Moree
Special Activation Precinct

Delivery Plan
September 2022

rgdc.nsw.gov.au

We acknowledge Country and pay respects to the Gamilaroi people as the Traditional Owners and Custodians of the land and waters on which the Moree Special Activation Precinct site is situated and connected to via a broader landscape.

We recognise their continued connection to Country and that this connection can be seen through stories of place and cultural practices such as art, songs, dances, storytelling and caring for the natural and cultural landscape of the area.

We also recognise the continuing living culture of Aboriginal people, and the significance of Moree in that living culture. We recognise the contemporary stories of displacement and the cultural significance of Moree in the continued journey of self-determination in Australia.

We acknowledge all the people who have and will contribute their stories of Moree and their connection to this place.

We recognise the importance of telling the First story, first. All other stories of place come from and are woven into the First Story.

We recognise the importance of truth telling, a reckoning and the telling of the whole story.

In line with the 2022 NAIDOC theme, we acknowledge that the Moree Special Activation Precinct seeks proper environmental, cultural and heritage protections, and a genuine commitment by all of us to Get Up! Stand Up! Show Up!

Gamilaraay terms are used in this Delivery Plan in recognition of the rich Gamilaroi history and today's community in Moree.

Terms have been sourced from the Gamilaraay, Yuwaalaraay & Yuwaalayaay Dictionary, Compiled and edited by Anna Ash, John Giacon and Amanda Lissarrague, Published by IAD Press 2003.

Gamilaraay word	**English word**
Yurrul	Bush
Yuu	Dust
Yuul	Food
Wugawa	Flood
Dhawun	Ground
Dhulu	Tree
Gali (noun)	Water
Warrambul	Watercourse

Cover image:
Aerial of agricultural land in Moree

As NSW's northern gateway, Moree's Special Activation Precinct will support the diversification of its strong agricultural economy by building on its strong connection to country and sustainable gali-water endowments.

Moree cattle farmers

1

Introduction

Orange harvesting in Moree

1

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

1.1 What is a Special Activation Precinct?

Special Activation Precincts are dedicated areas within regional New South Wales which have been identified by the NSW Government to drive regional economic development. They bring together planning and investment support services to create jobs, foster economic activity and grow our regional areas.

Aerial of cattle, Moree

Foundations for Special Activation Precincts

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

Special Activation Precincts will create jobs, attract businesses and investors and fuel economic development to meet the needs of regional communities.

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

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

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

1.2 What is the role of Regional Growth NSW Development Corporation

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

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

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

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

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

1 **Services**
Physical and digital enabling infrastructure, utilities and services

2 **Approvals**
Streamlined planning and environmental approvals

3 **Investment**
Industry investment and attraction incentive packages and management

4 **Partnerships**
Triple helix partnerships and collaboration

1.3 What is a delivery plan?

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

This Moree Special Activation Precinct Delivery Plan (delivery plan) has been prepared by the corporation and must be consistent with the Moree Special Activation Precinct Master Plan (master plan). It sets out criteria for applications for an Activation Precinct certificate, including the:

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

The Moree Delivery Plan will be update periodically every 3-5 years, or as required by the corporation.

Who will use this delivery plan?

This delivery plan will be used by:

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

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

We are here

Precincts-Regional SEPP 2021

- zone
- objectives
- land uses

Moree Special Activation Precinct master plan

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

Moree Special Activation Precinct delivery plan

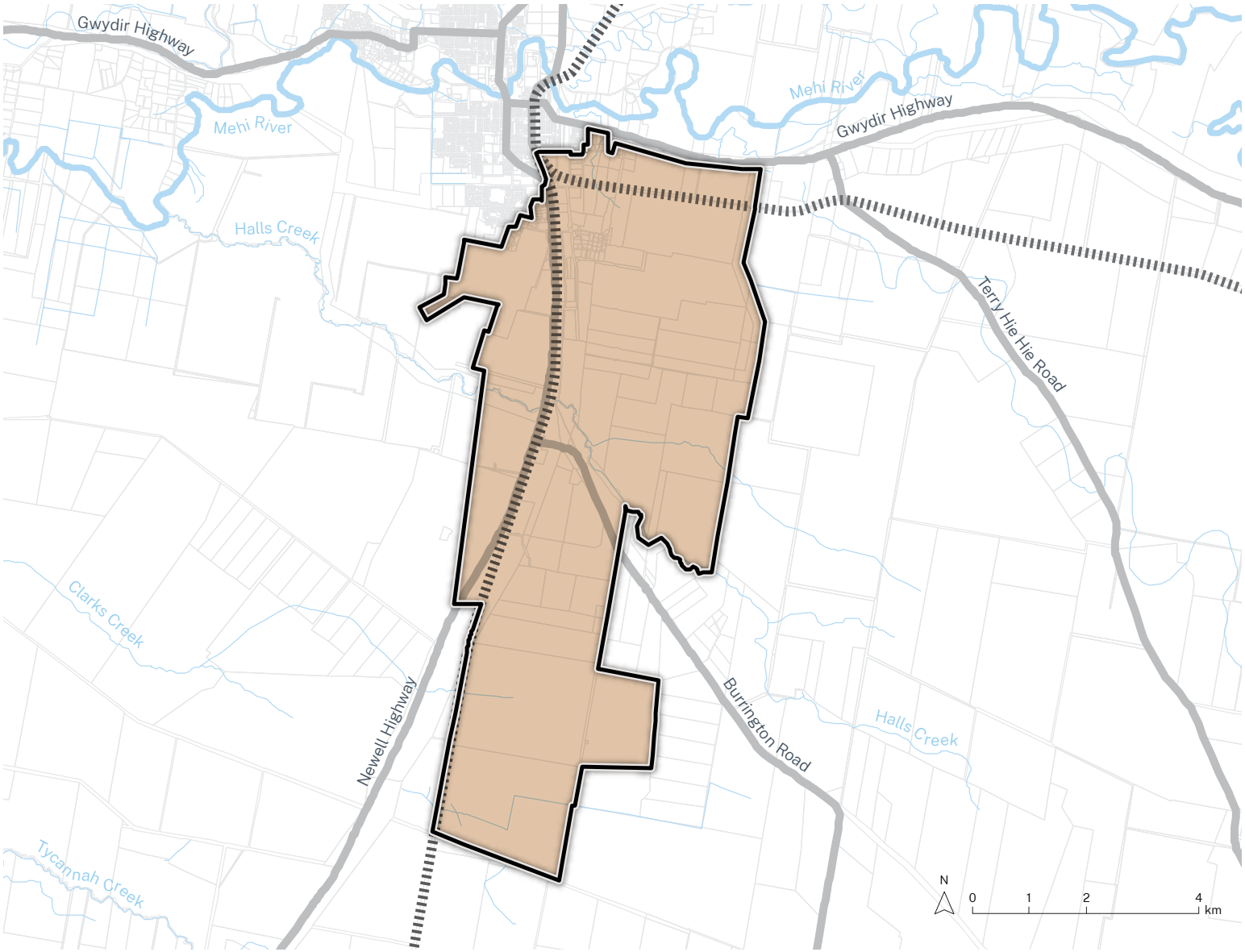
- built form and landscape design guidelines
- precinct-wide mapping
- landscape strategy
- precinct and site-based assessment criteria and solutions

Where does this delivery plan apply?

Under clause 12 of the Precincts-Regional SEPP, an issuing authority can only issue an Activation Precinct certificate for land if there is a master plan and delivery plan that applies to the land concerned.

This delivery plan applies to the Moree Special Activation Precinct (the precinct) where roads and services are being provided. The evolution of the delivery plan will be prepared by the corporation when required for future development.

Figure 1 Moree Special Activation Precinct



How to use this delivery plan

1

Introduction (this section)

This section sets the context for the precinct, including the broader legislative framework. It also sets out how this delivery plan should be navigated for development proposed within in the precinct, and the process development proposals will go through to obtain an Activation Precinct certificate.

Read this section to understand:

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

2

Precinct design principles

This section sets out the overarching design outcomes for the precinct to ensure that the precinct is characterised by a high quality public realm through landscaping and design that is representative of a high quality advanced industry and business precinct.

Read this section to understand:

- the overarching design outcomes for the precinct aligned with the master plan guiding principles and the design considerations which are incorporated into the master plan's performance criteria.

3

Precinct revegetation strategy

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

Read this section to understand:

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

4

Infrastructure

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

Read this section to understand:

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

5

Subdivision design guidelines

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

Read this section to understand:

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

6

Assessment criteria

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

Read this section to understand:

- the performance-based planning approach to evaluating development proposals
- the requirements which must be considered when planning and designing your site
- the requirements which a development proposal will be evaluated against to determine whether it is consistent with the master plan and delivery plan.

7

Monitoring, reporting and compliance

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

Read this section to understand:

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

8

Mapping

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

Read this section:

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

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

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

Development type[2, 3]	Chapter 4 Infrastucture	Chapter 5 Subdivision	Chapter 6 Assessment criteria									Chapter 8 Mapping
			6.1 Regional Enterprise Zone				6.2 Rural Activity Zone	6.3 Precinct-wide			6.4 Savings and transitional provisions	
			6.1.1 Land uses	6.1.2 Controls that apply to all development	6.1.3 Specific development requirements i.e. rail and intermodal, solar energy farms	6.1.4 Sustainability		6.3.1 Environment i.e. landscape character and visual impact, heritage, biodiversity, vegetation and riparian corridors, groundwater	6.3.2 Environmental hazards i.e. flood risk management, bushfire protection, managing development on contaminated land	6.3.3 Environmental impact management i.e. potentially hazardous and offensive development, air quality and odour, noise, biosecurity		
Change of use	→		✓	→		✓						✓
Subdivision	✓	✓		✓								✓
Development on a small lot (less than 1 hectare) subsequent to and consistent with a subdivision under this delivery plan			✓	✓		✓						✓
Development on a small lot (less than 1 hectare)	✓		✓	✓		✓		→	→			✓
Development on a large lot (minimum 1 hectare)	✓		✓	✓	✓	✓		→	→			✓
Development on land identified for rail and intermodal	✓		✓	✓	✓	✓				→		✓
Development on land identified as a commercial node	✓		✓	✓		✓		→	→			✓
Solar energy farm	✓		✓	✓	✓	✓		→	→			✓
Works to or within the curtilage of a heritage item			→	→			→	✓				
Potentially hazardous development	✓		✓	✓	✓	✓		→	→	✓		✓
Development that is a scheduled activity listed in Schedule 1 of the POEO Act	✓		✓	✓	→	✓				✓		✓
Development that may involve emissions (i.e. air, odour, noise)	✓		✓	✓	→	✓		→	→	✓		✓
Demolition, damage or removal of structures or buildings				→	→		→					
Development in the rural activity zone	✓						✓	→	→	→	✓	✓
Out of sequence development	✓		✓	✓	✓	✓		→	→	→		✓

1 This table is a guide only. Other parts of this delivery plan may apply than those identified, due to the scale and nature of the development proposal. The Issuing Authority will confirm applicable parts of this delivery plan as part of Step 3 – Pre-lodgement in the Activation Precinct Certification process.
2 More than one development type may apply to the development proposal. Where more than one development type applies, all applicable controls will apply.
3 Should a development proposal not be listed, the relevant parts of this delivery plan will be determined by the issuing authority.

