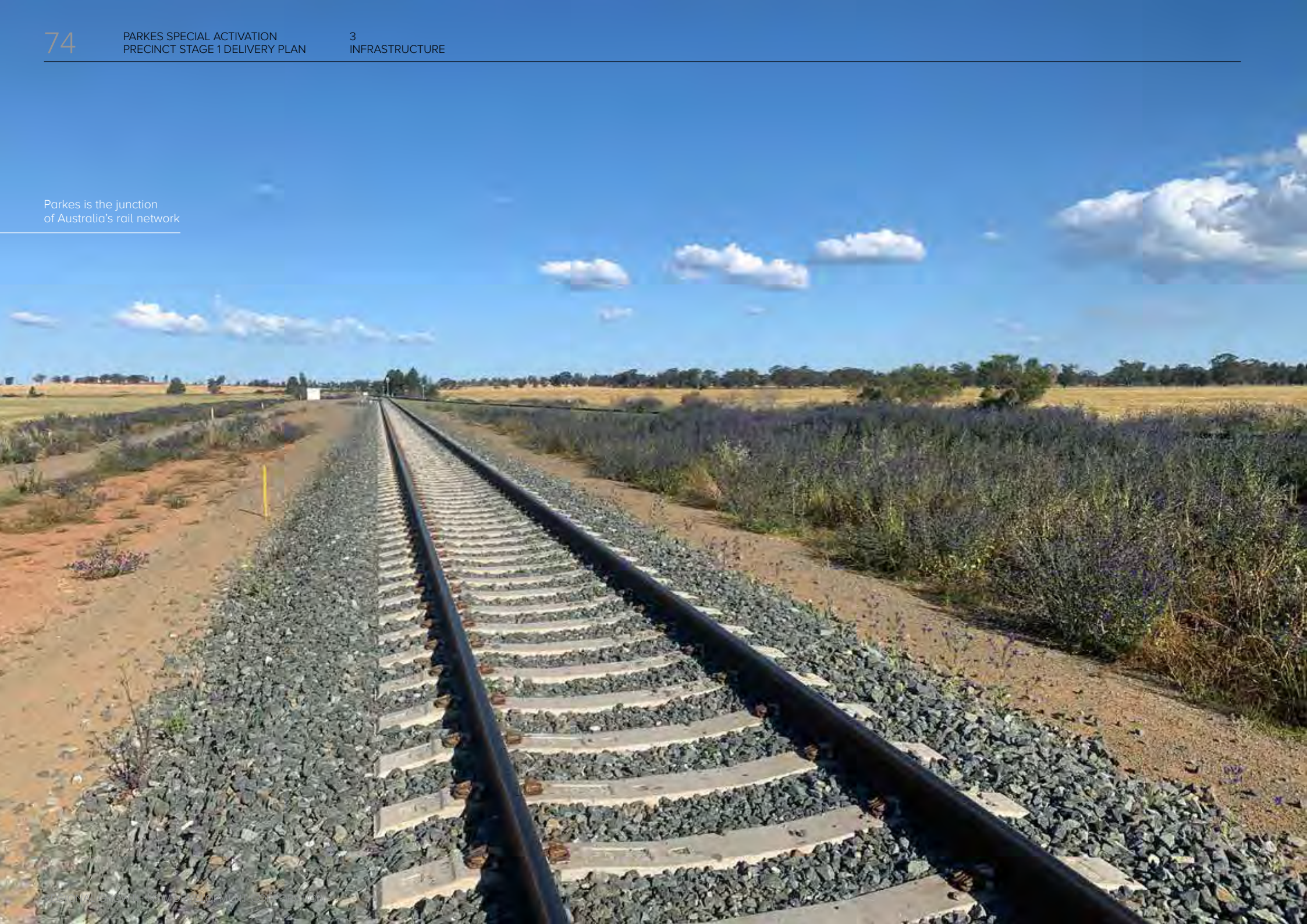
- roads, including internal roads and external access roads required to service new development and provide new road connections
- rail spurs to connect developments into the existing corridor
- water supply including internal and external works to connect to existing networks
- sewerage including the proposed new sewage treatment plant
- stormwater management within the site including works to connect the existing stormwater systems
- onsite open space
- electricity supply including internal and external works to connect to existing infrastructure
- telecommunications including internal and external works to connect to existing networks
- gas and/or hydrogen pipelines that connect a development into the existing network.

REGIONAL INFRASTRUCTURE

Regional infrastructure typically services the precinct as a whole and extends across all or part of the precinct. Because of this, it will typically be planned and coordinated by the corporation and will be delivered either by the corporation, utility providers or State agencies, or as a joint venture with private landowners or developers. This form of infrastructure will include:

- main road upgrades and new transport infrastructure, including road bridges (over rail line), roundabouts and intersections
- utilities including water, sewer and optic fibre
- future rail sidings and associated signalling
- energy generation plants
- precinct wide stormwater basins that form part of the broader catchment network
- public open space and trails
- gas and hydrogen transmission and distribution network
- green infrastructure that forms part of a biodiversity network or corridor
- active and public transport.

Freight truck on the road in Parkes



Parkes is the junction of Australia's rail network

3.3 Staging

The staging and delivery of infrastructure across the precinct needs to be flexible and responsive, depending on the timing of growth and land take up within stage 1.

ENABLING WORKS

The corporation is delivering a range of infrastructure works that will facilitate the delivery of the master plan in the short term and open up opportunities within stage 1 as shown in Section 6.12. These are known as the enabling works and comprise of the following components:

- upgrade to Brolgan Road (approximately 7.3km from Newell Highway to a point east of Keiths Lane) comprising new flexible pavements, stormwater drainage, road furniture and line marking
- a new concrete roundabout at the intersection of Brolgan and New Coopers Roads
- a new four-way intersection on Brolgan Road with north/south connector stubs for future internal roads
- new street lighting at intersections and shared user path along the length of Brolgan Road
- new Brolgan Road bridges
- new stormwater detention basins, roadside table drains and transverse culverts to manage overland flows
- adjustments to existing property driveways/local roads
- new 3.5ML potable water storage tank and mains
- new sewerage services provided with a gravity system, rising main and pump station in the precinct, with connections to a new treatment facility (a temporary packaged plant) with provisions for future upgrades to a permanent waste water treatment plant in the precinct
- new recycled water network with connection to the existing Parkes Shire Council recycled water network
- new gas main connecting to the existing Jemena main on Brolgan Road
- new trenched HV (11 kV) electricity cables along Brolgan Road
- a new 30MVA 11kv/33kv/132kV substation, connecting to the existing Transgrid 132kV substation to the north/west of the precinct, with provisions for future upgrades
- a new optic fibre network.

These works are in addition, and will be constructed separately to, the Newell Highway Upgrade – Parkes Bypass. The bypass 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. 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.

OTHER FUTURE WORKS

A general approach to the provision of infrastructure is to expand from the existing infrastructure networks in place. As such, development across the precinct will occur from east to west in stage 1. The growth of the precinct will radiate from the central spine of Brolgan Road.

The precinct needs to be responsive to emerging needs and demands. As such, any proposals that include out-of-sequence development may be considered if the proposal appropriately supports and contributes to infrastructure investment.

Variations to this approach may be accommodated where there is a demonstrated demand from a proposal and the delivery of the infrastructure 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.

3.4 Infrastructure design objectives and principles

The corporation will ensure all future infrastructure is planned, designed and constructed in accordance with relevant legislation, standards and guidelines from federal, state, and local authorities and service providers.

The design of infrastructure within the precinct will be based on the following principles:

ROADS

- accommodate PBS Level 2 (max length 26m) Design Vehicle and PBS Level 3 (max length 36.5m) Check Vehicle within the stage 1 precinct
- arterial and distributor roads designed for 90km/h design speed (80km/h posted speed)
- collector and local roads designed for 60km/h design speed (50km/h posted speed)
- all rail crossings are to be grade separated with bridges across the rail line to allow for double-stacking of containers and meet safety requirements as well as those of ARTC
- road levels set equal to or above the 1 per cent Annual Exceedance Probability (AEP) overland flooding for Regional roads and five percent AEP overland flooding for local roads
- 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
- new north west link between Brolgan Road and Henry Parkes Way to provide another connection point in the western part of the precinct. The final alignment of the north west link road is to be determined by the corporation having regard to site constraints
- future relocation of Coopers Road (New Coopers Road) to London Road
- ring road route formed by Brolgan Road, New Coopers Road and London Road, to be delivered in future stages
- pavements take into consideration the high centripetal axle loads expected due to large truck turning movements
- make use of recycled materials as part of the new pavement profile for either road subbase or on the shared use path
- road design cross sections and planting approaches align with the green infrastructure concepts outlined in this section
- State and regional roads (including Brolgan Road, New Coopers Road, London Road and the new north west link between Brolgan Road and Henry Parkes Way) will be included in the Special Infrastructure Contribution (SIC) for the Parkes precinct. These will be partly funded by the NSW Government and partly funded by SIC charges
- Newell Highway – Parkes Bypass is to be a Controlled Access Road and no future separate access connections are envisaged.

STORMWATER

- the approach to stormwater infrastructure across any individual site or subdivision will be designed to provide onsite management measures, along with precinct wide measures (i.e. bioretention basins) that form part of the broader stormwater and flood management strategy for the precinct
- no increase in peak discharges from overland flows or local stormwater runoff from the pre to post development case scenarios
- large stormwater detention basins are to be located on land acquired by the corporation. These will be constructed as part of initial activation works and incorporated with green infrastructure and vegetated areas across the precinct where appropriate
- cross drainage infrastructure to achieve road flood immunity and to maintain natural overland flow paths
- longitudinal drainage (open swale drainage infrastructure) to appropriately manage stormwater along existing and proposed road alignments
- stormwater detention can be provided in conjunction with stormwater quality improvement devices
- basin will be located on land that is considered poor quality for development, or land that would be expensive to develop and still meet compliance standards with regards to stormwater management
- 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%.

RAIL

- rail infrastructure within the precinct is 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.

ELECTRICAL

- planning for the ultimate energy demand of the precinct which includes the long term capacity of the substation to be expanded to 100MVA (80MVA with 20MVA spare capacity) will take into account the equipment and footprint area requirements for such future expansion. A location west of Coopers Road, on the southern side of Brolgan Road is recommended. The precinct will:
  - provide for an embedded energy network
  - provide for connection of single loads or generators e.g. data hub or centre and waste to energy plant at 33kV
  - initially utilise existing Essential Energy (EE) 11kV assets until the total load is greater than what Essential Energy can supply from the Parkes Town substation
- 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 RMS guidelines.

LIGHTING

- smart lighting will be delivered as part of the precinct lighting design
- smart lights use sensors to automatically adjust lighting levels in response to changing conditions. The sensors use movement detection and a basic mesh network to communicate with each other
- solar powered pole lighting will be provided to all shared use paths
- poles, bollards and other urban elements will be installed with smart-chip sensors that switch the lights on and off according to conditions
- regular street lights along Brolgan Road corridor are not proposed at this stage of the precinct due to the rural nature of the area, apart from lighting at intersections and major entry points.

WATER

- the Parkes precinct – stage 1 has been designed for an overall demand on average of 8.1ML/day and a peak 14.6ML/day
- the precinct water network will be supplied from the Barton Street Reservoirs located in the existing Parkes network via the existing DN300 pipes until either:
  - supply 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
- after which a reservoir will be constructed to provide storage capacity and service the precinct other than the Commercial Gateway sub-precinct which will be serviced by the existing township supply.

RECYCLED WATER

- 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 from the precinct sewage treatment plant
- recycled water will be used for green and open space irrigation and to supply individual customers within the precinct.

WASTEWATER

- a wastewater network will be delivered in the first stage of the precinct and will prioritise the use of a gravity trunk network and maximise the areas serviced by gravity connections
- 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
- 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
- wastewater demand assumes stage 1 ultimate equivalent population of 39,345
- treatment design assumes that all the treated effluent will be reused as recycled water, without environmental discharge
- an area of 65 hectares will be set aside to accommodate a scalable sewage treatment plant adjacent to Coopers Road to the south of the east-west railway line.

GAS

- gas demand for the precinct (excluding e-waste recycling) is estimated to be approximately 0.2 TJ/d
- an upgrade of existing Brolgan Road 110mm Nylon line to 160mm SDR 11 PE is proposed with an extension of the gas pipeline from Coopers Road to Keiths Lane
- gas pipeline infrastructure will be designed to accommodate the injection of renewable gas (biomethane or hydrogen) produced within the precinct as the specified piping is compatible with hydrogen
- the corporation is investigating the installation of a hydrogen network within the precinct. The design and specifications of this will be determined as part of the construction of enabling works.

TELECOMMUNICATIONS

- multiple conduits are to be installed within the services corridor to enable optic fibre installations for future smart infrastructure.
- 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. This also contributes to circular economy and sustainability requirements across the precinct.

ACTIVE AND PUBLIC TRANSPORT

- all streets within the precinct will feature a shared use path, separated from the road carriageway, for active transport and safety purposes. These shared use paths will be able to accommodate both pedestrians and cyclists.
- shared use paths will be 2.5m in width and comprised of bitumen, compacted granite or recycled materials
- in some areas of the precinct avenue plantings either side of a shared use path will be established to provide shade for users
- rest areas and signage will be established along shared use paths
- any pedestrian or cycle paths that are constructed on private land need to 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
- public transport stops will be integrated into road verges in appropriate locations
- individual site layouts will provide clear lines of sight for entry points and public shared use paths.

SERVICES CORRIDOR

- a services corridor(s) will be provided to support new underground services required to activate the precinct including:
  - gravity and some 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 services corridor will vary between 5.5-10m in width depending on the services needed and is to be accommodated within the road reserve
- the services corridor 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
- the services corridor will also accommodate any 11kV Essential Energy assets.

Elvis 'The Rockin' Rhino sculpture located outside the Parkes Visitor Information Centre
Image courtesy of Destination NSW

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 for future opportunities such as the provision of common vehicle charging or battery recharging facilities as these technologies continue to emerge.

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.

A collaborative approach

One of the primary functions of the corporation is to facilitate and deliver infrastructure. This has to be managed in the context of the broader network management framework of regulated utility providers, state agencies and Parkes Shire Council.

The corporation recommends that proponents adopt a collaborative approach to the planning and design of infrastructure with the ultimate asset owners. This is important to ensure consistency with both the precinct objectives and individual utility and authority objectives and requirements.

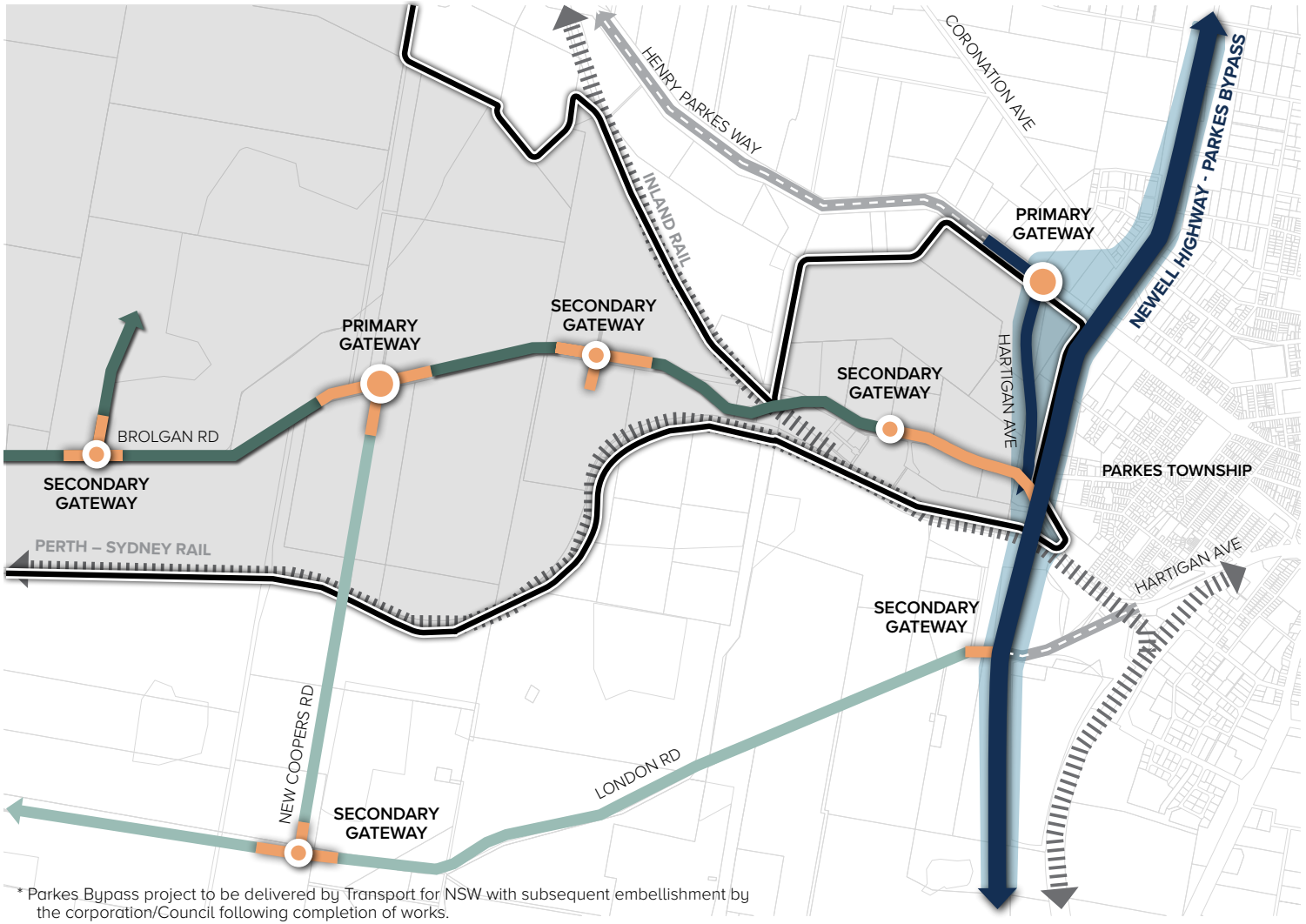
The corporation will coordinate consultation for works it will undertake. Each proponent will be responsible for consultation work related to their own individual developments.