1.4 Vision and aspirations for Moree Special Activation Precinct

With national and global connections by road, rail and air, the Moree Special Activation Precinct will support diversification of Moree's proud agricultural economy by building on its strong Connection to Country and sustainable gali-water endowments.

The Special Activation Precinct will foster world class opportunities to value-add, embrace new technologies and develop innovative energy solutions.

The precinct offers investors, businesses and the community:

- a world-class sustainable Precinct that attracts investors, boosts the region's economy and improves the quality of life for the people of the Moree Plains Shire
- lead the implementation of smart technology within the Precinct (including ag-tech revolution)
- leverage transport connections, renewable energy, innovation and agricultural expertise for horticulture and diversified agricultural production
- partner with Aboriginal stakeholders to increase employment and enterprise development opportunities for Aboriginal people
- enable the Precinct to become an innovation hub that encourages commercialisation and research and development
- provide a streamlined planning and development process in NSW
- establish benchmarks for businesses to achieve environmental management standards aligned with a United Nations Industrial Development Organization eco-industrial park and a leading circular economy precinct.

1.5 Moree Special Activation Precinct master plan

Aerial of Moree courtesy of Moree Shire Plains Council

The master plan was published by the NSW Government in March 2022. It identifies the vision and principles for the precinct, provides land use provisions and criteria for environmental considerations such as air quality, noise, biodiversity and gali-water management.

The Precincts-Regional SEPP requires a delivery plan is consistent with the master plan.

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

The master plan applies to approximately 4,716 hectares located south of the Moree township and Gwydir Highway, straddling both sides of the Newell Highway and Inland Rail. The Precinct currently benefits from commodity focused intermodals, rail access sidings, Moree Solar Farm, Moree Regional Airport and Gateway Estate, and utilities including gali-water, sewer, NBN, communications and Transgrid Fibre.

The master plan identifies a flexible Regional Enterprise Zone that allows for a wide range of employment and industrial uses, including over the existing industrial area, and providing a streamlined planning process for a wide range of businesses.
A Rural Activity Zone that protects the amenity of land located west of the Precinct, and clear separation distances for development within the Precinct ensures that the amenity enjoyed by residents surrounding the Precinct is maintained.

The opportunities enabled within the master plan include:

Leverage rail opportunities	New rail infrastructure and intermodal facilities leveraging from the future Melbourne to Brisbane Inland Rail alignment and connectivity to Newcastle Port allowing for local production and global consumption.
Building off agriculture	Innovation in agriculture and new cropping opportunities due to Moree's black soil. Work with industry to enhance and grow vertical integration opportunities, innovation, skills and education.
Build from airport expansion	Enable new investments associated with the airport and the integration of air and land activities.
Innovation crafting	Enable the Precinct to become an innovation hub that encourages commercialisation, research and development. Promote early-adopters through incubator or activation spaces. Encourage diversification based on market trends and exploring alternative crops.
Renewable energy	Storage and creation through solar (including thermal solar), bioenergy, gas and hydrogen opportunities and seeking alignment with renewable energy and recycling.
Connecting to Country	Foster partnerships and incorporate opportunities for skills, training and employment opportunities for Aboriginal people to respond to Closing the Gap targets.

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

1	**The place**	• A sustainable enterprise precinct • Protecting the amenity of nearby neighbourhoods • Provide for a range of land uses • Boost the region's economy
2	**Connection to Country**	• Respect the Gamilaroi Culture • Partner with Aboriginal stakeholders • Appropriately engage with Aboriginal stakeholders
3	**Environment and sustainability**	• Protect gali-water sources • Encourage gali-water reuse and sustainable energy management • Strive for carbon and climate neutrality, and the protection of biodiversity • Gali-water, bio-energy, waste cycle management • Locate future development outside of wugawa-flood prone areas • Establish benchmarks for businesses to achieve environmental management standards
4	**Social and community infrastructure**	• Grow education and training opportunities • Enable an innovation hub • Increase job prespects and up-skilling
5	**Economy and industry**	• Facilitate the streamlined establishment of new and emerging industries • Support the establishment of circular economies • Attract exemplar businesses with corporate social responsibilities
6	**Infrastructure and connectivity**	• Leverage infrastructure to support horticulture and diversified agricultural production • Design efficient transport routes • Facilitate access to appropriate utilities and services • Support implementation of smart technology • Build on and enhance connections to regional centres

Figure 2: Moree Special Activation Precinct Master Plan at a glance

Master plan at a glance

1. A range of industrial jobs premised on Moree's agricultural base, whilst allowing for higher value processing, movement of freight and green energy production.
2. The Regional Enterprise Zone will allow for a broad range of industrial and employment uses.
3. A Rural Activity Zone will act as a buffer between industry and rural land to the west, providing a long-term strategy for reducing land use conflict and prohibiting any new residential uses in this zone.
4. The Precinct will provide for 40 years of demand and will be staged over time with initial development leveraging off existing road, rail and utility infrastructure in the north east and central areas.
5. A new planning framework will see most development be exempt or complying development, where it meets the requirements of the Precincts-Regional SEPP established under the *Environmental Planning and Assessment Act 1979,* Master Plan and the Delivery Plan.
6. The Precincts-Regional SEPP which will apply to the precinct identified in the structure plan will replace the *Moree Plains Local Environmental Plan 2011*.
7. Detailed performance criteria for noise, air quality, odour, gali-water management and protecting biodiversity.
8. Strategies for greening the Precinct – revegetation, connecting habitat and greening riparian corridors, roads and private lots.
9. Controls for the protection of sensitive sites and strategies for the interpretation and celebration of Gamilaroi culture and history.
10. New streets, services and infrastructure to support sustainable growth over time.
11. Enable around 4,000 jobs by 2060, and generate opportunities for Aboriginal employment and empowerment.
12. Protection of Moree Regional Airport.

> Moree is the most productive agricultural region in Australia – and now thanks to this new precinct, backed by the State Government, combined with inland rail – Moree will become the economic engine room for northern NSW.

Adam Marshall, Member For Northern Tablelands

1.6 Approval pathways

The Precincts-Regional SEPP proposes to simplify planning and environmental approvals. Any development within a Special Activation Precinct must be consistent with the master plan for the Special Activation Precinct.

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

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

1.6.1 Activation Precinct Certificates

Although a streamlined planning process (i.e. complying development pathway) is available, an Activation Precinct certificate will be required from the corporation. The requirement for an Activation Precinct certificate is regulated under the *Environmental Planning and Assessment (EP&A) Regulation 2000,* and must accompany all development applications or applications for a Complying Development Certificate within a Special Activation Precinct. The Activation Precinct certificate provides an assurance that a proposal is consistent with the relevant land use table, master plan and delivery plan.

The corporation will issue an Activation Precinct certificate if it decides 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 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 Resilience and Hazards (2021)*
- not be carried out in a pipeline corridor
- not be a major hazard facility
- be carried out in accordance with the relevant provisions of the Blue Book
- be installed in accordance with the manufacturer's specifications, if applicable
- for the erection of a building, not be carried out within 1 metre of a public sewer without written approval from the authority/asset manager
- not involve the removal of asbestos.

In the case of proposed development involving land use not ordinarily permitted, development consent must be obtained under Part 4 of the *Environmental Planning and Assessment Act 1979*.

1.7 Activation Precinct Certification process

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

Business concierge

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

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

Applicant-driven process

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

The Activation Precinct Certification provides for investors to decide:

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

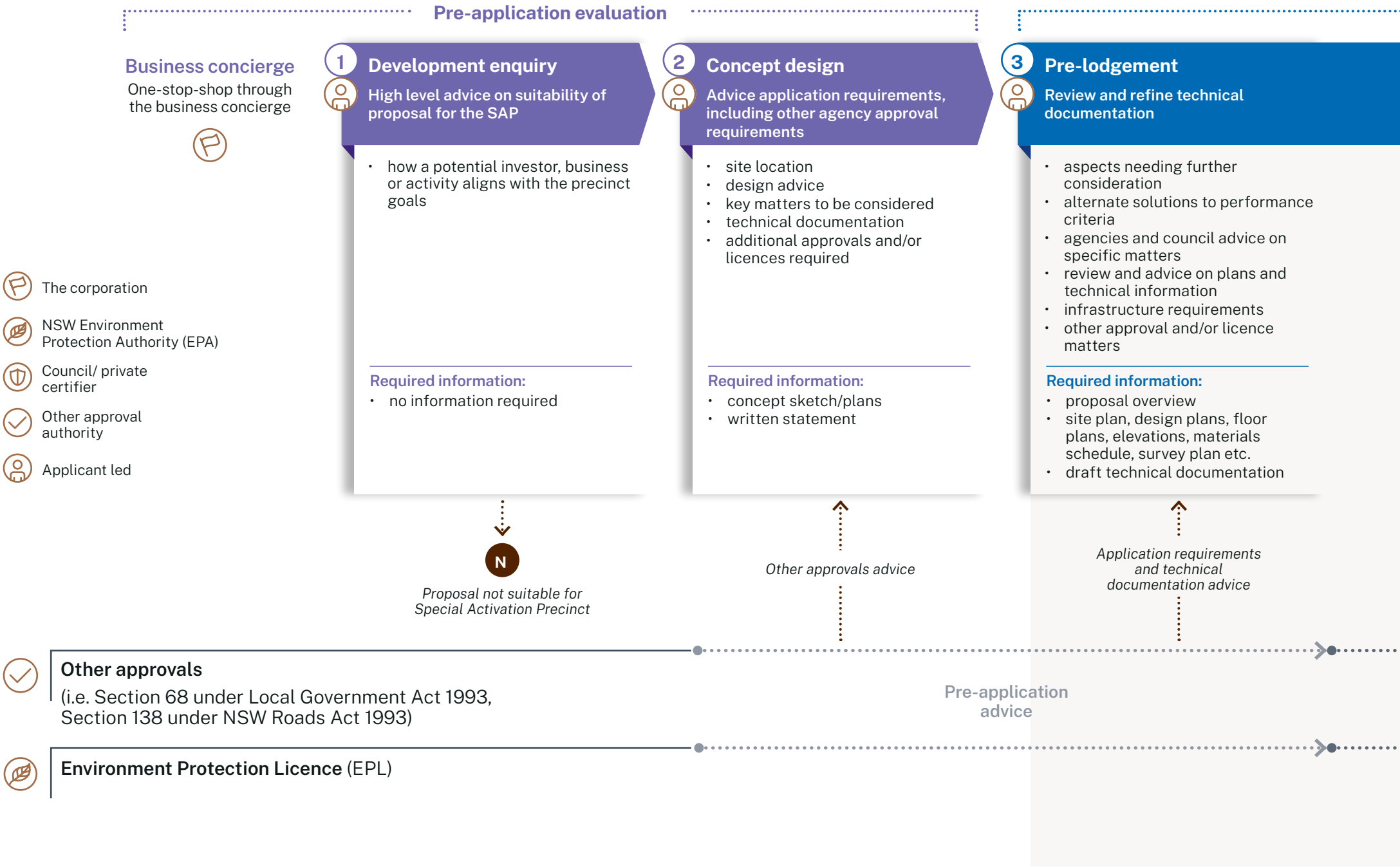
The business concierge offers a coordinated service to investors to undertake additional approval and licence processes in parallel with the Activation Precinct Certification process.

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 investor's discretion when they choose to initiate the other approval and/or licence requirements.

Picking cotton on a farm in Moree
Courtesy of Destination NSW

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 assessment 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 approval

Other approvals
Approval granted either unconditionally or subject to conditions

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

Development Application
Lodge with 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.

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.

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
- any additional approvals, licences and permits.

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 advices.

The information needed for the concept design evaluation includes:

- concept design plans/sketches
- written statement.

Development Specific Checklist

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

3

Pre-lodgement

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

Pre-lodgement is to promote decision-ready applications to support a streamlined planning pathway for development consistent with the master plan and delivery plan.

It gives all parties (i.e. the corporation, applicant and other government agencies, regulatory bodies and council) the opportunity to:

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

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

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

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

4

Application

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

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

5

Evaluation and determination

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

In most instances, the corporation will be responsible for issuing the Activation Precinct certificate unless they are the applicant, in which case the Planning Secretary will be the issuing authority.

The issuing authority will determine whether a development is consistent with the master plan and delivery plan based on the submitted *technical documentation*.

If the development is consistent with the master plan and delivery plan, the issuing authority will issue an Activation Precinct certificate, which will provide that:

- the proposed development is consistent with the master plan and delivery plan
- the determination is based on 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 issuing authority 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.

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

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

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

Complying Development

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

The council or accredited certifier will evaluate and determine an application for a Complying Development Certificate in accordance with the *Environmental Planning and Assessment Act 1979* and Environmental Planning and Assessment Regulation 2000. Section 4.28 of the *Environmental Planning and Assessment Act 1979* requires the council or registered certifier to consider and determine:

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

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

The issuing authority will evaluate the application against the delivery plan development standards and issue an Activation Precinct certificate if the proposed development is consistent with the master plan and delivery plan.

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

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

Aerial of Moree

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 Precincts-Regional SEPP.

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

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

Modifications to proposals

There may be circumstances when an applicant wishes to:

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

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

A new application for an Activation Precinct certificate will be required for a modified development proposal that the corporation considers to not be substantially the same as the development proposal the subject of the current Activation Precinct certificate.

Updated or changed Activation Precinct certificate

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

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

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

In the instance where the applicant seeks changes to be made to an Activation Precinct certificate during the complying development approval process and a changed Activation Precinct certificate is issued, a new application for a Complying Development Certificate would need to be made with the changed 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 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 pre-evaluation of the proposed development and draft 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 apply for the EPL at the same time as an Activation Precinct certificate.

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

Section 68 approvals

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

- temporary structures and places of public entertainment
- gali-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 roads authority prior to the activities being undertaken.

As part of the Activation Precinct Certification process the corporation will engage with the relevant 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.

Cotton warehouse in Moree

Potentially hazardous and offensive development

For developments that are a potentially hazardous or a potentially offensive industry, through the business concierge the corporation will engage with the Department of Planning and Environment early as part of Step 2 – Concept design or Step 3 – Pre-lodgement to identify whether the potentially hazardous industry or potentiality offensive industry is low, medium or high risk, and confirm whether the proposed development will be complying development or require a development application.

For complying development involving potentially hazardous or offensive industry where the corporation is the issuing authority, the corporation will seek the approval of the Planning Secretary to issue an Activation Precinct certificate during Step 5 – Evaluation and determination.

Other referrals and concurrences

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

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

Cotton farm
in Moree

1.8 Proposal documentation requirements

All applications for an Activation Precinct certificate should adequately address the master plan and delivery plan requirements. Proposals should include the following information to demonstrate consistency with the master plan and delivery plan:

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

✓ Required

→ May be required

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

✓ Required

→ May be required

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

✓ Required

→ May be required

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

✓ Required

→ May be required

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

✓ Required

→ May be required

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

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

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

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

Environmental management plans

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

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

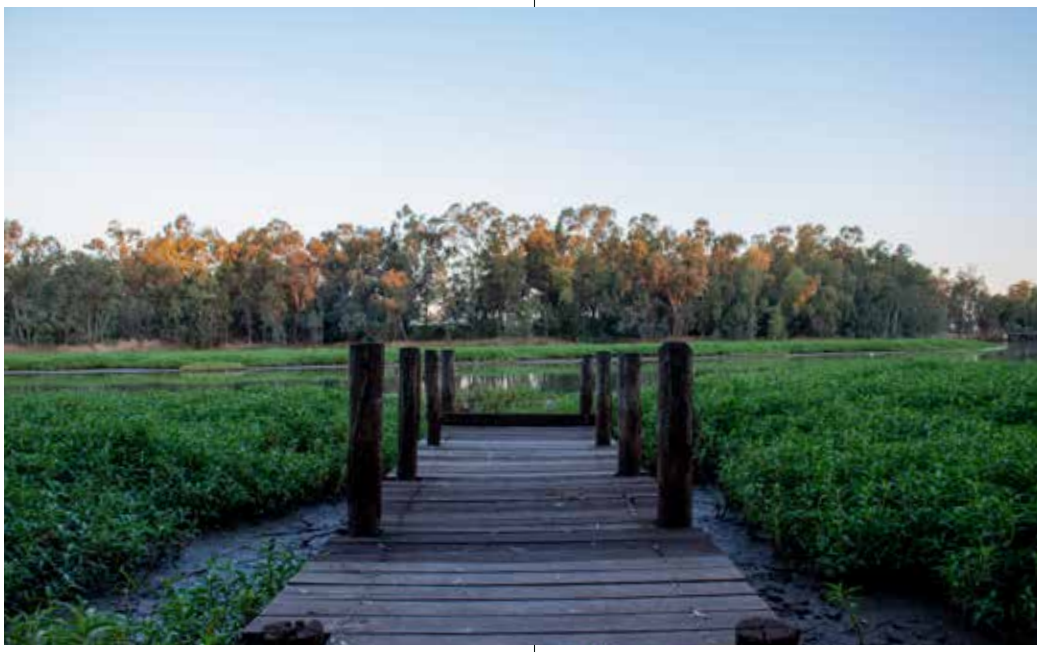
- flora and fauna
- rehabilitation
- noise emissions
- air quality and odour emissions
- energy efficiency and energy consumption
- gali-water consumption
- stormwater management
- erosion and sedimentation
- wugawa-flood emergency response plan
- traffic, parking and access
- waste management
- Aboriginal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

Where necessary a site-based environmental management plan may be required to be provided to the corporation before an application for a complying development certificate is submitted. Where a development requires a development application, the site-based environmental management plan will become a condition of consent.

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

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

Mehi River



1.9 Proposal referrals and concurrences

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

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

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

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

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

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

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

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

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

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

2

Precinct design principles

Mural on a local store on Heber Street, Moree
Courtesy of Destination NSW

2

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

The precinct design principles ensure the continued growth and innovation of agribusiness and industry through subdivision, built form and infrastructure design that minimises land use conflict and constraints and supports productivity and job creation.

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

2.1 Understanding the context of the Moree Special Activation Precinct

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

2.2 Precinct design principles

Overarching design aspirations and outcomes for the precinct, aligned with the master plan's guiding principles and the design considerations incorporated into each performance criteria.

2.1 Understanding the context of the precinct

Nestled on the banks of the Mehi and Gwydir rivers, Moree is the ancestral Country of the Gamilaroi people.

An agricultural powerhouse and home to some of Australia's most innovative and productive growers, Moree's gali- water resources and abundance of rich, black alluvial soil make it one of the most productive agricultural regions in Australia. Moree Plains Shire boasts a tightknit community of 13,159 residents, with 7,383 residing within Moree.

Moree's economy is dominated by the agricultural industry, contributing to 33 per cent ($225.1 million) of Moree's Gross Regional Product. Productivity improvements reducing overall job numbers in primary industries is a key contributor to a reduction in Moree's population over the past 20 years.

Over the past 20 years, the population of Moree Plains LGA declined from 16,100 to 13,077, or 18 per cent. Most of this reduction occurred in the period 2001-2008, a period of significant weakness in cotton production. The decline in the period 2008-2020 was much less severe. The NSW Government's population projections for Moree predict a further reduction through to 2041. Job creation opportunities through the Moree Special Activation Precinct may lead to modest population growth for Moree in the order of an additional 4,500 people by 2041 or an increase of around 1.5 per cent per annum (Moree Plains Shire Council, 2021).

The Moree Special Activation Precinct provides an opportunity to develop the region as a yuul-food manufacturing and innovation hub with opportunities for intensive horticulture, early-stage processing and packaging of primary produce, and working ultimately towards vertical integration. The Moree Special Activation Precinct will have access to export terminals in Melbourne, Brisbane, Newcastle and Sydney thanks to its connection to Inland Rail.

Moree's strategic location at the junction of the Newell, Gwydir and Carnarvon highways provides direct interface with Sydney, Newcastle, Brisbane, Melbourne and Adelaide. Moree also has rail access to Newcastle and Botany Ports and connections to other regional centres in south-east Queensland and regional NSW. The Inland Rail project and planned expansion of the existing Moree Regional Airport within the precinct will strengthen its accessibility and enhance the precinct's capacity for supporting freight and logistics for local businesses.

Much of the precinct is cleared land and is used for broadacre cropping and industrial purposes. Within this highly modified landscape, there are still some patches of remnant native vegetation.

Moree and its surrounding region have a deep, complex and unique Aboriginal history, with the town located on one of the largest Indigenous nations in Australia, Gamilaroi Country. Connecting

01 Gateway North will build on the strategic intent of Moree Plains Shire Council's Moree Gateway (Puma Energy pictured at centre)
02 SAP Gateway South will strengthen the tourism opportunities for the Moree Water Park and Ski Lakes facility

with Country guidelines have helped to shape the master plan. Partnerships with the Indigenous community to activate land within the precinct will create empowerment and self-determination for local Aboriginal people.

The Regional Enterprise Zone includes previous Primary Production, Primary Production Small Lots and General Industrial Zones east of the Newell Highway.

The Regional Enterprise Zone also includes Moree Plains Shire Council's strategic gateway site located south of the town centre between the airport and the Newell Highway and replacing an Enterprise Zone (Gateway North).