3.5
Green infrastructure

Site-based landscaping in the precinct will be complemented by precinct wide green infrastructure. Refer to Sections 2.4.5, 2.4.7 and 2.4.8 for lists of plant species. Concept designs for the green infrastructure include:

- landscape and urban design concept plan
- primary gateways
  - roundabouts
  - Hartigan Avenue
- secondary gateways
- embankments
- boulevards
- parkways
- grassways
- local roads
- local road adjacent open space
- Regional Enterprise Park
  (note: Hartigan Avenue Primary Gateway treatments to be completed by the corporation/ Council following completion of Parkes bypass project subject to further consultation with TfNSW).

FIGURE 4 PARKES PRECINCT GREEN INFRASTRUCTIURE SPINE



* Parkes Bypass project to be delivered by Transport for NSW with subsequent embellishment by the corporation/Council following completion of works.

3.5.1 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 By-pass works undertaken by Transport for NSW. These public realm elements will be implemented by the corporation/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 5 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.

Building on the Aboriginal Design Principles report (WSP, June 2019), the central roundabout features swathes of native grasses and shrubs, set in amongst bands of compacted granite gravels in different hues.

A series of totems 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.

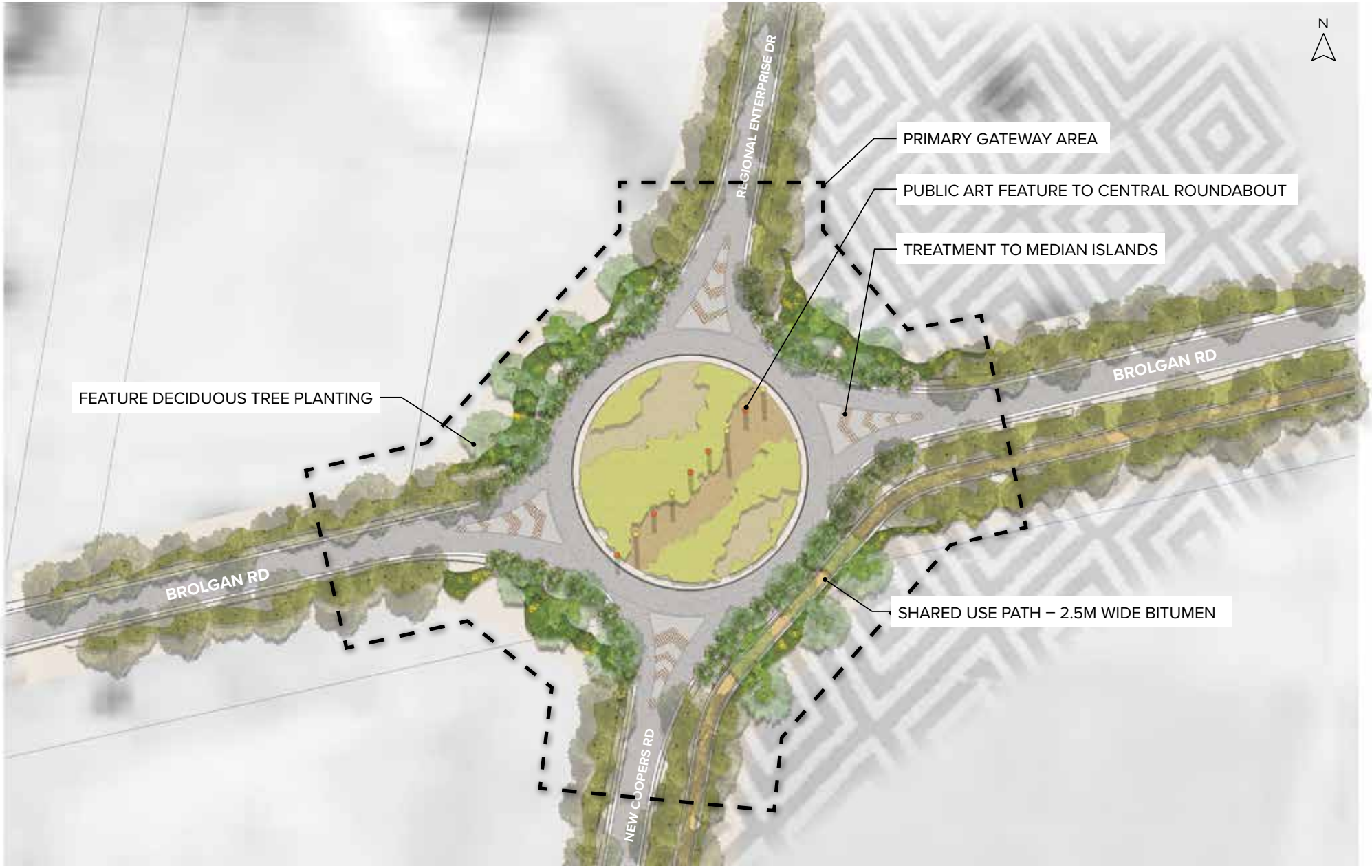
The approach roadside areas feature informal groupings of large Western Grey Box tall woodland tree species (Eucalyptus microcarpa, Eucalyptus conica) with an understorey of bands of associated native grasses, as well as a series of low, repeated gabion walls using locally sourced stone.

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.

KEY FEATURES

Large, mature trees	Surrounds (species): Eucalyptus camaldulensis, River Red Gum and formal rows of deciduous trees	Pot sizes: 45L (all species)
Landscape	Centre of roundabout: formal native species – grasses and groundcovers	Pot size: • Grasses: 75mm tubestock • Groundcovers: 200mm Plant density: • Grasses: four plants per m^2 • Groundcovers: 800mm centres
	Surrounds (species): Western Grey Box tall woodland species	Pot size: 75mm tubestock Plant density: two plants per m^2
Irrigation	Irrigation required using recycled water during the establishment period (typically up to a year) Following the establishment period, no further irrigation	
Mulch	Garden beds: 75mm depth organic mulch Other areas: cement treated, compacted granite gravel as per plans	

FIGURE 5 PRIMARY GATEWAY – ROUNDABOUTS (CONCEPT PLAN, NOT TO SCALE)



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.

A series of feature corten steel walls, with integrated landscaped mounds and planted with native grasses creates a distinction between the township and the Parkes Special Activation Precinct.

Fuzzy Box woodland forms the basis of the landscape species selection in locations surrounding the embankments and Newell Highway overpass, including Eucalyptus conica as the primary species with scattered Eucalyptus melliodora and Eucalyptus microcarpa.

Avenue plantings of Jacarandah trees will occur as part of the Transport for NSW works. Future plantings by the corporation/ Council will focus on fill plantings between those existing to create clusters, utilising a mixture of common and mixed trees species.

The above 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 the corporation/Council.

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

KEY FEATURES

Large, mature trees	• Features (species): Eucalyptus conica Jacaranda mimosifolia • Surrounds (species): E. melliodora and E. microcarpa	Pot sizes: 45L (all species)
Landscape	Fuzzy Box woodland species	Pot size: • Grasses: 75mm tubestock • Groundcovers: 200mm Plant density: • Grasses: four plants per m^2 • Groundcovers: 800mm centres
Irrigation	Irrigation required using recycled water during the establishment period (typically up to a year) Following the establishment period, no further irrigation	
Mulch	Garden beds: 75mm depth organic mulch Other areas: cement treated, compacted granite gravel as per plans	

3.5.2 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.

There are two types of secondary gateways based on the intersecting roads at a four-way junction (Figure 6), and at T-junctions (Figure 7).

The design approach is the same for both.

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 an inner avenue of smaller, deciduous trees (representing the Parkes character).

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.

KEY FEATURES

Large, mature trees	• Western Grey Box tall woodland species focus • Outer avenue: Eucalyptus microcarpa • Inner avenue: small deciduous tree	Pot sizes: 45L (all species)
Landscape	Western Grey Box woodland species	Pot size: Grasses 75mm tubestock Plant density: Grasses four plants per m^2
Irrigation	Irrigation required using recycled water during the establishment period (typically up to a year) Following the establishment period, no further irrigation	
Mulch	Garden beds: 75mm depth organic mulch Other areas: cement treated, compacted granite gravel as per plans	

FIGURE 6 SECONDARY GATEWAY – FOUR WAY JUNCTION (CONCEPT PLAN, NOT TO SCALE)

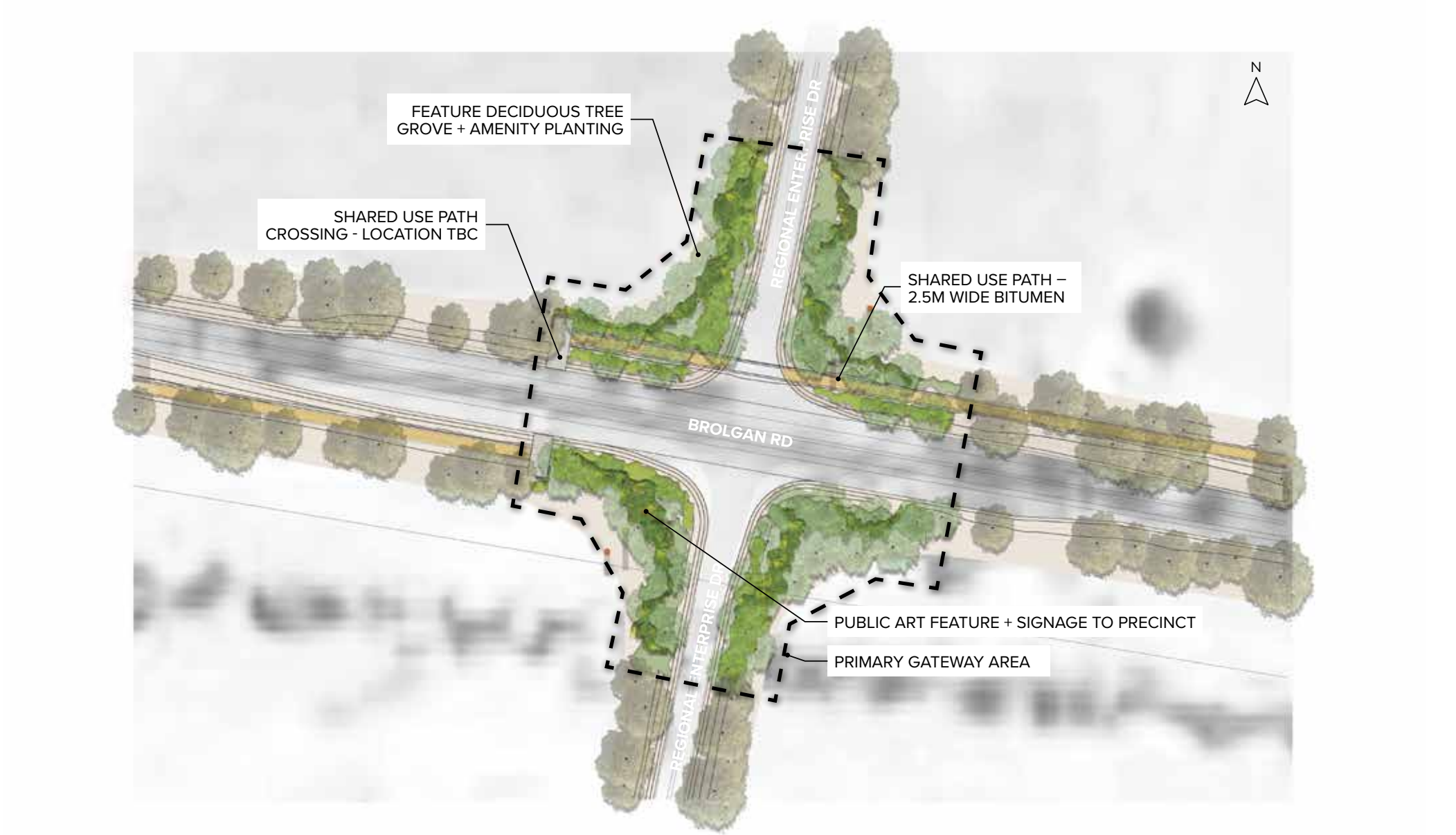
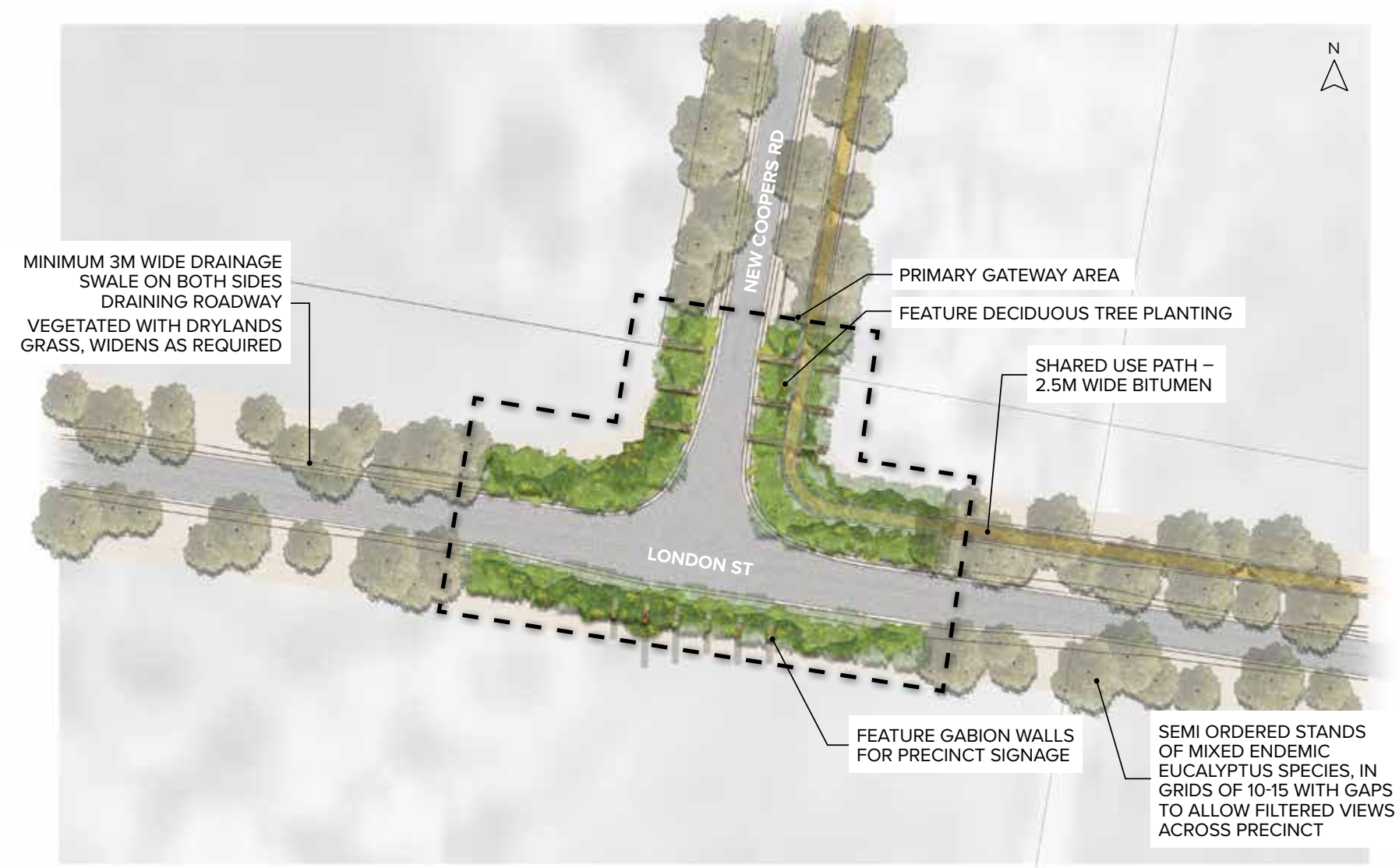


FIGURE 7 SECONDARY GATEWAY – T-JUNCTION (CONCEPT PLAN, NOT TO SCALE)



3.5.3 Secondary gateway – Brolgan Road Entry, West

As key decision points, junctions create a threshold for turning as well as orientation throughout the broader area. This T-junction along Brolgan Road is the major entry into Regional Enterprise sub-precinct (west) and is defined as a Secondary Gateway.

- Each secondary gateway features an outer avenue of Western Grey Box tall woodland trees – Eucalyptus microcarpa, and an inner avenue of smaller deciduous trees. Layered around a series of gabion walls are feature shrubs and grasses to create a strong sense of place as well as opportunities for local artworks, signage and wayfinding.
- Figure 8 illustrates a change in streetscape/roadway treatment as you enter from Brolgan Road, unique to the Regional Enterprise sub-precinct (west) development area.
- The approach along Brolgan Road features semi ordered stands of eucalypt species in grids of 10-15 with gaps to allow filtered views across the precinct and Regional Enterprise Park. Brolgan Road is considered a 'Parkway' – the proposed treatment focuses on formality to reinforce the broader landscape character of the precinct while allowing individual design elements to be celebrated that are unique to that particular development.
- Example imagery illustrates the style and character of elements that could be considered for this gateway area including gabion walls with incorporated seating, simple shelter structures, signage and sculptural artwork with a strong relationship to the landscape using natural/local materials.

FIGURE 8 BROLGAN ROAD ENTRY NODE

3.5.4 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. An example is shown in Figure 9 below.

The 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 typologies will be appropriate elsewhere.

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

The planting approach should respond to the slope and soil conditions, including requirements for any retaining structures.