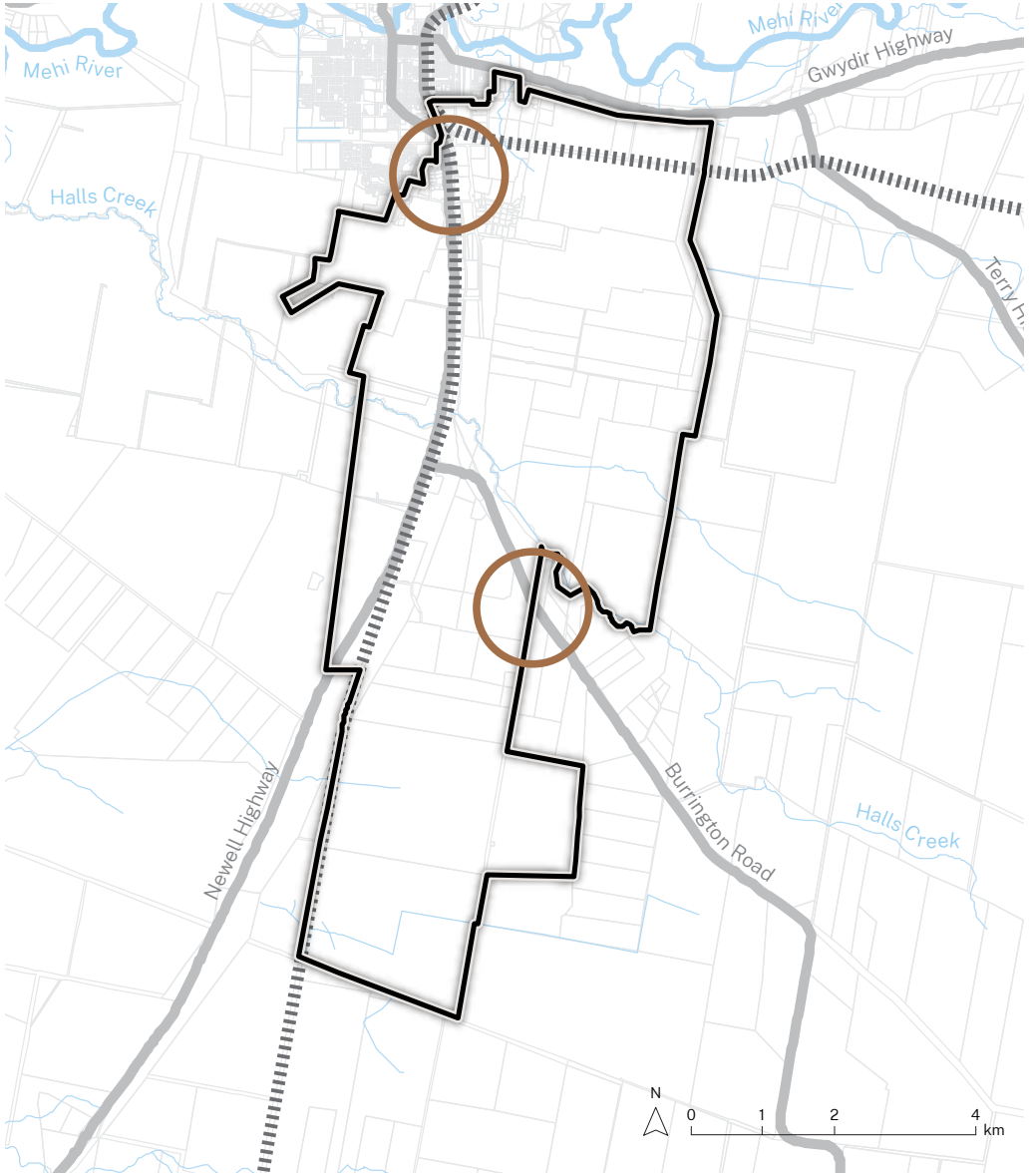
This area is high quality, flat and wugawa-flood-free and was designated to provide a new, mixed-use precinct and regional hub for transport, logistics and tourism industries. The location will showcase the town on the Newell Highway and create a new commercial hub for both the region and visitors with lots from 2,000 to 20,000 square metres.

Gateway North will build on the existing strategic intent by promoting this site for light industrial investment and ancillary uses and supporting it through building performance, design, landscape and wayfinding principles.

Gateway South will build on the significant investment made to date at the Moree Water Park and Ski Lakes, strengthening its relationship with the Travelling Stock Reserve (TSR), cultural site and mature dhulu-trees to provide a cultural and environmental community and tourism attraction. The Rural Activity Zone east of the Regional Enterprise Zone has also been formed to provide a transition between the industrial uses and sensitive uses to mitigate land use conflict. This zone will prohibit intensification of residential uses closest to the Regional Enterprise Zone.

The continued operation of Moree Regional Airport will be protected through the Special Activation Precinct as well as the function of the TSR traversing Crown Land.

Figure 3: Precinct Gateways North and South



Aerial photo of the Moree Special Activation Precinct (view looking south to north)

2.2 Precinct design principles

Precinct design principles will guide development outcomes to ensure the precinct builds on the agricultural identity of Moree by transitioning developable land into a thriving hub for shared resources, prosperity and realisation as one of Australia's preeminent agribusiness precincts.

1

Clearly articulate and reinforce the precinct's point of difference, optimising investment return through smart design, siting and clustering of businesses leveraging direct access to the Inland Rail.

This will be achieved by:

- providing a range of lot sizes that are functional, flexible and energy-efficient
- building design and siting to support a range of operational requirements of industries and businesses
- providing first-movers with early infrastructure and support to immediately realise value-add outcomes to their businesses
- building on Moree Plains Shire Council's strategic intent of Gateway North to support small and local business associated with the Special Activation Precinct and airside development
- future proofing the later stages of the Special Activation Precinct so businesses can leverage the Moree Water Park and surrounding assets
- celebrating and activating the grain silos and other important places that represent Moree's strong agricultural history.

2

Celebrate the local community and township and their Connection to Country.

This will be achieved by:

- embedding Aboriginal cultural knowledge in the project's delivery
- retaining and preserving Aboriginal heritage items and places as part of a layered system of experiences to increase stewardship and awareness
- connecting a system of landscaping and wayfinding to celebrate the stories of local people and historic uses of the precinct
- respecting Country by incorporating local native dhulu-trees and vegetation that are suited to the area and resilient to the long-term effects of climate change
- incorporating local materials and colours in the landscape and building design to minimise visual impacts and promote a connection to place.

3

Provide a safe and efficient movement network that facilitates access to international markets by being a world class precinct with well-designed freight, a skilled workforce and convenient operations, leveraging Inland Rail and the Newell Highway.

This will be achieved by:

- building on and enhancing road, rail and pedestrian connections to Moree town centre and future residential areas, as well as surrounding regional centres
- anticipating infrastructure modifications to accommodate emerging technology in transportation
- designing efficient and connected transport routes that attract intended business clusters and minimise traffic and travel times, while increasing road safety
- designating land for freight and logistics and rail expansion
- ensuring adequate rail sidings are providing for efficient industry operations
- integrating blue and green infrastructure, as well as aspects of the local character within the street design and landscaping.

4

Establish a framework that introduces likeminded business partnerships to facilitate practical, innovative and sustainable gali-water, waste and energy practices.

This will be achieved by:

- creating circular economy opportunities wherever possible across the precinct including early mover expansion of services and for closed loop processing development
- co-locating businesses that can support each other symbiotically based on their resource and environmental needs, and incorporate universal design in the delivery of infrastructure, communications and services
- integrating climate resilience, gali-water, bioenergy and waste cycle management and ecologically sustainable development principles across the precinct
- incorporating gali-water sensitive urban design principles for the management of gali-water quality and efficiency
- utilising sustainable building products and integrated renewable energy generation systems.

5

Protect, promote and enhance the biodiversity, environmental and agricultural values within and surrounding the precinct.

This will be achieved by:

- identifying, protecting and strengthening:
  - existing vegetation communities by incorporating them into landscaped areas, vegetated setbacks, streetscapes and the public domain
  - creek lines and riparian systems through stewardship and raising awareness
  - agricultural productivity of land through business clustering
- meaningful connection of the travelling stock reserve, creek lines, environmental corridors and verges for the movement and sustainability of flora and fauna
- utilising green infrastructure for stormwater management, protecting and increasing biodiversity and mitigating climate change impacts.

Crowds gathered at Moree Secondary College for the 2019 Moree on a Plate Festival.
Courtesy of Destination NSW

Render view looking south east over the early stages of the SAP subdivision and beyond (illustrative built form only)


AIRCAIR

3

Precinct revegetation strategy

Park in Moree town

3

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

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

3.1 Aims

The precinct revegetation strategy provides the landscape strategy for the Moree Special Activation Precinct and:

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

3.2 Biodiversity, vegetation and riparian corridors

3.2.1 Biodiversity and vegetation character

The majority of the Moree Special Activation Precinct is on land that has been disturbed for broad acre farming. Generally, remnant vegetation in higher condition is limited to Travelling Stock Reserves (TSRs). A TSR intersects the Moree Special Activation Precinct and has been listed as Category 2 by Local Land Services as it is currently used for:

- travelling stock
- emergency management or biosecurity purposes
- biodiversity conservation.

The TSR supports important areas of high biodiversity values which provides wildlife corridors and habitat for threatened biodiversity. Vegetation recorded varied in condition due to weed invasion, current grazing regimes and historic clearing leading to regrowth vegetation being observed.

Halls Creek and the TSR are of cultural significance and provide larger tracts of native vegetation and habitat connectivity, and priority areas for management. Other priority area would be identified through engagement with the Moree Aboriginal reference group as outlined in the Biodiversity Management Plan.

Connectivity across the Moree precinct is limited. The Newell Highway runs north-south through the Moree precinct dissecting travelling stock reserves, Halls Creek riparian corridor and native grasslands.

Native vegetation was recorded across approximately 15 per cent of the Moree precinct area (693.07 Ha), and included the following native Plant Community Types (PCTs):

PCT 52 Queensland Bluegrass +/- Mitchell Grass grassland	on cracking clay floodplains and alluvial plains mainly the northern-eastern Darling Riverine Plains Bioregion
PCT 27 Weeping Myall open woodland	of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion
PCT 39 Coolabah - River Coobah - Lignum woodland wetland	of frequently flooded floodplains mainly in the Darling Riverine Plains Bioregion
PCT 55 Belah woodland	on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions
PCT 56 Poplar Box - Belah woodland	on clay-loam soils on alluvial plains of north-central NSW.

PCTs recorded are shown in Chapter 8 - Map 8.2. The master plan includes protection of all areas of PCTs within the Moree precinct with the exception of impacts to 212.30 Ha (35 per cent of extent within precinct) of PCT 52 Queensland Bluegrass +/- Mitchell Grass grassland on cracking clay floodplains and alluvial plains mainly the northern-eastern Darling Riverine Plains Bioregion (Aurecon, 2021). Over 480 ha (approximately 70 per cent) of PCTs within the precinct will be retained.

3.2.2 Riparian and warrambul-watercourses character

Within the Moree Special Activation Precinct, the landscape is essentially a floodplain of the Gwydir Catchment. Rivers and streams recorded include Halls Creek (which is a tributary of Mehi River located approximately 500 metres to the north) and drainage features such as Clarks Creek and tributaries of Halls Creek. These are in poor condition as illustrated in figures 4 and 6 and there is an opportunity for improvement. Figure 5 and 7 riparian corridors vegetation offsets.

In addition to the high biodiversity values of remnant vegetation, these areas are of cultural importance. Important clusters of Aboriginal heritage sites were identified along Halls Creek and Aboriginal stakeholders confirmed that Halls Creek corridor and related sites hold high cultural value to the community both in the value of the heritage sites but also for the biodiversity values associated with the native food and medicinal plants present.

The Biodiversity Management Plan incorporates traditional land management techniques and a process of engagement with Gamilaroi people to provide opportunities for Caring for Country and to practice Culture on Country.

Development controls for riparian corridors aim to ensure impacts to waterways and native vegetation are avoided and ecological processes are protected to improve gali-water quality. Setbacks or buffers have been calculated based on Strahler order (also known as stream order) of waterways within the precinct and align to riparian buffers outlined in Appendix E of BAM 2020 and the *Water Management Act 2000*. Table 3.1 shows the riparian zone width for each waterway.