KEY FEATURES

Trees	Other woodland species	Pot sizes: 200mm (all species)
Landscape	White Cypress Pine, Other woodland species	Pot size: 75mm tubestock Plant density: four plants per m²*
Irrigation	Irrigation required using recycled water during the establishment period (typically up to a year) Following the establishment period, no further irrigation	
Mulch	Garden beds: 75mm depth organic mulch^	

* to be confirmed based on slope and embankment design
^ mulching requirements to be confirmed based on slope and embankment design

FIGURE 9 ELEVATION – RAIL LINE UNDER BROLGAN ROAD

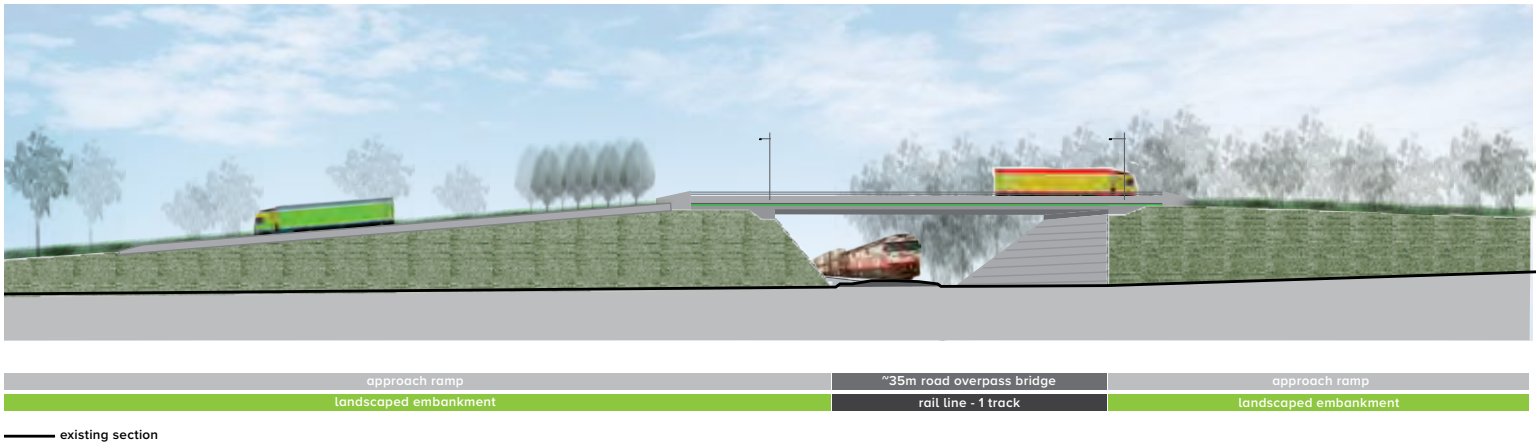
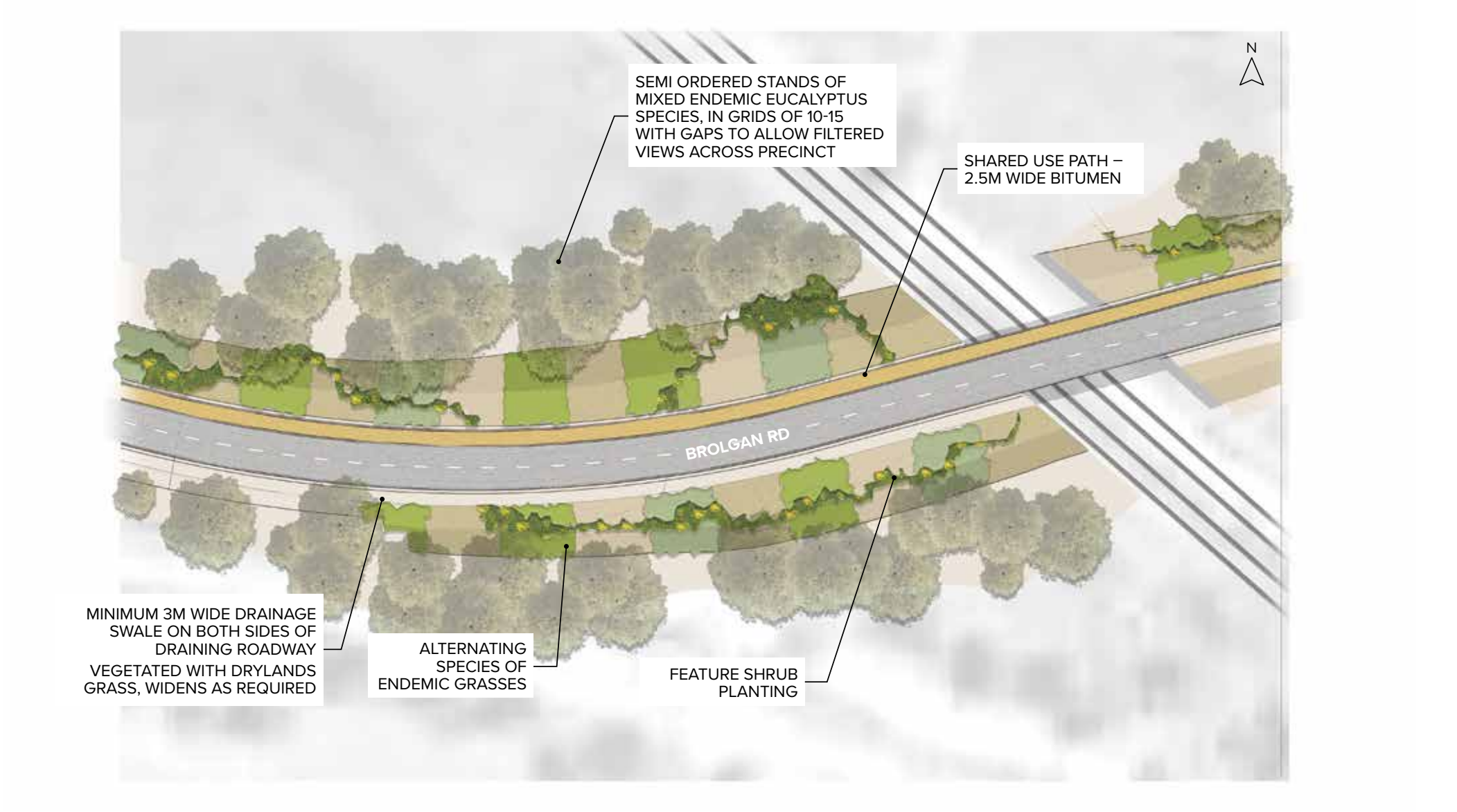


FIGURE 10 EMBANKMENTS (CONCEPT PLAN, NOT TO SCALE)



3.5.5 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 FEATURES

Staggered double avenue of large, mature trees	• Outer tree: Yellow Box, Eucalyptus melliodora • Inner tree: River Red Gum, Eucalyptus camaldulensis	Pot sizes: 100L (all species)
Landscape	Western Grey Box woodland species	Pot size: • Grasses: 75mm tubestock • Groundcovers: 200mm Plant density: • Grasses: four plants per m^2 • Groundcovers: 800mm centres
Irrigation	Irrigation required using recycled water during the establishment period (typically up to a year) Following the establishment period, no further irrigation	
Mulch	Garden beds: 75mm depth organic mulch Other areas: seeded lawn/turf	
Shared use path	Material: bitumen	Width: 2.5m wide, with 0.5m shoulder on both sides
Drainage swale	Vegetated with endemic, dryland grass, widens as required, non-irrigated	Min 3m, on both sides, draining roadway, as per engineering details
Lighting	• Intersections 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)	
Street furniture	• Wayfinding signage • Benches, bus shelter/s, bus stop/s, recycling and rubbish bins, bollards and bicycle racks	

3.5.6 Parkways

Parkways form the main treatment for Brolgan Road and connect different sub-precincts.

This parkway 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 the cross section below), and should provide a visitor experience to transition through the precinct.

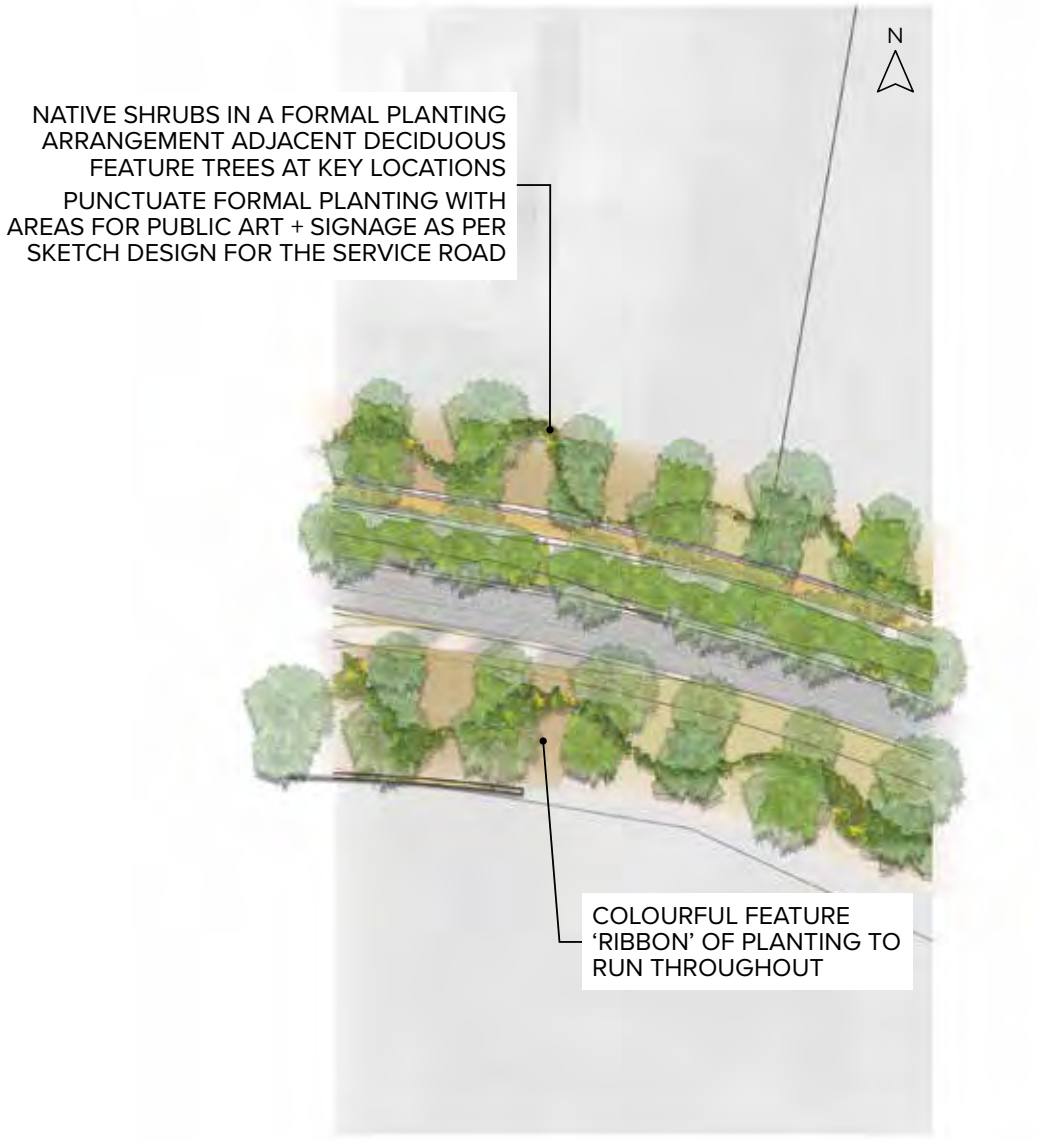
The focus on formality reinforces the precinct character, while allowing for entrances to new developments to feature formal landscaped primary street frontages.

KEY FEATURES

Staggered double avenue of large, mature trees	Inner tree – alternate groups of 20 • Yellow Box, Eucalyptus melliodora • Fuzzy Box, Eucalyptus conica Outer tree • Western Grey Box, Eucalyptus microcarpa • White Cypress Pine, Callitris glaucophylla	Pot sizes: 5L bags
Landscape	Fuzzy Box woodland grass species: • Windmill Grass, Enteropogon acicularis • Straw Wallaby Grass, Rytidosperma richardsonii • Quena, Solanum esuriale	Pot size: 75mm tubestock Plant density: three plants per m^2
Irrigation	Irrigation required using recycled water during the establishment period (typically up to a year) Following the establishment period, no further irrigation	
Mulch	Garden beds: 50mm depth organic mulch	
Shared use path	Material: bitumen/cement-treated, compacted granite gravel Enables separation from heavy and local traffic movements and encourages safe active transport	Width: 2.5m wide, with 0.5m shoulder on both sides
Drainage swale	Vegetated with endemic, dryland grass, widens as required, non-irrigated	Min 3m, on both sides, draining roadway, as per engineering details
Lighting	• Intersections 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 11 RESOURCE RECOVERY AND RECYCLING SUB-PRECINCT CROSS SECTION

FIGURE 12 PARKWAYS (CONCEPT PLAN, NOT TO SCALE)



3.5.7 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.

A grassway is the treatment proposed for the majority of all other roads in the Parkes Special Activation Precinct.

This informal and sustainable landscape treatment reinforces a rural character and allows new developments to feature formal landscaping at primary street frontages. A typical cross section is shown below.

KEY FEATURES

Informal, scattered trees	Tree species to be based on prevailing landscape type (refer Section 2.4.6 - 2.4.8 Site landscaping plant lists for map and plant species)	Pot size: 75mm tubestock Plant density: two plants per m^2
Landscape	Species to be based on prevailing landscape type (refer 2.4.6 - 2.4.8 Site landscaping plant lists for map and plant species)	Pot size: 75mm tubestock Plant density: two plants per m^2
Irrigation	Irrigation required using recycled water during the establishment period (typically up to a year) Following the establishment period, no further irrigation	
Mulch	Garden beds: 50mm depth organic mulch	
Shared use path	Material: bitumen/cement-treated, compacted granite gravel Enable separation from heavy and local traffic movements and encourages safe active transport	Width: 2.5m wide, with 0.5m shoulder on both sides
Drainage swale	Vegetated with endemic, dryland grass, widens as required, non-irrigated	Min 3m, on both sides, draining roadway, as per engineering details
Lighting	• Intersections and junctions – regulatory/smart street lighting • Solar lighting (with sensors and controllers) along shared use path	

FIGURE 13 TYPICAL ROAD CROSS SECTION SHOWING GRASSWAY LANDSCAPE TREATMENT

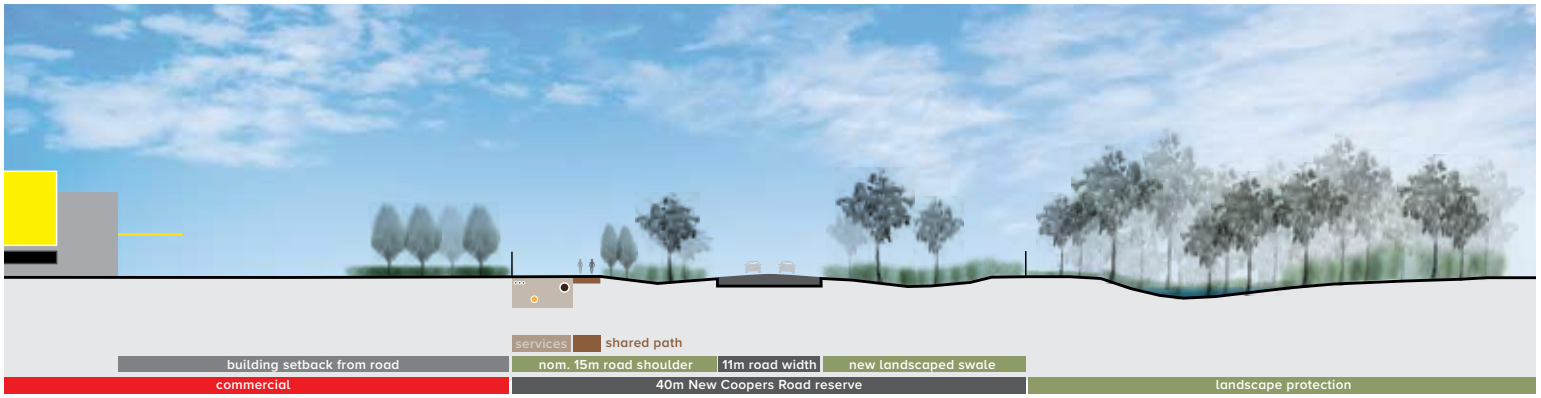
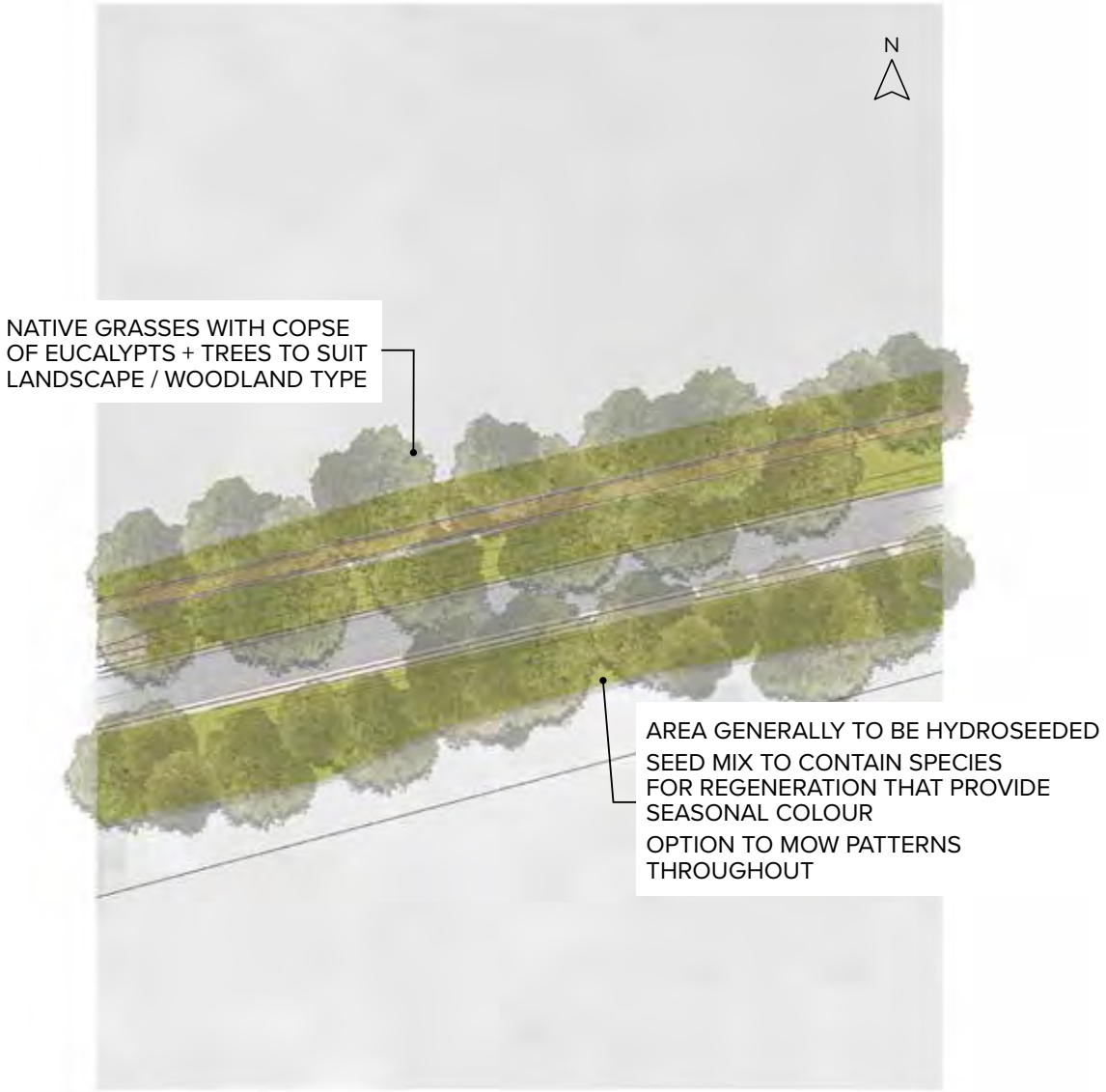


FIGURE 14 GRASSWAYS (CONCEPT PLAN, NOT TO SCALE)



3.5.8 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.

These local industry roads have a 30 - 40 metre road reserve providing room for truck access.

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.

FIGURE 15 CROSS-SECTION OF A TYPICAL ROAD SHOWING KEY FEATURES

Section A:A

3.5.9 Local road adjacent open space

The local roadway adjacent to an open space/revegetation area may be considered for a higher level 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 construction) as an edge to the revegetated landscape buffer zone.

Parkways contain a double row of staggered native trees – mixed species based on Fuzzy Box woodland characteristics, drainage towards vegetated swales with lighting and street furniture in appropriate locations (at the nodal points).

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

FIGURE 16 CROSS-SECTION OF A LOCAL ROAD ADJACENT OPEN SPACE

Section B:B

3.5.10 Regional Enterprise sub-precinct (west)

The concept for the landscape overlay of the Regional Enterprise sub-precinct (west) area strongly reflects that developed for the broader precinct, for continuity of development and visitor experience.

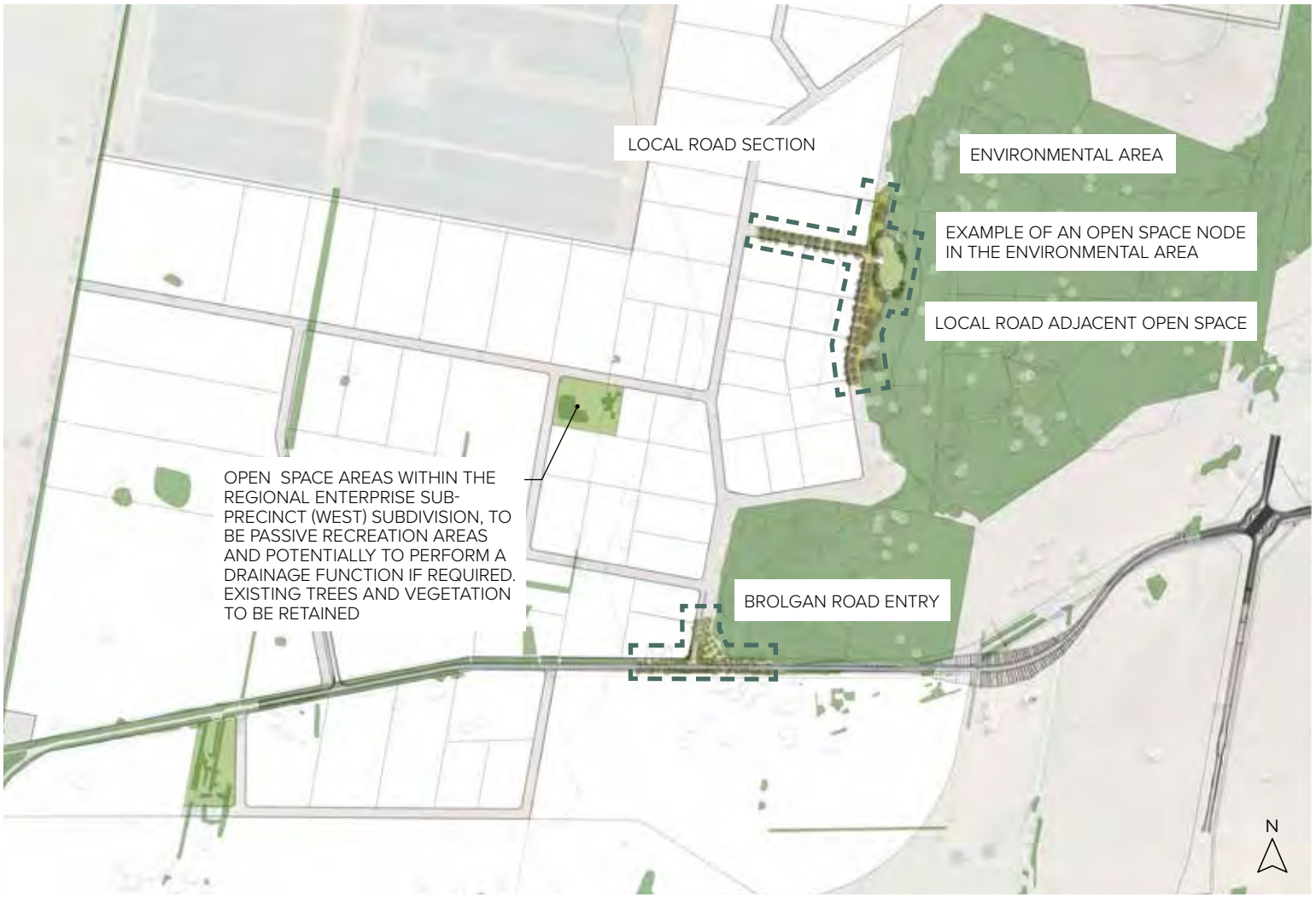
The landscape and urban design principles define a vision that Regional Enterprise sub-precinct (west) will be a place where:

- 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.

The subdivision concept for Regional Enterprise sub-precinct (west) and the landscape overlay have reinforced strong links to the abutting environmental area 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 of this area while maximising access, views and its relationship to the industrial development at its edge.

The landscape concept design/overlay includes treatments for the edge of the protected environmental area, open space areas within the development, nodes, different streetscape treatments and gateway treatments in line with the precinct.

FIGURE 17 REGIONAL ENTERPRISE SUB-PRECINCT (WEST) (CONCEPT PLAN, NOT TO SCALE)



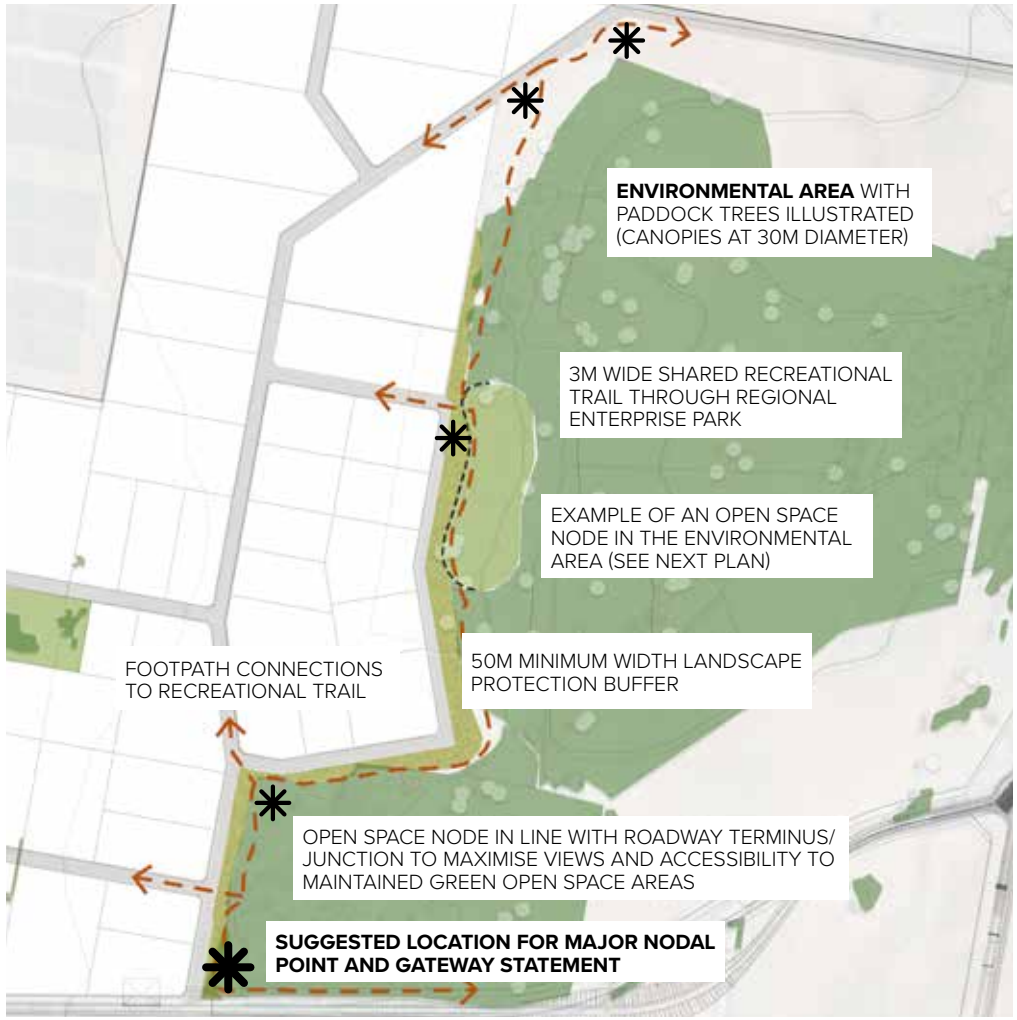
3.5.11 Regional Enterprise Park environmental area

The protection and improvement of the Regional Enterprise Park environmental area is central to the landscape concept and overlay. These features aim to improve biodiversity, environmental qualities, access and appreciation of this natural area.

Regional Enterprise Park is central to achieving environmental and sustainability outcomes within the precinct, and will make Regional Enterprise Park a great place to work and visit. Key design ideas and features of the Regional Enterprise Park are:

- The schematic layout illustrates a series of open space nodes, located at key points – at roadway junctions and view corridors along the boundary of the industrial development area and Regional Enterprise Park. A major node could potentially be located at the entry from Brolgan Road.
- Revegetation of grassland and tree planting will protect the area's biodiversity. This planting should not inhibit views into Regional Enterprise Park but keeps with the grassland understorey and upper tree canopy vegetation characteristics of the region.
- The recreation trail links with the internal footpath network at the nodal points and will contain signage, seating, shade and other parkland infrastructure elements. The trail should be compacted local rubble throughout Regional Enterprise Park.
- There is an opportunity to incorporate Wiradjuri design elements at nodal point infrastructure and in plantings.

FIGURE 18 REGIONAL ENTERPRISE PARK ENVIRONMENTAL AREA (CONCEPT PLAN, NOT TO SCALE)



Monitoring, reporting and compliance

4

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

4.1 General

The Parkes Special Activation Precinct aims to champion sustainable development by embedding the United Nations Industrial Development Organization (UNIDO) Eco-Industrial Park (EIP) Framework, UN Sustainable Development Goals, Ecologically Sustainable Development (ESD) and circular economy principles. A comprehensive monitoring, reporting and compliance program will be a key component supporting the achievement of the precinct's sustainability goals.

The precinct's sustainability targets, actions, management and mitigation measures will be informed by an annual baseline audit. This will help drive an adaptive management cycle for monitoring, reporting and compliance across the precinct.

The program will be developed progressively 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 to incorporate developments in this area.

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 and environmental health
- infrastructure
- operational requirements.

The intent of the program is to coordinate and integrate existing monitoring, modelling and reporting systems across these themes to avoid duplication. For example, if there are existing Environment Protection Licences in place which require monitoring and reporting to the EPA for industry within the precinct, the corporation would seek to also capture this data rather than duplicate information.

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 results

track and inform the performance of the precinct against domestic and international benchmarks.

Principles

The following principles will apply to the 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 is transparent, accountable, comprehensive and readily accessible
- 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 that 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 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

Monitoring will be undertaken to compile baseline conditions of the precinct and assess the extent of impact from the growth of the precinct. This will also help evaluate community benefits and sentiment. 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 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 reporting templates will be developed to ensure data and information is recorded consistently.

An annual report on implementation and operation of the precinct will be provided to the corporation's governing board and will be made publicly available. This report will be prepared by the corporation and provide an assessment of progress toward 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 matters related to a Complying Development Certificate, such as an existing 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, Industry and Environment for thermal electricity generating works in the precinct
- Secretary, Department of Planning, Industry and Environment 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 EPA is the state's principal environmental regulator and 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 industry to report on its compliance. In particular 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 the corporation

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

- application of the master plan through the development of 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.

The corporation 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*, the corporation has the ability to assist councils with respect to matters concerning the promotion, co-ordination and management of the precinct.

As such, the corporation 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, the corporation would first work with the business as an industry partner to rectify the matter.

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, DPIE, EPA, industry and businesses, the community, and research and conservation sectors.

4.2 Precinct wide monitoring program

Throughout the delivery of the Parkes Special Activation Precinct, the corporation will be responsible for undertaking a precinct-wide monitoring program which will be used to evaluate whether the precinct is on track to meet its targets, objectives and outcomes.

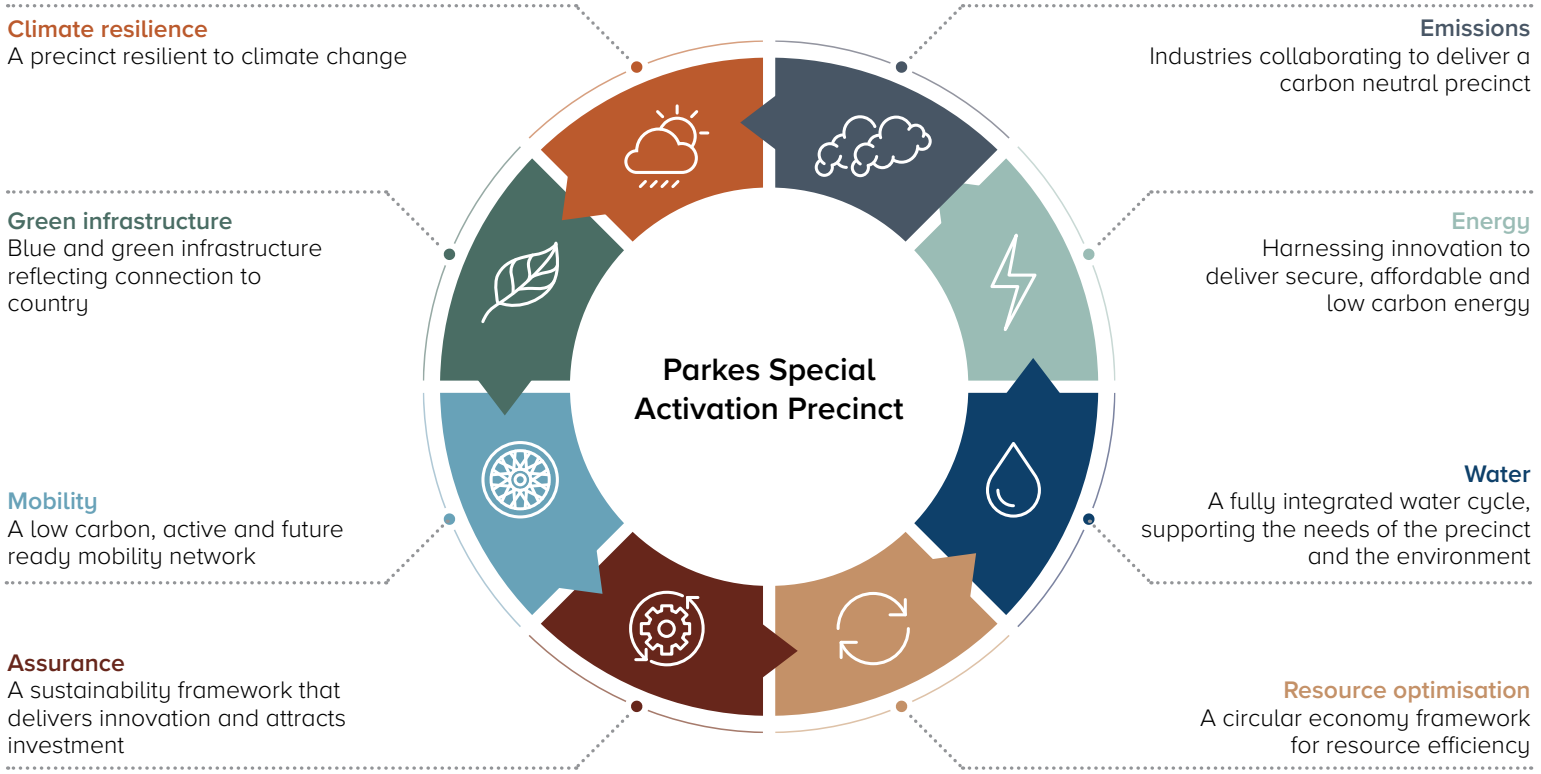
The corporation is committed to improving environmental performance providing national and international leadership in sustainable development and implementing the sustainability framework to connect organisations, processes and sources in a circular economy to gain efficiencies and minimise waste.

The sustainability goals for the precinct are:

1. to be Australia's first UNIDO accredited Eco Industrial Park
2. to become a carbon neutral precinct
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.