A riparian zone width is based on a buffer being applied to each side of the waterway from the outer edge of the bank as represented in Moree Special Activation Master Plan, Figure 11: High value biodiversity areas to be retained.

Remnant vegetation along warrambul-watercourses should be protected and maintained through weed control and vegetated through supplementary planting according to the recorded native plant community types, as shown in Chapter 8 - Map 8.2), adjacent native vegetation and/or landscape position. The appropriate plant community type for each waterways riparian zone is detailed in Table 3.1.

Table 3.1 Waterways recorded within the Moree SAP area and riparian corridors

Name	Strahler Order	Riparian zone width (each side of waterway from outer edge of bank)	Plant community type (mapped/likely)
Clarks Creek	1	10m	PCT 56: Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW
Drainage features of Halls Creek	1	10m	PCT 56: Poplar Box - Belah woodland on clay-loam soils on alluvial plains of north-central NSW
Halls Creek	2	20m	PCT 39: Coolabah - River Coobah - Lignum woodland wetland of frequently flooded floodplains mainly in the Darling Riverine Plains Bioregion

Figure 4: Clarks Creek existing character

Figure 5: Clarks Creek vegetated riparian zone

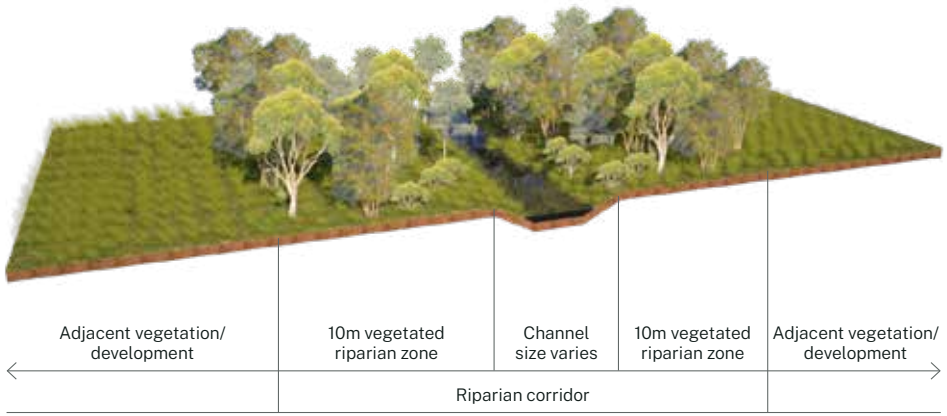
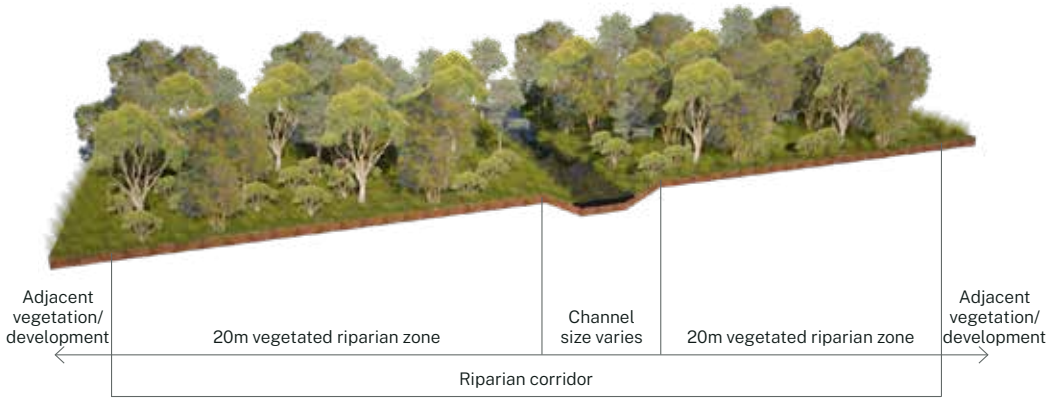


Figure 6: Halls Creek existing character

Figure 7: Halls Creek vegetated riparian zone



3.2.3 Landscape principles

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

1

Retain areas of high biodiversity value through avoidance

- improve condition of riparian vegetation corridors of Queensland Bluegrass and Mitchell Grass (PCT 52) along TSRs
- threatened ecological communities including Weeping Myall Open Woodland (PCT 27) and other native vegetation are to be avoided during design and retained where possible
- the majority of impact areas will be located within cleared land
- maintain and improve condition of remnant vegetation through weed control and subsequent monitoring to inform management plans.

2

Create habitat corridors

- define new areas of connectivity to be linked to existing remnant native vegetation supplementary planting of these areas using adjoining native plant community types as biodiversity target to reflect the plant community types of the precinct as well as species of cultural significance
- maintenance of plantings including weed control
- monitoring of condition/success to inform management
- native seed for rehabilitation and restoration should be sourced locally where possible.

3

Preserve and improve riparian corridors around warrambul-watercourses

- minimise disturbance to warrambul-watercourses by implementing riparian buffers in accordance with BAM 2020 and the *Water Management Act 2000*
- revegetate creek-lines, tributaries and Halls Creek (including tall dhulu-trees and middle-level strata) to contribute towards achieving the environmental outcomes for the precinct
- supplementary planting of these areas using recorded/adjoining native plant community types as biodiversity target to reflect the plant community types of the precinct as well as species of cultural significance
- maintain and improve condition through active management including weed control and traditional land management practices
- monitoring of condition/success to inform management
- protect ecological processes within riparian corridors to improve gali-water quality within the Moree precinct and other receiving environments.

3.3 Green infrastructure

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

Green infrastructure aims to assist in wayfinding and navigation, facilitate ease of movement, and develop a unique sense of place and character for the Moree Special Activation Precinct.

3.3.1 Green infrastructure principles

The following green infrastructure principles aim to create a strong partnership between planting, stormwater infrastructure and the built form throughout the Moree precinct:

Gali-Water

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

- capturing and storing gali-water is key to the success of any vegetation establishment, particularly in low rainfall areas such as Moree
- new development should utilise WSUD interventions including raingardens, swales detention/retention ponds and constructed wetlands to assist plant establishment and ensure stormwater is treated before re-entering natural waterways and groundwater systems.

Resilience

Select robust plant species adapted to local climatic and soil conditions.

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

Wayfinding

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

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

Shade

Strengthen shade amenity throughout the precinct.

- dhulu-tree planting will lower ambient temperatures and offer respite from high summer temperatures in Moree
- attractive and healthy dhulu-tree planting will attract investment and contribute to the overall wellbeing of precinct workers and visitors
- dhulu-tree planting, particularly on the western side of buildings, contributes to the creation of cooler microclimates in and around buildings.

Built form

Utilise new and existing built form to support green infrastructure.

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

Character

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

- endemic plant species can be used to express the unique character of the Moree region
- Moree's agricultural history, artisanal gali-water supply and rich Gamilaroi culture should be expressed through signage, wayfinding and material choices.

Maintenance

Design green infrastructure with the aim of reducing maintenance requirements.

- select appropriate plant species whose size, form and growth supports the intended scale and function of the planting area
- adopt an informal, naturalistic planting style to align with a maintenance regime that does not require constant pruning and mowing for it to appear attractive
- carefully design and arrange elements to maximise efficiencies when maintaining green infrastructure.

Moree town centre

Aerial overlooking the town of Moree, courtesy of Destination NSW

3.3.2 Landscape treatments

The following areas have been identified where landscape treatments will positively contribute to the overall aesthetic and ecological function of the wider Moree Special Activation Precinct.

Road treatments

Planting treatments that distinguishes the overarching road hierarchy, promotes wayfinding and navigation, softens the visual impact of the surrounding developments, facilitates stormwater management and strengthens overall biodiversity.

Identified road types:

- distributor road
- collector road
- local road
- rural road.

Public realm treatments

Spaces within the landscape which are distinct, memorable and provide amenity to workers and visitors of the site, including:

- formal entry thresholds and street frontages
- parking areas
- other small open space areas for visitors and staff within developments.

Gateway treatments

Landscape treatments to distinguish and identify portals into the precinct.

Identified emerging gateways:

- Northern and Southern gateways

Additional treatments

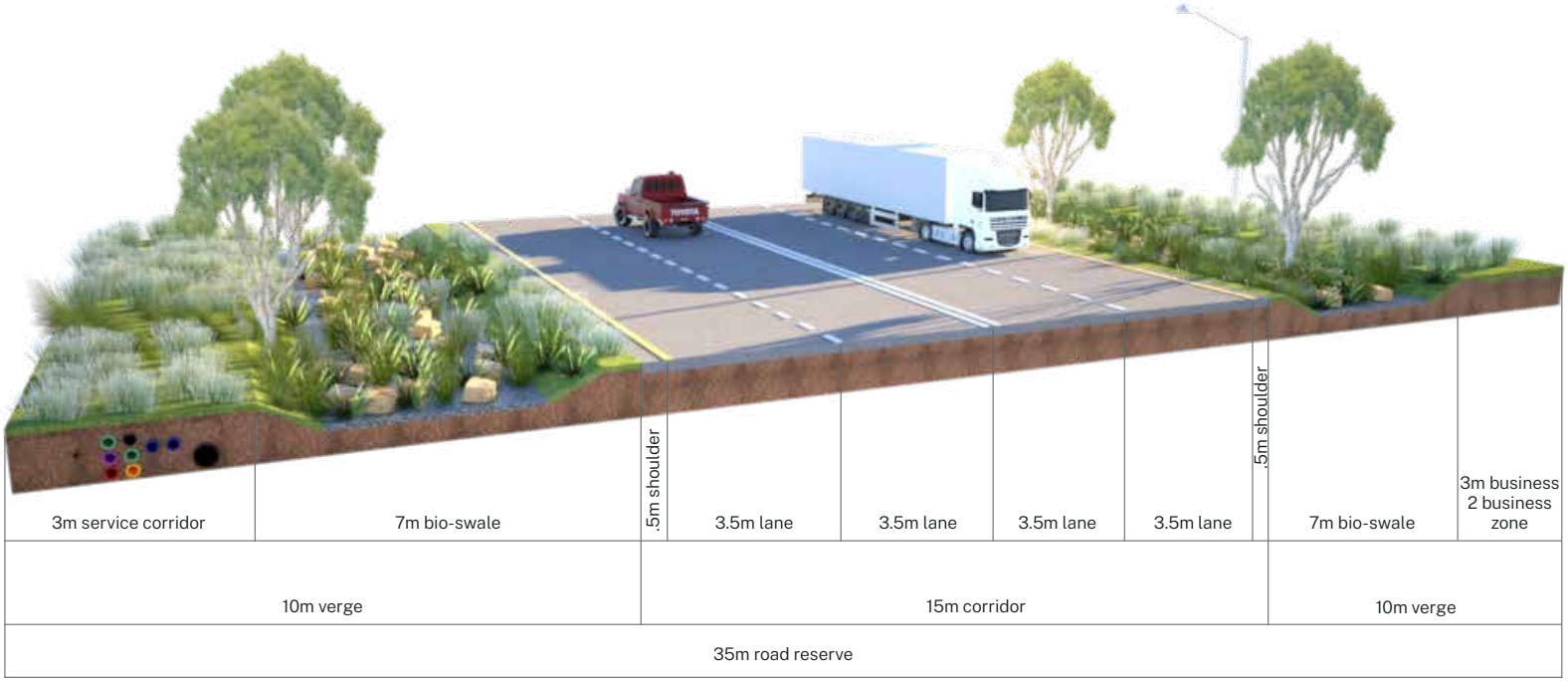
Any additional landscape treatments that provide functionality and visual amenity to the SAP.

- bioswales
- screen planting.

3.3.3 Road treatments

Distributor road (80km/h – 4 lanes)

The most prominent freight corridor within the Moree Special Activation Precinct road hierarchy, the distributor road typology consists of a structured mix of vegetation underpinned by unique seasonal variation in colour.



01 *Eucalyptus populnea*
02 *Corymbia tessellaris*
03 *Capparis mitchellii*, courtesy of Adam Henderson/DPE
04 *Dichanthium sericeum*

Key planting palette

Trees	Acacia *pendula* Weeping Myall *Corymbia tessellaris* Carbeen *Eucalyptus populnea* subsp. *bimbil* Poplar Box *Jacaranda mimosifolia* Jacaranda
Shrubs	*Capparis mitchellii* Wild Orange *Citrus glauca* Desert Lime *Eremophila maculata* Spotted Fuchsia Bush *Geijera parviflora* Wilga
Groundcovers and grasses	*Astrebla elymoides, A. squarrosa or A. pectinate* Mitchell Grass *Austrostipa verticillata* Slender Bamboo Grass *Austrodanthonia setacea* Wallaby Grass *Dichanthium sericeum* Queensland Bluegrass

For additional planting species, please refer table 3.4 Green infrastructure planting list.

Collector road (50km/h - 2 lanes)

The collector roads allow slower vehicle movement in both north-south and east-west directions across the precinct. Planting along these routes are to consist of a range of native species with an emphasis on habitat creation for endemic fauna.

Key planting palette

Trees	*Alectryon oleifolius* Western Rosewood *Eucalyptus camaldulensis subsp. camaldulensis* River Red Gum *Flindersia maculosa* Leopardwood *Eucalyptus sideroxylon* 'Rosea' Mugga Ironbark
Shrubs	*Atriplex stipitata* Mallee Saltbush *Eremophila deserti* Turkeybush *Eremophila mitchellii* Budda *Maireana decalvans* Black Cotton Bush
Grasses	*Austrostipa scabra subsp. scabra* Speargrass *Leptochloa digitata* Umbrella Canegrass *Paspalidium jubiflorum* Warrego Grass *Monachather paradoxus* Bandicoot Grass

For additional planting species, please refer table 3.4 Green infrastructure planting list.

01 *Flindersia maculosa*, courtesy of Julieanne Doyle/DPE
02 *Eremophila bignoniiflora*, courtesy of Courtney Davies/DPE

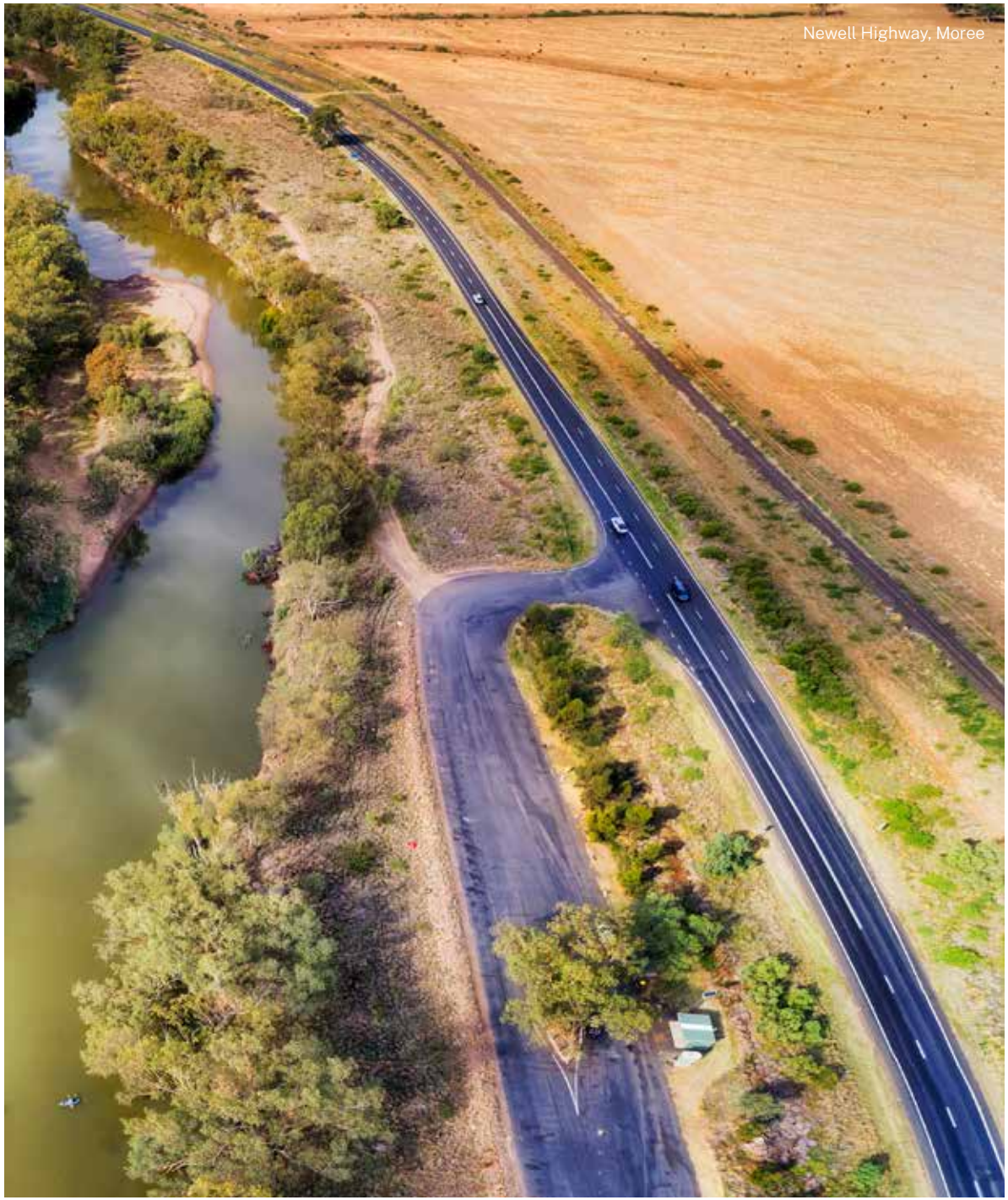
Local road (50km/h – 2 lanes)

The local road typology is designed for existing local routes connecting to the Newell Highway and within the loop of Industrial Drive. Aesthetics, edibility, seasonal variation, and proximity to existing patches of Weeping Myall Open Woodland (PCT 27) have informed species selection for this typology.

Key planting palette

Trees	*Atalaya hemiglauca* Whitewood *Carya illinoinensis* Pecan *Callistemon viminalis* Weeping Bottlebrush *Eucalyptus microcarpa* Western Grey Box

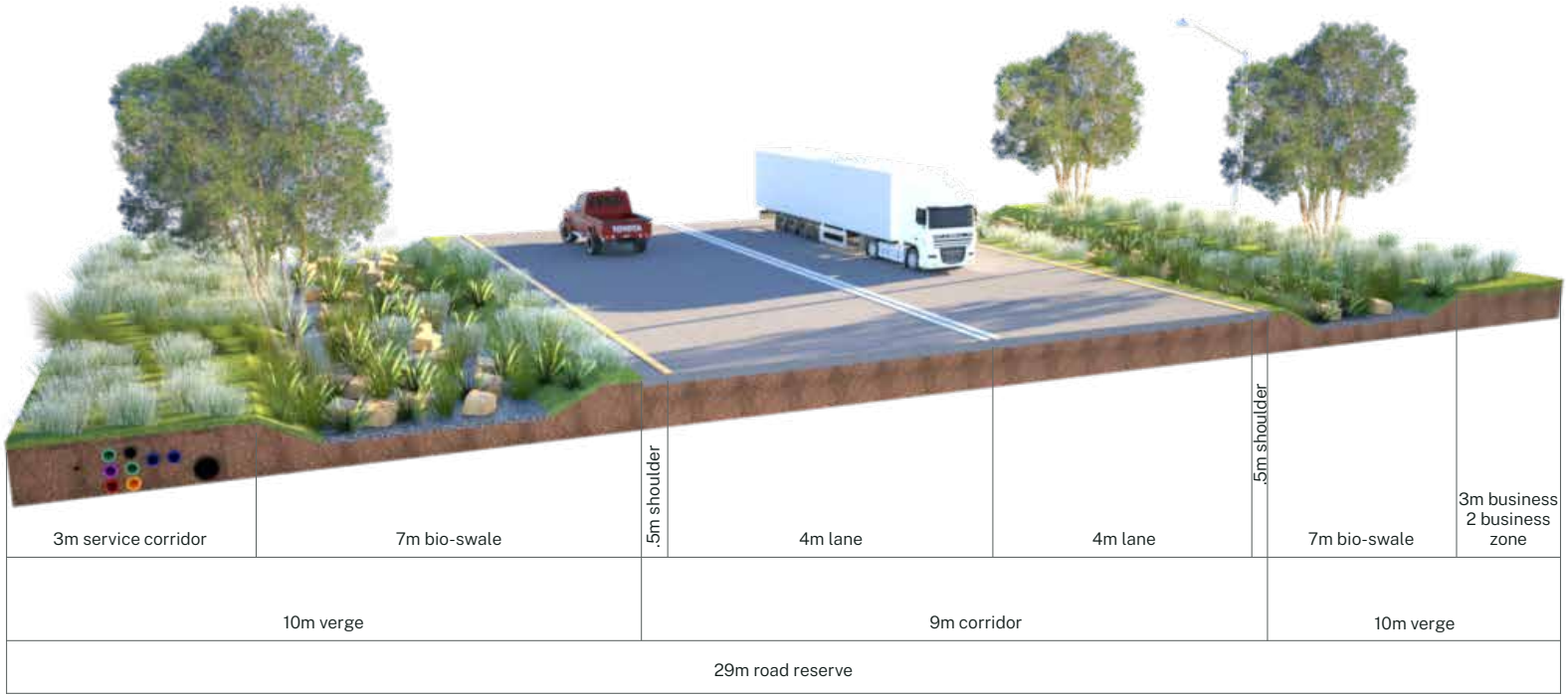
For additional planting species, please refer table 3.4 Green infrastructure planting list.



Newell Highway, Moree

Rural road (80km/h - 2 lanes)

The rural road typology is unique in that the majority of it runs along the travelling stock route (TSR). Set aside for conservation and periodic stock movement, this planting typology is designed to expand the existing Queensland Bluegrass plant community (PCT 52), with the addition of some trees to provide shade and feed for stock.



Key planting palette

Trees	*Acacia salicina* Cooba
	Brachychiton populneus Kurrajong
	Casuarina cristata Belah
	Eucalyptus coolabah subsp. coolabah Coolabah
	Eucalyptus largiflorens Black Box

For additional planting species, please refer table 3.4 Green infrastructure planting list.