SUSTAINABILITY FRAMEWORK



Environmental Management Framework

To ensure the precinct can achieve its goals and fully embed these frameworks and principles, an ISO 14001 Environmental Management System (EMS) has been developed which incorporates an Environmental Management Framework and an Environmental Management Register. In addition to the EMS, the United Nations Industrial Development Organization (UNIDO) Eco-Industrial Park (EIP) Framework has been embedded into the master plan and the EMS to ensure that the precinct improves environmental, economic and social performance with the aim to create the first Eco-Industrial Park in Australia.

The corporation is responsible for delivering the EMS.

The EMS contains targets, actions objectives and outcomes to achieve environmental protection, 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.

The EMS will be monitored on an ongoing basis using a detailed monitoring and evaluation process outlined in the EMS. A review of compliance, performance data and Key Performance Indicators (KPIs) will be undertaken at least quarterly with an annual review undertaken as part of annual reporting requirements.

Following the review process, an annual compliance, data and KPI review will be undertaken to confirm that the EMS is effective in managing and improving environmental performance. KPIs have been developed during the initial master planning stage and were based on detailed modelling and research. KPIs will be assessed and updated once the precinct is in operation and on an annual basis thereafter.

Businesses and organisations within the precinct will have a responsibility to provide data to the corporation to inform annual reporting on the EMS.

The EMS will be subject to an external audit by a third-party approved auditor with accreditation provided as per ISO 14001.

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 the corporation 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 to ensure that existing systems are creating ongoing opportunities for improving environmental performance

Environmental monitoring

Precinct-wide environmental monitoring will be undertaken by the corporation in relation to:

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

Businesses and organisations within the precinct will have a responsibility to provide data to the corporation on site or project-based environmental monitoring to inform the precinct-wide annual reporting on the EMS.

The objectives and principles of the environmental monitoring are provided:

WATER QUALITY

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

GROUNDWATER

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

AIR QUALITY

- The corporation will work with relevant government agencies (i.e. EPA) to establish unattended monitoring stations within the precinct. Indicative air quality monitoring locations are shown in Figure 22.
- The monitoring stations are capable of measuring ambient air quality levels and can be progressively relocated 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 precinct compared with relevant guidelines.

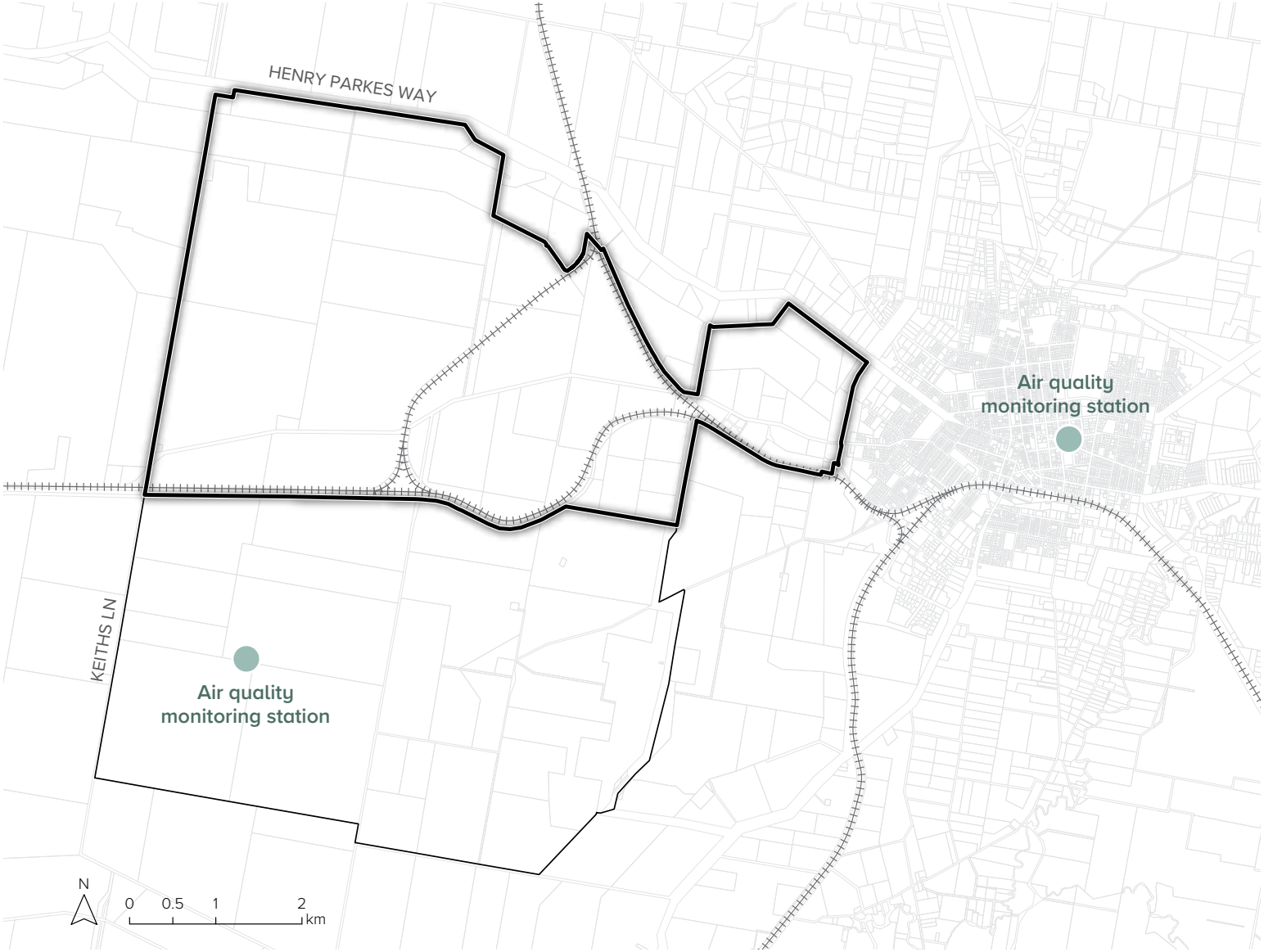
NOISE

- The corporation will work with relevant government agencies (i.e. EPA) to establish a monitoring and reporting program, which includes monitoring and reporting on noise emissions.
- The corporation will work with relevant government agencies (i.e. EPA) on the establishment of unattended monitoring locations within the precinct.
- 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

- The corporation will work with relevant government agencies 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 if any action may be needed.
- Odour sampling of sources at a site can also be conducted where absolutely 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.

FIGURE 19 MONITORING STATIONS



Data

Businesses in the precinct will work with the corporation 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 DPIE
- 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 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.

This enables the corporation as the precinct custodian to proactively manage and respond to the precinct's needs. A key component of the data captured in the precinct will focus on infrastructure assets.

This helps to understand the planning, design, construction and operational phases of infrastructure assets.

The corporation'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 that the corporation will adopt for data management include:

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

Environmental management plans

Businesses in the precinct may need to prepare an environmental management plan (EMP) which is a site or project specific plan developed to ensure that appropriate environmental management practices are followed during a project's construction and operation.

EMP's will ensure:

- application of best practice environmental management to a project
- the implementation of a project's conditions of approval or consent
- compliance with environmental legislation
- that environmental risks associated with a project are properly managed.

The scope of an EMP will vary depending on the scale and nature of a project. Chapter 5 – Assessment criteria sets out the requirements for an EMP depending on the scale, nature and potential environmental impacts from a project.

Assessment criteria

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

Canola farming in Parkes

5.1 How assessment criteria apply to development

The *Environmental Planning and Assessment Act 1979* identifies the following as forms of development:

1. the use of land
2. the subdivision of land
3. the erection of a building
4. the carrying out of a work
5. the demolition of a building or work.

THE PARKES SPECIAL ACTIVATION PRECINCT MASTER PLAN identifies overarching principles for development under the following themes.

Assessment criteria have been developed to align with these overarching goals. Development will be assessed against the assessment criteria for each of these principles.

economic development

environment and sustainability

community

infrastructure

place and landscape.

5.2
Economic development

Land use

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC1 Land uses are consistent with the strategic intent of the precinct and the relevant sub-precinct as shown in Section 6.2.	**A1.1** Land uses within the Regional Enterprise sub-precinct comprise one or more of the following: Electricity generating works, liquid fuel depot, intensive plant agriculture, industry, rural industry, sewerage system, waste or resource management facility, water supply system, farm buildings, landscaping material supplies, timber yards, industrial activity, industrial retail outlets, vehicle repair stations, storage premises, depots, warehouse or distribution centres, car parks, freight transport facilities, roads, road transport depots, truck depots, research station, recreation area, environmental protection works, crematoria, flood mitigation works, intermodal terminal, freight terminal. **A1.2** Land uses within the Solar sub-precinct comprise of one or more of the following: Electricity generating works, sewerage system, water supply system, industry, farm buildings, depots, car parks, roads, research station, recreation areas, environmental protection works, flood mitigation works.	**B1.1** 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 the corporation 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.	**U1.1** Land uses identified as prohibited within the Land Use Table set out within the Activation Precincts SEPP. **U1.2** Land uses contrary to the objectives of the precinct. **U1.3** 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. **U1.4** Sensitive land uses (such as dwellings) that would compromise existing or future envisaged land uses within a sub-precinct or adjacent sub-precinct. **U1.5** 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. **U1.6** General forms of industry that would be better located outside of the precinct, such as within the local industrial areas or Parkes township.

Land use

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC1 ... continued	**A1.3** Land uses within the Resource Recovery and Recycling sub-precinct comprised of one or more of the following: Electricity generating works, liquid fuel depot, sewerage system, waste or resource management facility, water supply system, agriculture, industry, farm buildings, timber yards, industrial activity, industrial retail outlets, wholesale supplies, vehicle repair stations, storage premises, depots, warehouse or distribution centre, car parks, freight transport facilities, roads, transport depots, truck depots, research stations, flood mitigation works, recreation areas, environmental protection works. **A1.4** Land uses within the Commercial Gateway sub-precinct comprised of one or more of the following: Electricity generating works, sewerage system, water supply system, specialist retail premises, industrial retail outlets, storage establishments, light industry, warehouses, visitor centre/ sales offices, food and drink premises, neighbourhood shops and kiosks, highway service centres, driver rest facilities and vehicle servicing.	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 the corporation, if required, to support that development is suitable in the sub-precinct. Where the development is a potentially offensive industry, development must have a 1 km buffer area within the development site.	**U1.7** Offensive industries which cannot satisfactorily mitigate impacts on adjacent development through buffers, design, construction or management practices.

Land use

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC2 Subdivision which creates a range of allotment sizes that facilitate the envisaged land uses within each sub-precinct.	**All precincts** **A2.1** Strata subdivision may be acceptable provided the uses are consistent with those outlined in PC1 and the standards for development outlined in this delivery plan are met. **A2.2** Subdivision layouts and allotments accommodate: a. a mix of allotment sizes; and b. a consistent number of access points and general locations to key roads; and c. staging of development; and d. new or upgraded infrastructure in the Parkes precinct. **A2.3** Allotment sizes range across the precinct as follows: a. within the Regional Enterprise sub-precinct – minimum two hectares; b. within the solar sub-precinct – minimum two hectares; c. within the Resource Recovery and Recycling sub-precinct – no minimum lot size provided subdivisions create allotment sizes and shapes that support the provision of preferred land uses and maximise access to the future rail intermodal; d. Commercial Gateway – no minimum lot size provided subdivisions create allotment sizes and shapes that support the provision of preferred land uses.	**B2.1** Allotments outside of the designated allotment size range, provided it can be demonstrated that the allotment is capable of accommodating the following: a. a building of a scale typically associated with an envisaged land use; and b. spaces for outdoor activities and storage areas; and c. car parking spaces; and d. vehicle manoeuvring areas capable of accommodating up to B-double vehicles; and e. at least 30 per cent of the site accommodating pervious surfaces/landscaping. **B2.2** Subdivision creating allotments larger than the designated size range for the sub-precinct, unless the allotments are being created as a result of a boundary realignment or to facilitate future delivery arrangements.	**U2.1** Subdivisions that create allotments which would be too small to provide for the land uses envisaged within the relevant sub-precinct. **U2.2** Allotment sizes that do not accommodate future expansion or growth of envisaged uses for the sub-precinct. **U2.3** Strata subdivisions creating small allotments.

Land use

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC3 Existing and transitional development occurs in the short term in a way that does not compromise the development of the precinct.	**A3.1** Development of buildings and structures that support existing farming and primary production uses on the associated land while the farming use is in transition. **A3.2** Minor additions and alterations to existing dwellings such as: a. verandahs b. decks c. carports and garages d. living areas.	**B3.1** Temporary land uses on land that would support the active use of the land in the interim development of the precinct. Examples include: a. farming b. special events.	**U3.1** Intensification of existing or establishment of new sensitive land uses that compromise the development of the precinct. **U3.2** Development of structures or uses that compromise the establishment of important road, rail or open space/ vegetation connections for the current or future stages of the precinct.
PC4 Development that capitalises on the rail and road transport infrastructure as a key competitive advantage for the precinct.	**A4.1** Land within the intermodal and rail terminal facility overlay (Section 6.3) 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. **A4.2** Subdivision that provides for road and rail infrastructure to support important connections identified within the master plan. **A4.3** Land uses within the intermodal and rail terminal facility overlay that propose or support 24/7 operations.	**B4.1** 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. **B4.2** 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. **B4.3** Subdivisions that provide for freight access along the corridor through alternative means to public roads, such as rights of way.	**U4.1** 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. **U4.2** Land uses and buildings that would prevent the 24 hour operation of rail and road freight movements and transfer activities. **U4.3** Subdivision layouts and building placement that prevents the continuous movement of freight along the corridor.

Land use

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC5 Development that enables infrastructure and the co-location of industries requiring transport and utility/service connections.	**A5.1** Development contributes to the establishment of the clustering of like land uses with similar transport, utility and service infrastructure needs, where possible. **A5.2** Development and subdivision layout and design provides space for required infrastructure easements including future circular economy and/or shared infrastructure including driveways and car parking. **A5.3** Development takes advantage of existing and proposed shared systems relating to resource handling and storage, fuel or water storage, onsite energy generation and resource processing.	**B5.1** Land uses among non-similar uses and industries provided: a. they do not compromise the ongoing and future operations of adjacent businesses in terms of transport and service infrastructure demands; or b. there is no other alternative location due to land availability or suitability; and c. they demonstrate a clear pathway to integrating future infrastructure integration with surrounding businesses using circular economy principles.	**U5.1** Development and subdivision layouts that do not provide for key infrastructure connections either across a site or sub-precinct.
PC6 Thermal electricity generating work is appropriately located within the Resource Recovery and Recycling (west) sub-precinct.	**A6.1** Thermal electricity generating work is located in the Resource Recovery and Recycling (west) sub-precinct that: a. provide direct rail access to maximise freight and logistics opportunities; 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.	Not applicable.	**U6.1** Thermal electricity generating work located outside the Resource Recovery and Recycling (west) sub-precinct.

5.3 Environment and sustainability

Sustainability

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC7 Development supports and contributes to the principles of the UNIDO Eco-Industrial Park framework and a carbon neutral precinct.	**A7.1** Development demonstrates a commitment to the Parkes Special Activation Precinct accredited ISO14001 EMS framework. **A7.2** The applicant commits to contributing data in accordance with the precinct EMS framework. Note: Access to the Parkes Special Activation Precinct accredited ISO14001 EMS framework can be obtained from the corporation.	**B7.1** The applicant commits to developing an ISO14001 EMS framework within 12 months from the date of approval and commits to contributing data in accordance with the precinct EMS framework.	**U7.1** Development does not demonstrate a commitment to the principles of the UNIDO Eco-Industrial Park framework and a carbon neutral precinct.

Note: The EMS framework is scalable depending on the size and nature of businesses within the precinct. For small businesses, a commitment to the EMS framework and annual data for energy and water consumption would be required e.g. by supplying electricity bills.

PC8 Development supports energy efficiency through the use of onsite energy generation.	**A8.1** Development maximises onsite energy capture and reuse through roof top mounted solar PV. **A8.2** Development commits to implementing an energy efficiency and energy consumption plan for continually improving energy efficiency and will report energy data to the corporation annually.	**B8.1** Development utilises an equivalent or better alternative onsite renewable energy generation system. **B8.2** Development commits to implementing an energy efficiency and energy consumption plan for continually improving energy efficiency and will report energy data to the corporation annually, within 24 months of precinct occupation.	**U8.1** Development does not seek to improve energy efficiency.

Note: An energy efficiency and energy consumption plan includes requirements for sub-metering and monitoring of different energy uses, setting consumption targets, and programmes for annual review and ongoing energy use reduction.

Sustainability

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC9 Development integrates best-practice water cycle management initiatives with both quantity and quality aspects for water management.	**A9.1** 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 6,000m^2 a rainwater tank with a minimum of 10,000 litres; or for development with building footprint greater than 6,000m^2 onsite rainwater storage tanks equivalent to a minimum of 1.65 litres storage per square metre of gross floor area.	**B9.1** Development demonstrates equivalent or better alternatives for integrating best-practice water cycle management initiatives in order to reduce potable water use.	**U9.1** Development does not seek to reduce potable water demand.

Sustainability

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC10 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 source 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 wastes in the ongoing use of a premise; and f. reducing the demand for waste disposal.	**A10.1** 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. 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. **A10.2** Development incorporates the use of recycled or reclaimed materials in construction where possible. **A10.3** 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; and d. designed and located to ensure the access and manoeuvring area is suitable for the collection vehicle, where applicable.	Not applicable.	**U10.1** Development that maximises waste to landfill.

Sustainability

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC10 ... continued	**A10.4** Grease traps are provided where there is a likelihood of liquid waste entering the drainage systems. **A10.5** Communal storage/ collection facilities are provided where: a. the design makes it difficult for all tenants to have ready access to a collection point; or b. the site characteristics restrict vehicle entry. Note: A waste management plan may be required.		

Biodiversity, vegetation and the landscape

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC11 Development protects and enhances areas of high value biodiversity through landscaping and open space.	**A11.1** Development retains all areas of high ecological value and Tier 1 and Tier 2 paddock trees, as identified within Section 6.4, within roads, allotments and site layouts. **A11.2** Subdivision designs provide for vegetation retention and green corridors (on public or private land) as identified within Section 6.4. **A11.3** Development sites provide onsite landscaping consistent with Section 2.4.	**B11.1** Development that requires removal of existing grassland and vegetation, must demonstrate: a. the vegetation is not part of an area of high ecological value or Tier 1 or Tier 2 vegetation; and b. no other reasonable alternative to the design of the site and development is feasible; or c. provides planting of additional grassland and vegetation of native species in other locations on the site at a rate of 10:1. **B11.2** Development that requires the removal of areas of high ecological value and Tier 1 and Tier 2 trees for streets, utilities or stormwater infrastructure must demonstrate: a. no alternative route or location is cost effectively achieved or physically possible for the street or infrastructure; and b. offset planting is made in lieu at a rate of 10:1.	**U11.1** Avoidable removal of areas of high ecological value or Tier 1 and Tier 2 trees, particularly within private development sites. **U11.2** Development sites that do not integrate existing vegetation into landscaped spaces or site design.

Biodiversity, vegetation and the landscape

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC11 ... continued	**A11.4** Subdivisions and development accommodate open space and landscape that support the establishment of vegetated corridors including: a. trails as identified within Section 6.5; 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. Note: A written advice statement may be required from a suitably qualified person which confirms that the development will not directly or indirectly impact on areas of high ecological values. Note: A landscape plan will be required to be submitted with the application.	**11.2** ... continued Note: The master plan provides that areas of high-ecological value and Tier 1 and 2 trees, shown at Figure 5: Significant vegetation, are to be retained and not 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. Note: Development consent is required under the Activation Precincts SEPP for clearing of native vegetation on land identified as within an environmentally sensitive area on the Activation Precincts SEPP Parkes Activation Precinct Environmentally Sensitive Areas Map. A report will be required from a suitably qualified person that identifies any potential adverse impact of the proposed development on any of 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 impact.	

Note: Biodiversity Offsets Scheme 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, Industry 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*.

Biodiversity, vegetation and the landscape

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC12 Development addresses biosecurity requirements to protect the environment and community from the negative impacts of pests and diseases, weeds and contaminants.	**A12.1** 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. Note: An emergency disposal and biosecurity protocol may be required.	Not applicable.	**U12.1** Development results in an unacceptable biosecurity risk.

Flooding, stormwater and groundwater

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
Flood risk management			
PC13 Development is compatible with the flood function and the flood hazard of the land.	**A13.1** Development (except for infrastructure delivered by the corporation) within the Flood Planning Area: a. ensures buildings are not located within FPCC 1 or 2; designated on Section 6.6; b. ensures building floor levels and flood sensitive equipment (including electric motors and switches) are located at or above the Flood Planning Level designated on Section 6.7; c. ensures utilities and services (e.g. electrical and telecommunications services) are adequately flood proofed.	**B13.1** Development within the flood planning area may be considered appropriate where supported by a flood engineering report that demonstrates how flood risk will be managed and mitigated. **B13.2** Development may be considered appropriate where development is unable to meet the minimum levels on the contour map but is supported by a flood engineering report that demonstrates how flood risk will be managed and mitigated. **B13.3** Flood proofing of existing buildings may be considered where it can be proven to limit loss of or damage to the operation of the activity.	**U13.1** Large scale bulk earthworks to make land below the Flood Planning Level available for development. **U13.2** Buildings and other structures located within areas of higher risk.
	A13.2 Subdivision of land for commercial or industrial purposes occurs outside FPCC 1 and 2 designated on Section 6.6.	**B13.4** Subdivision that includes areas within FPCC 1 or 2 may be supported where the resultant lots have a building envelope of at least 30 per cent outside of the FPCC1 or 2 area and are to be registered on title or similar. These areas should still be excluded from future commercial or industrial development in the event lot layout or building design cannot address the flood risk.	**U13.3** Subdivision enabling the future use of land within FPCC 1 or 2 for purposes such as commercial or industrial uses where it cannot demonstrate that the flood risk has been mitigated.

Flooding, stormwater and groundwater

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC14 Development will not: a. adversely affect flood behaviour resulting in detrimental increases in the flood affectation on other properties, including cumulative impacts; b. significantly alter flow distributions and velocities to the detriment of other properties or the environment of the floodplain; c. adversely affect the environment or cause erosion, siltation, destruction of riparian vegetation, or a reduction in the stability of river banks or watercourses.	**A14.1** Filling: a. is not undertaken in FPCC 1 or 2 designated in Section 6.6; and b. if undertaken in the balance of the Flood Planning Area as detailed in Section 6.8, demonstrates no adverse changes to flood behaviour, flow distributions, or environmental impacts; and c. only uses clean fill. **A14.2** Activities, site layout, or infrastructure design should not increase erosion, instability, siltation or destruction of riparian vegetation are avoided on or off site. **A14.3** The use of structural controls (including fences) that physically alter the flow behaviour is minimised. **A14.4** Filling or earthworks undertaken by the corporation is permitted in all flood planning constraint categories where the work involves the provision of enabling infrastructure and the resulting flood planning impacts have been considered in the relevant design.	**B14.1** Where alterations to flow behaviour are unavoidable or required to avoid other impacts such as discharge of hazard materials, these are carefully designed through a flood engineering report (including site specific flood study and mitigation assessment).	**U14.1** Large scale bulk earthworks to make land below the Flood Planning Level available for development. **U14.2** The use of large-scale mitigation infrastructure on private land that substantially alters the natural flow of floodwaters across the precinct.

Flooding, stormwater and groundwater

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC15 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.	**A15.1** Subdivision or development layout within a site does not result in isolation or create evacuation challenges for users. Note: The Issuing Authority may require a site-based flood emergency response plan.	Not applicable.	**U15.1** Development that creates risks for the community or individuals, or increases burden on emergency management services prior to, during, or following a flood event. **U15.2** The following sensitive, vulnerable or critical uses within the Flood Planning Area: a. community facilities; b. early education and care facilities; c. educational establishments; d. emergency services facilities; e. group homes; f. boarding houses; g. hostels; h. hospitals; i. research stations (flood vulnerable activities only); j. seniors housing.
PC16 Development incorporates appropriate measures to manage risk to life from flood.	**A16.1** Where necessary, flood depth and evacuation pathway signage is provided where flood depth exceeds 500mm within the flood planning area using the flood planning levels from Section 6.7.	Not applicable.	**U16.1** Development that creates risks for the community or individuals, or increases burden on emergency management services prior to, during, or following a flood event.

Flooding, stormwater and groundwater

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC17 Development does not result in unsustainable social and economic costs to the community as a consequence of flooding.	**A17.1** High value commercial or industrial activities or materials are not located on land within FPCC 1 or 2 designated in Section 6.6.	**B17.1** Where it can be demonstrated that building above the Flood Planning Level is sufficient to mitigate risk to high value buildings or operations, this can be considered. Note: Development may be considered appropriate where development is unable to meet the minimum levels on the contour map but is supported by a flood engineering report that demonstrates how flood risk will be mitigated.	**U17.1** 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. **U17.2** Higher risk areas should be reserved for low value activities such as vehicle parking and landscaping.
PC18 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.	**A18.1** Hazardous materials are: a. not stored on land within FPCC 1 or 2 designated in Section 6.6; b. located above the Flood Planning Level in Section 6.7; and c. stored or contained in a way that is designed to avoid release of the materials during floods.	Not applicable.	**U18.1** Release of hazardous materials during flooding events (including rarer flood events than the Defined Flood Event). This includes pollutants such as onsite effluent or tailings treatment or chemical storage.

Flooding, stormwater and groundwater

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
Flooding – controls for specific uses/sub-precincts			
Solar sub-precinct			
PC19 Future development ensures solar farm structures and operations are resilient to flood events.	**A19.1** Development ensures suitable mitigation is undertaken to avoid flood impact on solar panels and other infrastructure placed in the Flood Planning Area as shown in Section 6.8, including locating equipment above the Flood Planning Level. **A19.2** Fencing within the sub-precinct that limits flow of water across the site (even beyond the Flood Planning Area in Section 6.8) is avoided.	Not applicable.	**U19.1** Site design and layout of structures that can result in avoidable damage or disruption from flood events.
Resources and Recycling sub-precinct drainage investigation area			
PC20 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.	**A20.1** Where changes to flowpaths or waterways are proposed, development (including enabling infrastructure) is supported by a drainage master plan prepared in accordance with the Floodplain Development Manual (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.	**U20.1** Development (including enabling infrastructure) that adversely affects flood behaviour or flows, or does not adequately mitigate flood risk. **U20.2** Unmitigated release of contaminants because of placement of uses or activities within the Flood Planning Area.

Flooding, stormwater and groundwater

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
Uses requiring flood-free premises			
PC21 Commercial or industrial uses that should not be subject to any flood risk are not located on flood prone land.	**A21.1** Development for the following uses occurs outside the extent of the Probable Maximum Flood identified in Section 6.8: a. data centres, data hubs or data storage.	Not applicable.	**U21.1** Commercial or industrial operations that cannot be damaged or should continue operations at all times being located on flood prone land.
Riparian corridors			
PC22 Development contributes to the preservation and enhancement of natural waterways and riparian habitats in order to improve water health and protect the areas character and biodiversity.	**A22.1** Development: a. avoids or minimises alteration to natural features such as drainage lines and waterways; and b. makes provision for buffer areas in accordance with the *Water Management Act 2000*. Note: A written advice statement may be required from a suitably qualified person which confirms that the development will not directly or indirectly impact on waterways and riparian habitats.	**B22.1** The design and layout of the development protects and enhances natural waterways and riparian habitats. Note: A report will be required from a suitably qualified person that identifies any potential adverse impact on any of the following: a. water quality within the waterway; b. aquatic and riparian habitats and ecosystems; c. stability of the bed, shore and banks of the waterway; d. the free passage of fish and other aquatic organisms within or along the waterway; e. habitat of any threatened species, population or ecological community; f. the likelihood that the development will increase water extraction from the waterway for stock use and the potential impact of any extraction on the waterway; and g. a description of all proposed measures that may be undertaken to ameliorate any potential adverse impact.	**U22.1** Development does not make provision for buffer areas to riparian corridors in accordance with the *Water Management Act 2000*.

Flooding, stormwater and groundwater

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
Groundwater protection and management			
PC23 Development ensures the sustainable management of groundwater in the precinct by including measures that mitigate risk to contamination from development and infrastructure.	**A23.1** A Groundwater Management Plan is prepared in accordance with best practice groundwater management requirements where development is likely to impact on groundwater and require site specific management solutions for the site.	Not applicable.	**U23.1** Development that has the potential to contaminate groundwater without risk mitigation measures in place. **U23.2** Extraction of groundwater.

Note: A development must obtain the appropriate water licenses in accordance with the *Water Management Act 2000* and consider the relevant Water Sharing Plan.

Flooding, stormwater and groundwater

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
Onsite stormwater detention requirements			
PC24 Stormwater generated onsite is appropriately managed to ensure minimal nuisance, danger and damage to people, property and the environment.	**A24.1** Onsite stormwater detention must be provided for all development to attenuate up to the 10% AEP storm back to pre-development flows. **A24.2** Onsite stormwater management infrastructure is designed, constructed and operated: a. to not impede or necessitate alterations to the precinct-wide stormwater infrastructure; b. to not impact on flood risk management requirements; c. in accordance with Parkes Shire Council Stormwater Drainage Design Guidelines and any applicable Australian Standards; and d. to ensure that the system capacity is in accordance with Australian Rainfall and Runoff (Engineers Australia, 2016) and Managing Urban Stormwater: Council Handbook (EPA, 1997) guidelines. Note: A site-based stormwater management plan may be required.	Not applicable.	**U24.1** Suitable onsite stormwater detention infrastructure is not provided. **U24.2** Onsite stormwater detention infrastructure impacts precinct-wide stormwater infrastructure or flood risk management requirements.

Flooding, stormwater and groundwater

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC25 Protect, maintain and restore: 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.	**A25.1** Development incorporates WSUD measures through the design of stormwater drainage, onsite detention and landscaping. **A25.2** Site-based stormwater quality control measures ensure water pollution is avoided and: a. contribute to the following precinct-wide pollution load reduction targets: • Total Suspended Solids (TSS) by 80% • Total Phosphorus (TP) by 60% • Total Nitrogen (TN) by 45% • Gross pollutants by 90%. b. incorporate 30% pervious surfaces to manage stormwater runoff and water quality. Note: Section 2.4 Landscape design – minimum site coverage requirements provides that pervious surfaces includes: • tree planting • mulched garden beds with planting • pervious surface treatments, including • compacted rubble, decorative gravels • and inorganic mulches/sands • drainage areas and WSUD treatments • grasslands and rehabilitated/ revegetated areas. **A25.3** All stormwater treatment measures are designed with 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.	**B25.1** Development provides onsite end of pipe treatment devices where it can be demonstrated that WSUD measures are not feasible. **B25.2** 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 POEO Act and in consultation with the Environment Protection Agency. 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)*; 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).	**U25.1** Discharge of wastewater and/ or contaminated stormwater to watercourses or waterways.

Flooding, stormwater and groundwater

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC25 ... continued		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.	
Erosion and sediment control			
PC26 Protect waterways, drainage systems and groundwater quality, flows and drainage patterns during demolition, construction and ongoing operation phases of development.	**A26.1** An Erosion and Sediment Control Plan must be prepared by a suitabily qualified person in accordance with Managing Urban Stormwater: Soils and Construction prepared by Landcom (Blue Book) prior to applying for a Complying Development Certificate.	Not applicable.	**U26.1** Land disturbing activities results in negative impacts to soil, landform and receiving waters.

Noise

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC27 To minimise acoustic impacts on the amenity of existing noise-sensitive receivers outside the precinct arising from scheduled activities listed in Schedule 1 of the Protection of the Environment Operations Act 1997 (POEO Act) within the precinct.	**A27.1** Development that requires an environment protection licence under the POEO Act for a scheduled activity must: a. provide 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); and b. once a development is operational, where noise compliance measurements are required under an environment protection licence, commit to providing the corporation an annual statement setting out how the site-based noise monitoring and reporting regime 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 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 the corporation to satisfy B29.1(c).	Not applicable.	**U27.1** Development proposals that are not accompanied by a noise impact assessment prepared in accordance with the NPfI.

Noise

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC28 To ensure that the acoustic impact on the amenity of existing noise-sensitive receivers outside of the precinct is minimised.	**A28.1** Development that does not require an environment protection licence and has the potential to significantly impact nearby 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. The noise impact assessment will need to demonstrate that the proposed development will not create an adverse impact at the nearest existing noise-sensitive receiver outside of the precinct, including details of any on-site noise mitigation measures to be incorporated as part of the development. **A28.2** Where the Issuing Authority determines that on-site noise monitoring is required, commit to providing the corporation an annual statement setting out how the site-based noise monitoring and reporting regime has been complied with.	Not applicable.	**U28.1** Development that has a significant impact on nearby receivers.

Noise

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC28 ... continued	Note: Development that has the potential to significantly impact nearby receivers may include equipment that has a sound power level that is of a significant enough level to impact the nearest residential receivers. This equipment includes but is not limited to large fans, external pumps, energy generation equipment, truck movements, rooftop condensers and chillers. Mitigation measures may include lower sound power level equipment; silencers, mufflers or dampeners placed on equipment; adjusted operational times for when equipment is in use; implement quiet work practices; maintain equipment; limit simultaneous use of equipment; architectural treatments or a suitable alternative mitigation measure. Note: Where the Issuing Authority determines that on-site noise monitoring is required, 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.		

Air quality

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC29 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 harmless levels.	**A29.1** Development that requires an environment protection licence under the POEO Act for a scheduled activity: a. 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); b. complies with the prescribed discharge concentration contained in the *Protection of the Environment Operations (Clean Air) Regulation 2010* (the Clean Air Regulation); and 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. 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. The assessment must demonstrate that the performance criteria are achieved. **A29.2** Development implements an ongoing air quality monitoring and reporting regime prepared by a suitably qualified person and commits to providing the corporation an annual statement setting out how the site-based air quality monitoring and reporting regime has been complied with.	Not applicable.	**U29.1** Development is not designed to achieve the impact assessment criteria in the Approved Methods. **U29.2** Development is not designed to achieve the prescribed discharge concentrations contained in the Clean Air Regulation. **U29.3** Toxic air pollutants and particles are not minimised through the implementation of best practice process design and/or emission control.

Air quality

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC29 ... continued	Note: 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. 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 the corporation to satisfy A29.2.		
PC30 Non-scheduled activities reduce the risks to human health and the environment by reducing the discharge of substances into the air to harmless levels.	**A30.1** Development that involves stacks as a means of managing air emissions is located in accordance with Section 6.9 and incorporates the following: a. treatment of air emissions before release (e.g. bag filter, thermal oxidiser, carbon filter); b. compliance with the prescribed discharge concentration contained in the Clean Air Regulation; 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; d. increased stack height and velocity to allow for additional dispersion of emissions; and	**B30.1** 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); b. complies with the prescribed discharge concentration contained in the Clean Air Regulation; 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	**U30.1** 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 A30.1 or B30.1.

Air quality

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC30 ... continued	e. implements an ongoing air quality monitoring and reporting regime prepared by a suitably qualified person and commits to providing the corporation 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.	d. implements an ongoing air quality monitoring and reporting regime prepared by a suitably qualified person and commits to providing the corporation 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	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC31 Development is designed to not cause offensive odour to receivers beyond the boundary of the precinct.	**A31.1** Development that the Issuing Authority considers to involve odour emissions is located in accordance with the maximum odour emission rate per hectare (OU/s/ha) of the site of the development as shown in Section 6.10. Note: The emissions rate (OU/s) is calculated for each lot and can be obtained from the corporations spatial web portal. Note: A statement prepared by a suitability qualified person may be required to demonstrate compliance with A31.1, including details of any on-site odour mitigation measures to be incorporated as part of the development. Mitigation measures may include handling malodourous material within enclosed buildings or within a closed system and the capture and treatment of odour at the source (such as hooding and extraction, negative pressure enclosures, or process design to eliminate or minimise generation of odour). Continuous dense landscaping along odour source boundaries is encouraged. **A31.2** Odour emitting uses as defined in the NSW EPA's Technical Framework: Assessment and management of odour from stationary sources in NSW 2017 (or as updated) are not located in the 1km buffer as shown in Section 6.10 unless otherwise approved by the EPA.	**B31.1** Development: a. that may cause odour emissions in excess of the maximum odour emission rate per hectare (OU/s/ha) of the site of the development as shown in Section 6.10; or b. that is considered to involve odour emissions and is of a nature and character that was not considered as part of the determination of the maximum odour emission rate per hectare (OU/s/ha) of the site of the development as shown in Section 6.10, 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 2017 (or as updated) including details of any on-site odour mitigation measures to be incorporated as part of the development. **B31.2** Development implements an ongoing odour emissions monitoring and reporting regime prepared by a suitably qualified person and commits to providing the corporation an annual statement setting out how the site-based odour emissions monitoring and reporting regime has been complied with.	**U31.1** Development that involves odour emissions results in offensive odour impacts at the nearest existing sensitive receiver outside of the precinct.