01 *Eucalyptus coolabah,* courtesy of Nicola Brookhouse/DPE
02 *Eucalyptus largiflorens,* courtesy of Steve Lewer/DPE

3.3.4 Gateway treatments

Northern Gateway and Southern Gateway

Developing an arrival experience is an important element of establishing the place and identity of the precinct. Gateways should feature natural and built form elements that clearly indicates and highlights the precinct entry threshold. Natural and built form elements in these locations establish and develop an overall theme and style which can be replicated throughout the precinct.

Built form elements should consider scale, material and messaging and present opportunity to engage with the community and local artists. Natural elements should be reflective of the wider landscape context.


01


02


03


04

01 Cor-ten steel
02 Decomposed granite and locally sourced rock
03 Rammed earth
04 Sculptural elements/re-use of agricultural machinery

Material palette

- cor-ten steel
- rammed earth
- locally sourced rock, hardwood, or recycled agricultural materials
- decomposed granite

Key planting palette

Trees	*Allocasuarina luehmannii*
	Alstonia constricta
	Callitris glaucophylla
	Melaleuca trichostachya

For additional planting species, please refer table 3.4 Green infrastructure planting list.

3.3.5 Public realm treatments

Feature treatment

Public realm areas where landscape treatments may be required, may include formal entrances to buildings, significant cultural/historical sites, landscape features, landmarks, thresholds or street frontages. Emphasising certain areas within the precinct can be achieved through the application of feature planting, materials and elements that set themselves apart from the surrounding landscape. The planting palette is composed of endemic species of the Moree region that have unique visual traits, lending themselves to being showcased. All materials should be robust, sustainable and be low maintenance.

Material palette

- cor-ten steel
- rammed earth
- locally sourced rock, hardwood, or recycled agricultural materials
- decomposed granite.

Key planting palette

Trees	*Eucalyptus coolabah subsp. coolabah* Coolabah *Eucalyptus camaldulensis subsp. camaldulensis* River Red Gum *Eucalyptus populnea subsp. bimbil* Poplar Box *Eucalyptus largiflorens* Black Box
Shrubs	*Muehlenbeckia/Duma florulenta* Lignum *Geijera parviflora* Wilga *Capparis mitchellii* Wild Orange *Eremophila mitchellii* Budda
Forbs	*Erodium crinitum* Blue Storksbill *Eryngium paludosum* Long Eryngium *Leiocarpa brevicompta* Flat Billy Buttons *Solanum esuriale* Quena
Sedges/Rushes	*Carex inversa* Carex *Cyperus concinnus* Trim Flat-sedge *Juncus radula* *Eleocharis plana* Flat Spike-sedge

For additional planting species, please refer table 3.4 Green infrastructure planting list.

Parking areas

Parking areas are made more attractive and appealing through the addition of planting to shade expansive hardstand materials and vehicles, reducing levels of radiant heat and lowering ambient temperatures. The design of carparking areas should seek to disperse shade evenly and propose species that drop minimal amounts of leave, seeds and flowers.

Key planting palette

Evergreen trees	*Acacia pendula* Weeping Myall *Callistemon viminalis* Weeping Bottlebrush *Corymbia tessellaris* Carbeen *Eucalyptus sideroxylon* 'Rosea' Mugga Ironbark

Small open space areas for visitors and staff within developments

These areas are designed to cater for employees and visitors who may be meeting, taking a break or having lunch. Located close to buildings, these areas could provide shaded seating or picnic tables, whilst also providing sun in winter due to their deciduous nature.

Key planting palette

Evergreen trees	*Delonix regia* Poinciana *Gleditsia triacanthos* Honey Locust *Jacaranda mimosifolia* Jacaranda *Pistacia chinensis* Chinese Pistachio

Screening planting

Screening may be required to create privacy, delineate spaces, line property boundaries, and soften hardscape, infrastructure or utility areas.

Key planting palette

Shrubs	*Apophyllum anomalum* Warrior Bush *Capparis mitchellii* Wild Orange *Duma florulenta* Lignum *Rhagodia spinescens* Spiny Rhagodia

For additional planting species, please refer table 3.4 Green infrastructure planting list.

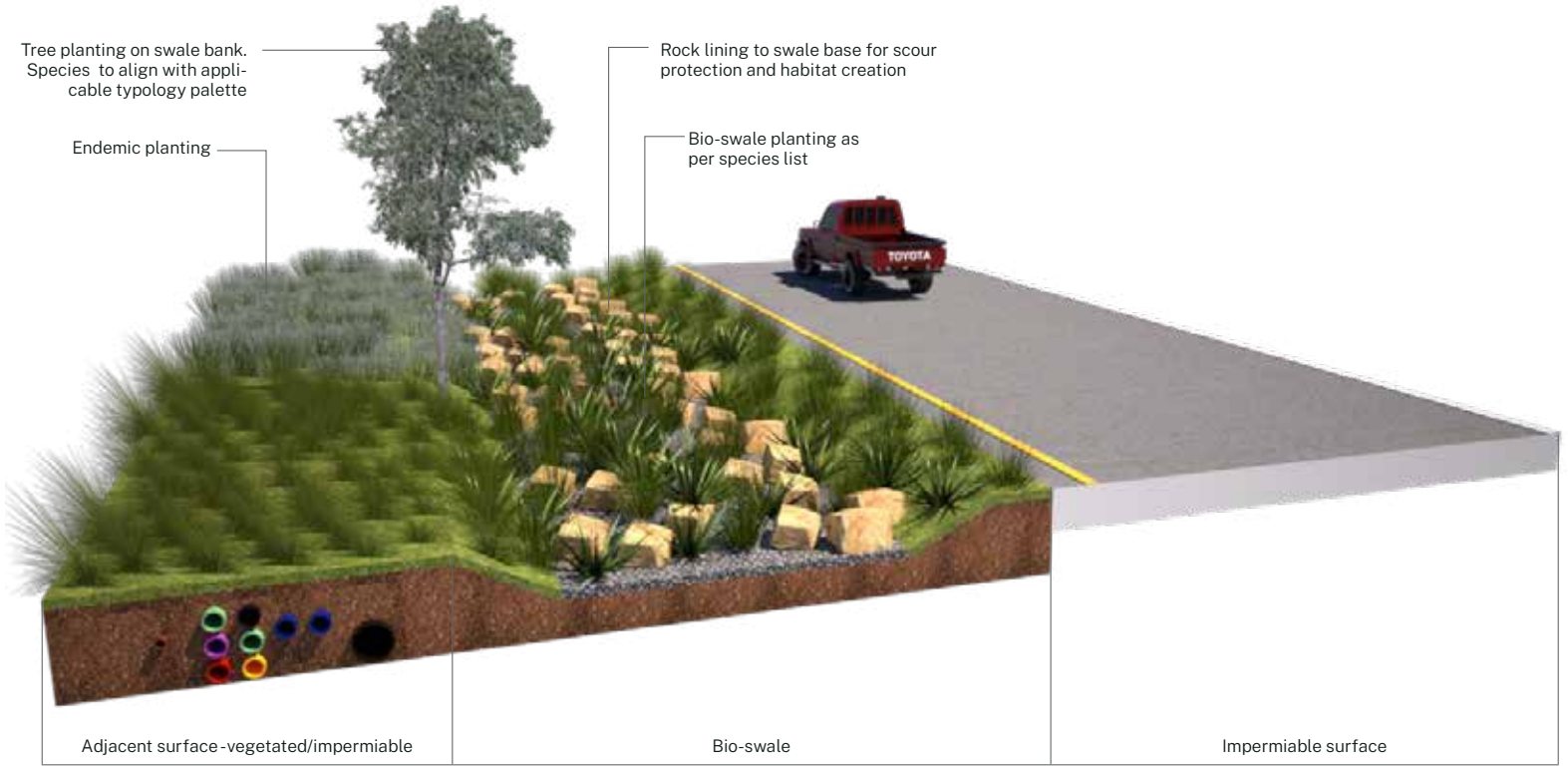
Bioswales

Bioswales are required adjacent to impermeable surfaces, allowing the capture and treatment of stormwater, in addition to providing habitat and forming an attractive green corridor. Lined with rock, the swale is a potential habitat corridor that conveys gali-water and supports plant species adapted to temporary inundation.

Key planting palette

Carex inversa Carex
Cyperus bifax Downs Nutgrass
Cyperus concinnus Trim Flat-sedge
Cyperus victoriensis

For additional planting species, please refer table 3.4 Green infrastructure planting list.



3.4 Revegetation planting palettes

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

The species list includes a number of species that are reflective of the existing natural environment in the precinct as well as climate ready species.

Each type of planting is described in detailed below.

Table 3.2 Species list for revegetation

Scientific name	Common name	PCT 27	PCT 39	PCT 52	PCT 55	PCT 56
Trees						
Acacia oswaldii	Umbrella Wattle	✓			✓	
Acacia pendula	Weeping Myall	✓	✓		✓	
Acacia salicina	Cooba	✓	✓			
Acacia stenophylla	River Cooba		✓	✓		
Alectryon oleifolius subsp. elongatus	Rosewood	✓		✓	✓	✓
Allocasuarina luehmannii	Buloke					✓
Alstonia constricta	Quinine Bush		✓			
Atalaya hemiglauca	Whitewood	✓		✓	✓	✓
Callitris glaucophylla	White Cypress Pine					✓
Casuarina cristata	Belah	✓	✓			✓
Corymbia tessellaris	Carbeen					✓
Eucalyptus camaldulensis subsp. camaldulensis	River Red Gum		✓			
Eucalyptus coolabah subsp. coolabah	Coolibah		✓	✓	✓	
Eucalyptus largiflorens	Black Box	✓	✓		✓	
Eucalyptus microcarpa	Grey Box				✓	✓
Eucalyptus populnea subsp. Bimbil	Bimbil Box	✓		✓		✓
Melaleuca trichostachya	-		✓			
Notelaea microcarpa var. microcarpa	Velvet Mock Olive					✓
Owenia acidula	Gooya			✓		

Table 3.2 Species list for revegetation continued

Scientific name	Common name	PCT 27	PCT 39	PCT 52	PCT 55	PCT 56
Shrubs						
Abutilon oxycarpum	Lantern Bush		✓			✓
Apophyllum anomalum	Warrior Bush		✓		✓	✓
Atriplex leptocarpa	Slender-fruit Saltbush	✓		✓		✓
Atriplex nummularia	Old Man Saltbush	✓				
Atriplex semibaccata	Creeping Saltbush	✓				
Atriplex stipitata	Mallee Saltbush	✓				
Capparis mitchellii	Wild Orange	✓	✓		✓	✓
Citrus glauca	Desert Lime					✓
Duma florulenta	Lignum		✓	✓	✓	
Enchylaena tomentosa	Ruby Saltbush	✓			✓	✓
Eremophila bignoniiflora	Bignonia Emu-bush		✓			
Eremophila deserti	Turkeybush				✓	✓
Eremophila longifolia	Emubush				✓	
Eremophila maculata	Spotted Fuchsia-bush		✓		✓	
Eremophila mitchellii	Budda		✓		✓	
Exocarpos aphyllus	Leafless Ballart				✓	
Geijera parviflora	Wilga		✓		✓	✓
Maireana aphylla	Cotton Bush	✓				
Maireana coronata	Crown Fissure-weed					✓
Maireana decalvans	Black Cotton Bush			✓		✓
Maireana enchylaenoides	Wingless Bluebush				✓	
Myoporum montanum	Western Boobialla	✓			✓	✓
Pimelea microcephala subsp. microcephala	-				✓	
Pimelea neoanglica	Poison Pimelea	✓				
Ptilotus sessilifolius	Crimson Foxtail			✓		