Odour

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC31 ... continued		Note: An operational environmental management plan should identify the environmental impacts, management activities and controls related to managing and minimising offensive odour 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 odour monitoring and reporting regime has been complied with may be provided to the corporation to satisfy B31.2.	

Lightspill

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC32 Development that supports 24 hour use of land without compromising night time amenity of sensitive receivers through lightspill.	**A32.1** All night time activities are internalised without any need to light external spaces beyond walkways and car parking areas. **A32.2** Development achieves compliance with AS/NZS 4282:2019 for outdoor lighting. **A32.3** Development utilises smart lighting for external lighting of areas used infrequently that are motion activated or dimmed to reduce lightspill when not in use.	**B32.1** Exceedance of lightspill criteria is marginal and can be demonstrated that sensitive receivers will not be unduly impacted. **B32.2** Mitigation measures (such as screens or mature landscaping) are integrated into the site or at the location of the sensitive receiver with their permission.	**U32.1** Development that does not mitigate lightspill to sensitive receivers that are adjacent or within direct line of sight. **U32.2** High light-emitting land uses and activities close to sensitive receiver.

Bushfire protection

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
Note: The following bushfire protection assessment criteria apply to development located within a bushfire risk or buffer area as shown in Section 6.11. The bushfire risk area map shows existing and future bushfire risk for the precinct based on the anticipated design and development of the precinct. The assessment criteria is in accordance with the requirements for Planning for Bushfire Protection 2019.			
PC33 Hazardous industries or materials are not located within 100m of any bushfire risk area.	**A33.1** Change of use or tenancy change does not involve hazardous industries within 100m of a bushfire risk area identified in Section 6.11. **A33.2** Storage of hazardous materials, including either indoor or outdoor storage, is more than 100m from any: a. identified bushfire risk area; or b. grassland external to the site.	Not applicable.	**U33.1** Hazardous activities and materials storage occurring within 100m of a grass or bushfire risk area.
PC34 Development does not result in unsustainable social and economic costs to the community as a consequence of bushfire.	**A34.1** High value commercial or industrial activities or materials are not located on or within a bushfire risk area identified in Section 6.11.	Not applicable.	**U34.1** Operations with a high capital value of machinery or materials being at risk of damage from bushfire. **U34.2** Higher risk areas should be reserved for low value activities such as vehicle parking and hard stand.
PC35 Subdivision responds to bushfire risk in its layout and design of roads.	**A35.1** Subdivisions provide perimeter roads which separate allotments from existing and future bushfire risk areas. This includes grassfire hazard. **A35.2** Subdivisions provide road layouts with multiple alternative vehicle evacuation options. **A35.3** New infrastructure such as electricity and telecommunications are provided underground.	**B35.1** Subdivisions provide for larger allotments at interfaces with bushfire risk areas to cater for asset protection areas and fire appliance access.	**U35.1** Subdivisions of smaller allotments adjoining bushfire risk areas, or which would not allow for suitable bushfire protection measures to be implemented. **U35.2** Subdivisions with only one access/ egress point.

Bushfire protection

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC36 Site and building design incorporate fire safe construction which includes requirements for bushfire protection.	**A36.1** Buildings are designed in accordance with the required fire safety construction provisions of the National Construction Code. **A36.2** Buildings and other onsite facilities are designed using fire resistant materials. **A36.3** Buildings and facilities are reasonably separated from each other to minimise potential for building-to-building ignition. **A36.4** For telecommunications towers, the provisions of the Planning for Bushfire Protection apply and should be assessed.	**B36.1** Development integrates a suite of layout, design and construction measures for bushfire protection.	**U36.1** Buildings that are constructed with non-fire resistant materials, or without any fire fighting treatment measures in place within the building design and construction. **U36.2** Complex built forms which provide opportunities for ember entrapment or make fire suppression difficult.
PC37 Buildings, facilities, stockpiles and other assets are located onsite to provide an asset protection zone to adjacent or nearby (including future) bushfire hazard.	**A37.1** An asset protection zone of 50 metres, including defendable space, is provided between grassland external to the site and bushfire risk areas identified in Section 6.11 and buildings, facilities, stockpiles and other assets.	**B37.1** A perimeter road reserve between the site and adjacent bushfire risk areas can be considered to form part of the asset protection zone. Other areas which are managed in a low fuel condition (such as parkland) may also be considered. **B37.2** A bushfire hazard assessment and management plan may identify site-specific asset protection zone provisions.	**U37.1** Buildings, facilities, stockpiles and assets which are not separated, or insufficiently separated, from bushfire risk areas. **U37.2** Buildings, facilities, stockpiles and assets which are sited in a manner which does not allow defendable space or fire fighting access to protect buildings.

Bushfire protection

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC38 Provide safe access on, to and from the public road system for firefighters providing property protection during a bushfire and for occupant egress for evacuation.	**A38.1** The capacity of access roads and driveways (including any culverts and bridges) are adequate for fire fighting vehicles (up to 23 tonnes). **A38.2** Roads, driveways and access are sealed for all weather access to structures and bushfire risk areas. **A38.3** Detailed access provisions meet, as a minimum, the access requirements for public roads and private driveways as per the Planning for Bushfire Protection requirements.	**B38.1** 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 and should be provided.	**U38.1** Unsealed access roads or perimeter roads.
PC39 Development provides suitable emergency and evacuation (and relocation) arrangements for occupants.	**A39.1** Any emergency evacuation procedure or plan developed for the premises pursuant to other legislation includes consideration of bushfire risk in identifying emergency assembly sites.	Not applicable.	**U39.1** Alternative solutions for bushfire bunkers.

Bushfire protection

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC40 Development provides adequate water supply for the protection of buildings, assets and facilities during and after a bushfire, and development locates gas and other utilities to reduce the risk of fire to a building on site.	**A40.1** Reticulated water supply is provided for the protection of buildings and assets onsite. **A40.2** Static water supplies are provided to meet fire safety provisions pursuant to the National Construction Code. **A40.3** Development complies with the flows, pressures and spacing provisions of AS2419.1 – 2005 Fire hydrant installations – System design, installation and commissioning. **A40.4** Fire hydrants are not located within any road carriageway. **A40.5** Fire hydrants are easily accessible in car parking areas. **A40.6** Reticulated or bottled gas on any lots is installed and maintained in accordance with AS/NZS 1596:2014, The storage and handling of LP Gas and the requirements of relevant authorities (such as the requirement that metal piping be used). **A40.7** Electricity reticulation to new development is provided underground.	**B40.1** Reductions in reticulated water supply services where the nature of the use (e.g. a quarry, or landfill) does not warrant such service provision. **B40.2** Above ground electricity reticulation may be considered in locations which do not increase bushfire risk	**U40.1** Development where connection with reticulated water supply is not available. **U40.2** Utilities which do not consider the risk of bushfire.

Bushfire protection

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC41 Development provides for the storage of hazardous materials away from grass or bushfire hazard wherever possible.	**A41.1** Site layout and design facilitates hazardous material storage in appropriate locations of the site, providing defendable space, emergency services access and potential radiant heat shielding, where relevant. **A41.2** Storage of hazardous materials, including either indoor or outdoor storage, is more than 100m from any: a. identified bushfire risk areas; or b. grassland external to the site.	Not applicable.	**U41.1** Hazardous and/or unstable material storage within 100m of a grassfire or bushfire risk area.
PC42 Hazardous industries are not located within 100m of any bushfire risk areas.	**A42.1** Site layout and design facilitates hazardous activities and storage to occur on the site, more than 100m from a bushfire risk area identified in Section 6.11. This includes grassfire hazard. **A42.2** A bushfire design brief should be prepared as part of the development proposal process and submitted for consideration, in accordance with the provisions for hazardous activities as per Planning for Bushfire Protection.	**B42.1** Where a large site intended for hazardous industry encroaches within 100m of bushfire risk area (including grassfire hazard), this may be considered where no hazardous material storage or activities are carried out within 100m of a bushfire risk area, and the access point to the site is not within 100m of a bushfire risk area, or an alternative access point is provided more than 100m from a bushfire risk area.	**U42.1** Hazardous activities and materials storage within 100m of a bushfire risk area.

Bushfire protection

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
Bushfire – controls for specific uses/sub-precincts			
Solar sub-precinct			
PC43 Development is designed and maintained so that it will not serve as a grass or bushfire hazard or present a risk to surrounding land uses, including agricultural activities.	**A43.1** Essential equipment should be designed and housed to minimise the impact of bushfires on the capabilities of the infrastructure during bushfire emergencies. **A43.2** A Bushfire Emergency Management and Operations Plan should identify all relevant risks and mitigation measures associated with the construction and operation of the solar farm, available on the NSW RFS website. This document is to be submitted for consideration as part of the development application process. A qualified and experienced professional is required to prepare this plan. Note: The Bushfire Emergency Management and Operations Plan should include: • detailed measures to prevent or mitigate fires igniting; • work that should not be carried out during total fire bans; • availability of fire-suppression equipment, access and water; • storage and maintenance of fuels and other flammable materials; • processes for notification of the local NSW RFS Fire Control Centre for any works that have the potential to ignite surrounding vegetation, proposed to be carried out during a bushfire danger period to ensure weather conditions are appropriate; and • appropriate bushfire emergency management planning.	**B43.1** Land management mitigation such as animal grazing may be considered as an approach to fuel load management where frequent inspection is carried out.	**U43.1** Unmanaged and/or combustible vegetation within the solar sub-precinct outside of the mapped bushfire risk area.

Bushfire protection

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
Solar sub-precinct (continued)			
PC44 Development provides adequate clearances to combustible vegetation as well as fire fighting access and water.	**A44.1** The following should be provided for solar farms: a. a minimum 15m APZ for structures and associated buildings/ infrastructure; where the primary hazard is grassfire; b. a minimum 25m APZ for structures and associated buildings/ infrastructure where the site adjoins bushfire risk areas; and c. the APZ should be maintained to the standard of an inner protection area for the life of the development (i.e. fuels including grass is maintained in a low-fuel condition).	Not applicable.	**U44.1** Development which presents a risk to or from surrounding land uses via the absence of an APZ from the risk of grass or bushfire from adjoining land.

Potentially hazardous and offensive development

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
Note: The following section applies to development considered as potentially hazardous industry or potentially offensive industry in accordance with the State Environmental Planning Policy No 33—Hazardous and Offensive Development.			
PC45 Potentially hazardous and potentially offensive industries are appropriately managed to protect human health, property and the biophysical environment. Note: This performance criteria also relates to any applications for the expansion or modification to a potentially hazardous or potentially offensive industry.	**A45.1** A preliminary hazard analysis is undertaken in accordance with clause 12 and 13 of State Environmental Planning Policy No 33 – Hazardous and Offensive Development. Note: Clauses 12 and 13 of State Environmental Planning Policy No 33 – Hazardous and Offensive Development 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. **A45.2** Development that is potentially hazardous and potentially offensive industries has been: a. identified as either low, medium or high risk by the Department of Planning, Industry and Environment; and b. determined not to be hazardous or offensive. 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, Industry and Environment. Potentially hazardous development that is high risk is not complying development and will require a development application. The Department of Planning, Industry and Environment should be consulted, and written advice sought on whether a proposed development that is potentially hazardous and potentially offensive is low, medium or high risk prior to making an application for an Activation Precinct Certificate. The corporation will require the Planning Secretary's approval to issue an Activation Precinct Certificate.	Not applicable.	**U45.1** Development that is determined to be hazardous or offensive.

Dangerous goods

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC46 Storage of dangerous goods on site must be done in a safe manner.	**A46.1** 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.	**U46.1** Storage of dangerous goods on site results in unacceptable health and safety risks.

Contaminated land

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC47 Development adequately addresses contaminated land.	**A47.1** If development is proposed on contaminated land, the land has been remediated in accordance with State Environmental Planning Policy 55 – Remediation of Land 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 the corporation'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 Activation Precincts SEPP requires that an Activation Precinct Certificate cannot be issued unless the Issuing Authority has considered whether the land is contaminated, and whether the subject land is suitable for the proposed development. Category 1 and 2 remediation works are required to be undertaken in accordance with SEPP 55. Category 2 works will need to be undertaken separately as development without consent under SEPP 55, and not as part of an application for Complying Development under the Activation Precincts SEPP.	Not applicable.	**U47.1** Development is proposed on land that has not been remediated in accordance with State Environmental Planning Policy 55 – Remediation of Land.

5.4 Community

Community facilities

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC48 New development supports accessible open space that promotes social interaction and physical and mental health, reducing longer-term health impacts and costs.	**A48.1** Development provides for open space that allows workers and visitors to meet and socialise, including seating areas, shelters and BBQs. **A48.2** Developments achieve Australian Standard 1428.1-2001 and *Disability Discrimination Act 1992* Standards and Guidelines relating to site and building access for people with disabilities and mobility difficulties.	**B48.1** Development is located in close proximity to one of the following, and is provided with an accessible path connection directly to the facility: a. public open space with seating, shelters or BBQs; or b. a communal service centre or use which includes a cafe or dining area with seating (not takeaway fast food).	**U48.1** Development that is unwelcoming or prevents access and comfortable usage to all users, particularly people with disabilities and mobility difficulties.

5.5 Infrastructure

Streets

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC49 Development of a street network consistent with the master plan.	**A49.1** Subdivisions and the placement and location of buildings that provide for, or create, the following planned major road networks and connections, as designated in Section 6.13: a. Hartigan Avenue connecting Henry Parkes Way to Brolgan Road as the principal road servicing the Commercial Gateway sub-precinct; b. realignment of Coopers Road approximately 400 metres east to avoid the new junction with the inland rail line; c. new northern connector road between Brolgan Road and Henry Parkes Way. **A49.2** Development only occurs when: a. the servicing road network and intersection capacities are able to accommodate the anticipated additional traffic volumes of the development; or b. the proposal includes an upgrade to a road or intersection to safely cater for anticipated traffic flows or specific vehicle types servicing the development.	**B49.1** Subdivisions with road locations in a different format or location to that shown within the Concept Plans and Section 6.13: a. continue to maintain the intended function or connection proposed by the road; b. the alternative route or design does not prejudice the potential for future development, public realm improvements and other infrastructure service corridors; c. the revised location is cost effective in its delivery; d. the alternate location does not involve the removal of high value environment or Tier 1 and 2 trees, or land features and artefacts of high indigenous value; and e. the alternative subdivision layout does not result in a significant reduction in developable land.	**U49.1** Subdivision or the placement and design of buildings that compromises the ability to create the identified road network and infrastructure improvements (such as bridges) by preventing the desired roadway locations and connections or space required to accommodate infrastructure in a logical and cost effective way.

Note: A traffic impact assessment prepared by a suitably qualified person may be required to identify the likely nature, volume or frequency of traffic generated by the development and assess the impacts of the proposed development on the street network and reasonable solutions to address those impacts.

Streets

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC50 Roads are suitable for their intended function and contribute to the establishment of a high amenity landscape character.	**A50.1** Road reserves, pavements and verges sized and designed to the relevant road types in accordance with Section 3.5. **A50.2** Roadside vegetation is provided within road verges as indicated within the design guidelines and Section 3. 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.	**B50.1** An alternate road pavement and verge width can be accommodated if: a. it can be demonstrated that the carriageway width can still accommodate all necessary vehicle movements for the types of vehicles likely to service development within the relevant sub-precinct; b. the road verges are of sufficient width to accommodate a shared use path, as well as suitable spaces for landscaping; and c. there is either, sufficient space for shared infrastructure, including potential future circular economy infrastructure, or that provision of infrastructure within the road reserve is not required due to its location elsewhere or within an easement on adjacent private property. **B50.2** Alternative species for roadside vegetation where it can be demonstrated that: a. they are native to the area; b. provide comparable amenity benefits to the equivalent vegetation type set out within Section 3.5; and c. have similar water consumption and drought tolerance characteristics to the equivalent vegetation type set out within the design guidelines.	**U50.1** Roads designed such that they are not suitable for the developments in terms of traffic volumes or vehicle types. **U50.2** Roads that require future widening at the expense of roadside vegetation and infrastructure. **U50.3** Roads that do not provide for appropriate landscaping to verges. **U50.4** Roads reserves that do not provide sufficient space for infrastructure.

Streets

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC51 Development on land that interfaces with an existing or future transport asset within the precinct is designed to protect the safe transit, function and performance of the transport asset.	**A51.1** 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 Activation Precincts SEPP.	Not applicable.	**U51.1** Development impacts the safety, function or performance of transport assets.

Pedestrians and cycling connections

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC52 Safe and convenient pedestrian and cycling infrastructure provided to form a network throughout the precinct.	**A52.1** Subdivision includes road reserves and public open space that provides for shared use paths that integrate within the networks identified within: a. Section 6.5 Trails and Nodes; b. Section 6.4 High Value Vegetation and Paddock Trees; and c. Section 6.6 Flooding Planning Constraints Categorisations. **A52.2** Continuous shared paths, designed for comfortable use by pedestrians and cyclists, should be provided along: a. primary streets; b. the Green north-south spines identified within the master plan; c. Quarry to Creek Green Grid. **A52.3** Shared paths are a minimum width of 2.5 metres, plus an additional buffer/ verge of a minimum 0.5 metres on each side. **A52.4** Shared paths constructed of: a. materials outlined within the design guidelines; b. constructed of locally or regionally sourced sustainable materials. **A52.5** Shared paths have lighting to allow for 24/7 usage. **A52.6** Development provides end of journey facilities for staff, including: a. secure, well lit, highly visible and conveniently located bike racks; b. shower facilities; and c. lockers.	**B52.1** Development on private land that includes a shared path for accessing a key network and the path is located within a free and unrestricted right of way over the land. **B52.2** A reduced path or verge width provided: a. the path location is not critical to linking the network or a key location within the precinct; b. minimum width of two metres; c. the boundaries of the space are not fenced, or the fencing is open in nature (such as chain mesh or steel post) and allows surveillance of the path to ensure safety; and d. the distance of the reduced width is kept as small as possible. **B52.3** Development that supports the potential for stepping stone corridor with existing and future patches of vegetation linked by pedestrian and cycle connections, including along road reserves and through sites via rights of way.	**U52.1** Streets and open space areas that do not provide safe and convenient access for pedestrians and cyclists.

Utilities

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC53 Infrastructure is planned, designed and implemented in advance of need.	**A53.1** Development and subdivision makes provision for, and sets land aside for key infrastructure, including: a. stormwater and natural treatment areas/basins; b. precinct waste water treatment plant; c. expanded sewer network; d. grid electricity connections; e. inset electricity network; f. natural gas network, including hydrogen reticulation capability; and g. recycled water network. Note: The relevant utilities' suppliers should be consulted at the earliest possible time. Note: Council should be consulted on connections to utility services including for water, 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.	**B53.1** Alternative locations are identified and preferred for key utility infrastructure as a result of further investigations and feasibility assessment. **B53.2** If it can be demonstrated that advances in technology and increases in efficiencies warrant identified infrastructure unnecessary.	**U53.1** Infrastructure provision delaying or preventing the growth of the precinct, or investment within certain areas of the precinct. **U53.2** Easements and space for infrastructure not accommodated within subdivision road network or easements.

Utilities

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC54 Development in advance of infrastructure provision.	**A54.1** Development sequencing and staging is consistent with the infrastructure provision and capacity for the precinct.	**B54.1** Development can occur in advance of infrastructure provision being in place, provided it can demonstrate: a. temporary supply of relevant utility source and the management of environmental impacts in accordance with EPA requirements; and b. capacity and loads for all utilities and services is known for future connection to infrastructure; and c. the development is a catalyst that cannot be accommodated within existing land areas currently able to be serviced by existing infrastructure.	**U54.1** Development that compromises the planned and orderly delivery of infrastructure throughout the precinct, either due to location, sequencing, or demand generation.
PC55 Development makes efficient use of infrastructure.	**A55.1** Development and subdivision staging is aligned to infrastructure use and capacities. **A55.2** Development maximises efficiency and reduces loads on infrastructure through: a. renewable energy generation; and b. use of recycled water, and wastewater, either onsite, or within a private network with other businesses within the precinct.	Not applicable.	**U55.1** Development occurring in advance of infrastructure capacity, warranting upgrades or expansion ahead of planned timing.

Utilities

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC56 Upfront costs and investment in common infrastructure are protected through good design which retains quality and relevance over time.	**A56.1** Infrastructure provision is designed and located to cater for growth and expansion of the precinct, in terms of: a. capacities able to be accommodated; and b. its location across the precinct; and c. its ability to integrate into circular economy networks that establish into the future. **A56.2** Infrastructure is designed to a standard that balances: a. construction quality that reduces unnecessary maintenance or upgrade costs within a reasonable planned lifespan for the piece of infrastructure; and b. cost effectiveness in its provision.	**B56.1** A reduced design standard or design approach is only acceptable if the infrastructure is intended to be temporary whilst other development is established or the permanent infrastructure is being built.	**U56.1** Infrastructure that is not designed and planned to be future proof and adaptable to changing needs of the precinct over time. **U56.2** Infrastructure designed to an excessive standard or lifespan that unnecessarily contributes additional cost to its provision.
PC57 Development makes efficient use of infrastructure.	**A57.1** Development and subdivision staging aligned to infrastructure use and capacities. **A57.2** Development maximises efficiency and reduces loads on infrastructure through: a. renewable energy generation; and b. use of recycled water, and wastewater, either onsite, or within a private network with other businesses within the precinct.	Not applicable.	**U57.1** Development occurring in advance of infrastructure capacity, warranting upgrades or expansion ahead of planned timing.

5.6 Place and landscape

Cultural heritage

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC58 Aboriginal culturally significant places, sites and objects are protected.	**A58.1** 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 the corporation's spatial web portal. **A58.2** Development retains in place and integrates scarred trees, stone quarry, identified artefact sites and other indigenous cultural places of importance within landscaped and public areas of sites so that they are publicly accessible. **A58.3** Subdivision layouts provide for indigenous places and artefacts of importance to be maintained in place within public open space or road reserves so they can be appreciated by all. **A58.4** An indigenous memorial garden using Wiradjuri planning principles is established within a prominent location adjacent to the principal precinct gateway at Brolgan Road.	**B58.1** 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.	**U58.1** Aboriginal culturally significant places and sites are harmed, except where an Aboriginal Heritage Impact Permit has been issued.

Cultural heritage

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC58 ... continued	**A58.5** 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.		
PC59 Protect the memory of the precinct's topography, particularly small hills.	**A59.1** Development and subdivision layouts retain small hills in place and: a. leave these spaces in either public open space or publicly accessible areas of sites that enable appreciation and interpretation by all; or b. any site cutting and filling is located well away from identified small hills of cultural significance; and c. maintain the land topography with minimal cutting and filling of land (less than one metre).	**B59.1** Cutting and filling is limited within development sites and subdivision designs (including new roads). **B59.2** Extent of cutting and filling is limited to building areas only where this can be achieved for the operation of sites.	**U59.1** Development that does not respond to natural topography and proposes extensive cutting and filling across a site.

Cultural heritage

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC60 Retain the prominence of, and views to and from, the rocky outcrops in the northern part of the precinct.	**A60.1** Development adjacent to the rocky outcrops is designed and sited to: a. have buildings set back at least 50 metres from this interface; or b. have lower scale buildings no taller than seven metres in height; or c. locate buildings to maintain key vistas from the rocky outcrops; and d. have buildings cut into sites instead of filled; and e. includes a landscaped edge comprising trees to boundaries of sites at the interface of at least five metres in depth.	**B60.1** Development that can demonstrate consistency with intent of criteria, specifically relating to: a. maintaining 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.	**U60.1** Development that impinges on views to and from the rocky outcrops.

Site layout and building design

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC61 New development incorporates good precinct design that protects and enhances valued environmental and visual characteristics of the precinct through careful placement of buildings and facilities.	**A61.1** Building entries and glazing face street frontages. **A61.2** Site access points are located directly adjacent to the principal building entries, with a direct path connection from parking areas to the building entry. **A61.3** Awnings and verandahs are provided at building entries and along common walking paths to adjacent buildings. **A61.4** Site layouts provide clear lines of sight for entries, public paths and parking areas, and avoid areas of entrapment. **A61.5** Product storage areas and other servicing locations are positioned on the site away from view from public roads and open spaces, or screened from view by screening structures and/or landscaping.	**B61.1** Development that does not achieve quantitative criteria set out within the design guidelines for any specific design issue, however, is considered to be consistent with the intent of the design principles and objectives sought. **B61.2** Building footprints and site coverage larger than those envisaged within the design guidelines, provided it can be demonstrated that: a. the use and activity accommodated within the building is unique and can only be achieved in a building of that scale; or b. design techniques are used that reduce the overall massing and scale of the building when viewed from surrounding sites and public spaces; and c. the development continues to achieve high quality urban design outcomes.	**U61.1** Development that: a. is not legible across sites or subdivision layouts, particularly in relation to key entries and arrival points; or b. results in uncomfortable environments for pedestrians either through scale, lack of weather protection or safety; or c. lacks balance between built form, open spaces and landscaping; or d. results in highly visible and visually detracting servicing and loading areas; or e. turns its back to public road frontages and key vistas.

Site layout and building design

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC62 Buildings and surrounding spaces are contextual and complement the established and intended spacious precinct character.	**A62.1** 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. **A62.2** Rooftop plant and equipment is integrated into the overall roof form or screened from public view. **A62.3** Taller and larger elements of buildings are located behind smaller office elements that present to primary and secondary street frontages. **A62.4** Building walls are broken up through the use of: a. windows and opening at regular intervals; or b. articulation, recesses or architectural features (such as blades or louvres) at least every 20 metres along a facade; or c. variations to materials, finishes and colours; or d. lean-to structures. **A62.5** Pitched roof forms are broken up into smaller elements that help modulate the overall building scale and bulk when viewed from public areas. **A62.6** Buildings incorporate at least three different materials to facades. **A62.7** Materials are those identified within the design guidelines.	**B62.1** Development that is consistent with the objectives and design principles set out within the design guidelines. **B62.2** A taller building can be considered where it can be demonstrated that: a. the building's bulk, scale and massing is appropriate within the context of the scale of the site and surrounding buildings; or b. the building's height is not visually detracting within the streetscape; or c. the building is on an identified landmark site as shown in Section 6.13 and its height is part of the distinctiveness desired to set it apart from adjacent sites. **B62.3** Alternative materials and finishes, provided it can be demonstrated that: a. they contribute to a high quality finish desired for the character for the precinct; and b. they are robust in nature providing a long lifespan without deterioration to their appearance; and c. do not result in excessive glare so as to detract from the amenity of neighbouring properties or views from public spaces.	**U62.1** Buildings that comprise large expanses of uninterrupted walling and single material usage where they are visible from public roads and spaces. **U62.2** Buildings positioned close to boundaries and streets that are large, bulky and provide little visual interest or relief. **U62.3** Buildings positioned on or within close proximity to site boundaries that prevent opportunities for meaningful landscaping along site boundaries or movement of vehicles or goods. **U62.4** Monochromatic building finishes that contribute to bland appearance of buildings. **U62.5** Buildings that include poor quality materials that are not durable and suitable for the environment, resulting in a need for replacement within the useful life of the building, or have poor appearance. **U62.6** Rooftop plant that is not screened and clearly visible from surrounding public views, particularly public roads and open spaces. **U62.7** Building setbacks that cannot demonstrate and support an active streetscape environment.

Site layout and building design

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC62 ... continued	**A62.8** Buildings are setback 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 15 metre setback applies to side and rear boundaries adjoining rural land and for lots greater than one hectare; and d. all other side and rear setbacks must meet National Construction Code setbacks.	**B62.4** Building setbacks from primary and secondary streets that are less than those identified within the acceptable solutions provided that it can be demonstrated: a. the setback supports the achievement of an active streetscape environment through the provision of entrances and clear glazed facade treatments with a direct or strong relationship to footpaths; and b. the overall height and scale of the building maintains a comfortable human scale at the street level; and c. the setback is complementary to the established streetscape pattern of surrounding sites.	**U62.8** Buildings that do not maintain a comfortable human scale at the streetscape. **U62.9** Buildings that detract from the established character of neighbouring sites.
PC63 Buildings are adaptable and can be re-used without significant changes or replacement.	**A63.1** Building floor to ceiling heights provide for a range of different land uses and in particular: a. for commercial land uses achieve at least 3.5 metre ceiling heights; or b. for other land uses and components of development, achieve at least five metre internal ceiling heights. **A63.2** Building structures are designed to provide adaptable internal layouts, including the removal of and revision of internal walls and layouts. **A63.3** Developments are sited and designed to allow for future expansion of businesses onsite.	**B63.1** The building is required by a particular land use for a function that warrants a specific design response which limits future adaptation, and no other reasonable alternatives are available.	**U63.1** Buildings designed and constructed to limit future usage for alternative businesses and industries, warranting demolition ahead of its useful lifespan.

Site layout and building design

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC64 Vehicular access is compatible with the surrounding road network.	**A64.1** 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.	**B64.1** Vehicular access is designed to ensure that new development does not compromise the effective and ongoing operation and function of any adjoining classified roads. Note: Where access is proposed from a classified road it is recommended that in principal support for the development be obtain from TfNSW prior to the lodgement of an Activation Precinct Certificate Application. 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.	**U64.1** Vehicular access designed such that the safety, efficiency and ongoing operation of the classified road is adversely affected.

Site layout and building design

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC65 Adequate car parking is provided that is safe and conveniently integrated within sites and the streetscape.	**A65.1** 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. **A65.2** All off-street car parking, access and internal roadways comply with Australian Standard 2890.1:2004. **A65.3** Development separates commercial and service vehicle (truck) access from staff and visitor (car) access. **A65.4** Access points are rationalised along road frontages to: a. one primary staff and visitor access point; and b. one secondary service vehicle access point (if applicable). **A65.5** Car parking areas are broken up into small distinct areas of not more than 10 parking spaces wide separated by landscaping areas of at least three metres in width. **A65.6** Car parking areas and access driveways are constructed of asphalt or concrete.	**B65.1** Additional access points may be appropriate if it can be demonstrated that: a. it is needed to provide additional separation of vehicle types accessing the development for safety purposes; or b. a one-way access and egress system is needed for the specific activity on the site; or c. the access points cumulatively do not dominate the street frontage of the site and maintain the desired landscape character for road verges. **B65.2** A reduced rate of parking may be appropriate if it can be demonstrated that: a. the specific land use has operational management or specific activities in place that warrant a reduced demand; or b. the different land uses on an allotment have differing peak parking demand periods; or c. the development has formal access to car parking in other locations. Note: A traffic and parking study may be required to demonstrate the reduced rate of parking is appropriate.	**U65.1** Development that does not provide sufficient parking for its demand, placing demands on on-street parking. **U65.2** Large, uninterrupted areas of car parking visible from streets without any landscaping.

Site layout and building design

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC65 ... continued		**B65.3** Large expanses of car parking can be considered where it can be demonstrated their visual impact is reduced through: a. landscaping beds at least five metres in width to the edges of the site, which screen large portions of the car park from view 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. **B65.4** Car parking areas and access driveways are constructed from the following materials: a. car parks and aisles for servicing cars – compacted crushed composite or similar materials; and b. entries and exits, and aisleways and manoeuvring areas servicing trucks and other heavy vehicles – asphalt or concrete.	

Site layout and building design

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC66 Fencing delineates public and private spaces, maintains security and contributes to an attractive streetscape character.	**A66.1** Fencing is provided to the perimeter of allotments. **A66.2** Fencing fronting primary and secondary road frontages is open in nature and comprising: a. a maximum 1.8 metre height above natural ground level; and b. hardwood timber and post rail or post and wire construction. **A66.3** Fencing between the building line and street frontages promotes passive surveillance through height or open structure and materials. **A66.4** Fencing is consistent with the design guidelines.	**B66.1** Fencing fronting public roads is of solid material (brick, stone or render), provided: a. it is no taller than 1.2 metres in height; and b. it is articulated at 20 metre intervals to break up its length and add visual interest; or c. it utilises a variety of solid material finishes alternating along its length; and d. it matches the materials and finishes of the principal building on the allotment. **B66.2** Fencing is not provided forward of the building line, provided landscaping of a minimum width of three metres is provided in its place to delineate public and private boundaries. **B66.3** Fencing that is consistent with the objectives and design principles set out within the design guidelines.	**U66.1** Solid fencing to street frontages that prevents views to sites, particularly parking areas, building entrances and public spaces. **U66.2** Fencing that contributes negatively to an otherwise attractive and welcoming appearance of sites through materials, colours, height or design. **U66.3** Fencing between the building line and street frontages does not contain barbed wire.

Site layout and building design

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC67 Signage contributes to legible, coherent and visually attractive identification of businesses and locations throughout the precinct.	**A67.1** Signage limited to: a. one wall sign on the primary street facade of the per tenancy building; and b. one freestanding sign per tenancy at the primary entry of the site. **A67.2** Wall signage is no greater than 10 per cent of the wall area and does not protrude above the parapet of the building. **A67.3** Freestanding signs: a. are no taller than eight metres above natural ground level and 2.5 metres in width; and b. contain an area no greater than 15m^2; and c. comprise only the name and branding of the lawful business(es) on the allotments and not advertise other goods or services. **A67.4** Signs are: a. not internally or externally illuminated; or b. if illuminated, have luminance intensity per unit area for Class 2A Material as set out within Australian Standard AS/NZS 1906.1:2007.	**B67.1** Additional wall or freestanding signs may be appropriate where it can be demonstrated that: a. they are needed to provide directions and identification to additional entries on the allotment, particularly if located on another street frontage; or b. they 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 land; and c. they are consistently sized and designed as a suite with a common appearance and materiality. **B67.2** Signage consistent with the objectives and design principles set out within the design guidelines and are both: a. complementary to the scale of the allotment and buildings on the land; and b. compatible with the signage that are within the streetscape.	**U67.1** Large and obtrusive signage or advertisements that detract from the visual character sought for the precinct. **U67.2** Proliferation of signage along site frontages. **U67.3** Provision of third-party advertisements within the precinct (except for Commercial Gateway precinct).

5.7
General requirements

Environmental Management Plan

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC68 Development ensures that appropriate environmental management practices are followed during its construction and/or operation.	**A68.1** Where the Issuing Authority requires, a site-based environmental management plan must be prepared by a suitably qualified person in consultation with relevant government agencies. The 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. Environmental issues may include: a. flora and fauna; b. rehabilitation; c. noise emissions; d. air quality and odour emissions; e. energy efficiency and energy consumption; f. water consumption; g. stormwater management; h. erosion and sedimentation; i. flood emergency response plan; j. traffic, parking and access; k. waste management; l. aboriginal cultural heritage; m. historic heritage; n. site security; o. emergency disposal and biosecurity protocol; and p. any other matters as may be required by the master plan or delivery plan.	Not applicable.	**U68.1** A development's actual environmental impacts are not consistent with those evaluated as part of the Activation Precinct certificate.

Environmental Management Plan

Performance criteria	*Acceptable solutions* How to achieve it	*Alternative solutions* What could be negotiated	*Unacceptable solutions* What we don't want to see
PC68 ... continued	Note: The requirements for the site-based environmental management plan will vary depending on the nature and scale of the proposed development. Where necessary the environmental management plan may be required to be provided to the corporation before an application for a complying development certificate is submitted. Where a development requires a development application, the environmental management plan will become a condition of consent. **A68.2** Commit to providing the development corporation an annual statement setting out how the site-based environmental management plan provisions have been addressed and complied with.		

Cows in Parkes
Image courtesy of Parkes Shire Council