Table 3.2 Species list for revegetation continued

Scientific name	Common name	PCT 27	PCT 39	PCT 52	PCT 55	PCT 56
Rhagodia spinescens	Berry saltbush	✓	✓		✓	✓
Salsola australis	-			✓		
Santalum acuminatum	Sweet Quandong				✓	✓
Senna form taxon 'filifolia'	-				✓	
Senna form taxon 'zygophylla''	-				✓	
Sclerolaena bicornis var. bicornis	Goathead Burr		✓			
Sclerolaena birchii	Galvanised Burr		✓	✓	✓	✓
Sclerolaena brachyptera	-	✓				
Sclerolaena calcarata	Redburr		✓		✓	
Sclerolaena divaricata	Pale Poverty Bush				✓	
Sclerolaena intricata	Poverty Bush		✓			
Sclerolaena limbata	-	✓				
Sclerolaena muricata	Black Rolypoly	✓	✓	✓	✓	✓
Sclerolaena stelligera	-	✓		✓		✓
Sclerolaena tricuspis	Giant Redburr					✓
Sclerolaena tubata	-		✓			
Groundcovers - grasses						
Anthosachne scabra	Wheatgrass				✓	
Aristida behriana	Bunch Wiregrass					✓
Aristida calycina var. praealta	-			✓		
Aristida jerichoensis var. jerichoensis	Jericho Wiregrass					✓
Aristida leptopoda	White Speargrass	✓		✓		
Aristida platychaeta	-			✓		
Astrebla elymoides	Mitchell Grass			✓		
Astrebla lappacea	Curly Mitchell Grass	✓				
Astrebla pectinata	Barley Mitchell Grass	✓		✓		

Table 3.2 Species list for revegetation continued

Scientific name	Common name	PCT 27	PCT 39	PCT 52	PCT 55	PCT 56
Astrebla squarrosa	Bull Mitchell Grass			✓		
Austrostipa aristiglumis	Plains Grass	✓		✓	✓	
Austrostipa blackii	-	✓				
Austrostipa scabra subsp. scabra	Speargrass				✓	✓
Austrostipa verticillata	Slender Bamboo Grass	✓				✓
Carex inversa	-			✓	✓	
Chloris truncata	Windmill Grass	✓	✓	✓	✓	✓
Chloris ventricosa	Tall Windmill Grass		✓			
Cyperus betchei subsp. betchei	-					✓
Cyperus bifax	Downs Nutgrass		✓	✓		
Cyperus concinnus	Trim Flat-sedge		✓			
Cyperus victoriensis	-		✓			
Dichanthium sericeum subsp. sericeum	Bluegrass	✓	✓	✓	✓	✓
Digitaria divaricatissima	Umbrella Grass			✓		
Diplachne muelleri	Brown Beetle Grass					✓
Eleocharis pallens	Pale Spike-sedge		✓		✓	
Eleocharis pusilla	-				✓	
Eleocharis plana	Flat Spike-sedge		✓	✓		
Enteropogon acicularis	-	✓		✓	✓	✓
Eragrostis elongata	Clustered Lovegrass					✓
Eragrostis leptostachya	Paddock Lovegrass	✓				✓
Eragrostis parviflora	Weeping Lovegrass	✓				
Eriochloa crebra	Cup Grass			✓		
Eriochloa pseudoacrotricha	Early Spring Grass	✓				
Iseilema membranaceum	Small Flinders Grass	✓				
Juncus radula	-				✓	

Table 3.2 Species list for revegetation continued

Scientific name	Common name	PCT 27	PCT 39	PCT 52	PCT 55	PCT 56
Lachnagrostis filiformis	-		✓			
Leptochloa digitata	Umbrella Canegrass		✓			
Leptochloa divaricatissima	-				✓	
Monachather paradoxus	Bandicoot Grass	✓		✓	✓	
Panicum decompositum	Native Millet		✓	✓		
Panicum simile	Two-colour Panic				✓	
Paspalidium caespitosum	Brigalow Grass				✓	
Paspalidium constrictum	Knottybutt Grass				✓	
Paspalidium globoideum	Shotgrass			✓		
Paspalidium jubiflorum	Warrego Grass		✓			
Phyllanthus virgatus	-					✓
Rytidosperma fulvum	Wallaby Grass				✓	
Rytidosperma setaceum	Smallflower Wallaby Grass	✓			✓	
Sporobolus actinocladus	Katoora Grass	✓				✓
Sporobolus caroli	Fairy Grass	✓	✓	✓	✓	
Sporobolus elongatus	Slender Rat's Tail Grass			✓		
Sporobolus mitchellii	Rat's Tail Couch			✓		
Thellungia advena	Coolibah Grass					✓
Themeda avenacea	Oat Kangaroo Grass	✓				
Walwhalleya proluta	-	✓			✓	
Groundcovers - forbs						
Ajuga australis	Austral Bugle					✓
Abutilon oxycarpum var. subsagittatum	Flannel Weed				✓	
Alternanthera denticulata	Lesser Joyweed			✓	✓	
Alternanthera nodiflora	Common Joyweed		✓			

Table 3.2 Species list for revegetation continued

Scientific name	Common name	PCT 27	PCT 39	PCT 52	PCT 55	PCT 56
Atriplex leptocarpa	Slender-fruit Saltbush				✓	
Atriplex muelleri	-			✓		
Atriplex semibaccata	Berry Saltbush				✓	
Boerhavia dominii	Tarvine			✓	✓	
Brachyscome dentata	-					✓
Brunoniella australis	Blue Trumpet					✓
Bulbine alata	Bulbine Lily		✓			✓
Calocephalus sonderi	Pale Beauty-heads					✓
Calotis cuneifolia	Purple Burr-daisy	✓				
Calotis lappulacea	Yellow Burr-daisy			✓		
Calotis scabiosifolia var. integrifolia	Rough Burr-daisy	✓				
Chenopodium desertorum subsp. desertorum	-				✓	
Craspedia variabilis	Common Billy Buttons	✓				
Crinum flaccidum	Murray Lily	✓				
Crotalaria dissitiflora subsp. dissitiflora	Grey Rattlepod	✓				
Cullen tenax	Emu-foot	✓				
Daucus glochidiatus	Native Carrot	✓	✓			
Einadia nutans subsp. nutans	Climbing Saltbush	✓	✓	✓	✓	✓
Einadia polygonoides	-			✓		
Erodium crinitum	Blue Crowfoot					✓
Eryngium paludosum	Long Eryngium	✓				
Euphorbia drummondii	Caustic Weed			✓		
Galium gaudichaudii	Rough Bedstraw					✓
Glycine tabacina	-				✓	
Goodenia fascicularis	-	✓				✓
Goodenia glauca	-	✓				

Table 3.2 Species list for revegetation continued

Scientific name	Common name	PCT 27	PCT 39	PCT 52	PCT 55	PCT 56
Goodenia pusilliflora	-		✓			
Hibiscus trionum	Flower-of-an-hour			✓		
Hypericum gramineum	Small St John's Wort					✓
Leiocarpa brevicompta	Flat Billy Buttons			✓		
Leiocarpa leptolepis	Pale Plover-daisy	✓				
Leiocarpa panaetioides	Woolly Buttons	✓		✓		
Leiocarpa tomentosa	Woolly Plover-daisy	✓				
Lepidium pseudohyssopifolium	Peppercress	✓				
Malvastrum coromandelianum	Prickly Malvastrum					✓
Neptunia gracilis f. gracilis	Sensitive Plant			✓		
Oxalis chnoodes	-			✓	✓	✓
Oxalis perennans	-	✓				
Plantago debilis	-			✓		
Plantago varia	-	✓		✓		
Plectranthus parviflorus	Cockspur Flower				✓	
Portulaca oleracea	Pigweed			✓		
Pratia concolor	Poison Pratia		✓			✓
Ptilotus exaltatus var. exaltatus	Showy Foxtail					✓
Pycnosorus globosus	Billy Buttons			✓		✓
Pycnosorus thompsonianus	Billy Buttons	✓				
Rhodanthe corymbiflora	Small White Sunray	✓				
Roepera apiculata	Common Twinleaf				✓	
Rostellularia adscendens subsp. adscendens	-	✓				
Sida corrugata	Corrugated Sida	✓			✓	✓
Sida trichopoda	Hairy Sida			✓	✓	
Solanum esuriale	Quena	✓	✓	✓		✓

Table 3.2 Species list for revegetation continued

Scientific name	Common name	PCT 27	PCT 39	PCT 52	PCT 55	PCT 56
Stellaria angustifolia	Swamp Starwort		✓			
Swainsona galegifolia	Smooth Darling-pea	✓		✓		
Swainsona swainsonioides	Downy Swainson-pea			✓		
Tetragonia moorei	-					✓
Tetragonia tetragonioides	New Zealand Spinach		✓	✓		
Velleia paradoxa	Spur Velleia					✓
Verbena gaudichaudii	-	✓				
Vittadinia cuneata var. cuneata	Fuzzweed	✓			✓	
Vittadinia pterochaeta	Winged New Holland Daisy			✓		
Vittadinia sulcata	-					✓
Wahlenbergia communis	Tufted Bluebell					✓
Wahlenbergia fluminalis	River Bluebell				✓	✓
Wahlenbergia gracilis	Sprawling Bluebell	✓				✓
Groundcovers - ferns and other						
Capparis lasiantha	Nepine					✓
Convolvulus clementii	Desert Bindweed	✓				
Convolvulus erubescens	Blushing Bindweed				✓	
Marsilea drummondii	Common Nardoo		✓	✓	✓	
Marsilea hirsuta	Nardoo	✓			✓	
Parsonsia eucalyptophylla	Gargaloo				✓	

Planting densities

Planting densities and other biodiversity values listed in Table 3.3 are based on the community condition benchmarks (plus 20 per cent for planting densities) for the listed biodiversity target published by the Department of Planning and Environment on the Vegetation Classification Database (2022) for the Brigalow. An additional 20 per cent has been added for each stratum to planting densities to account for an 80 per cent survival rate of plantings. Other biodiversity values including fallen timber, hollows and leaf litter have been included to inform supplementary habitat augmentation, addressed in the BMP.

Table 3.3 Biodiversity targets, planting densities and other biodiversity values

Biodiversity target	Vegetation formation	Vegetation class	Richness per stratum (planting density)	Other biodiversity values
PCT 27 Weeping Myall open woodland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion	Semi-arid Woodlands (Grassy sub-formation)	Riverine Plain Woodlands	60 trees, 180 shrubs and 540 groundcovers per ha	Length of fallen timber: 250m/ha Hollows: 100/ha Litter: 45%/m²
PCT 39 Coolabah-River Coobah-Lignum woodland wetland of frequently flooded floodplains mainly in the Darling Riverine Plains Bioregion	Semi-arid Woodlands (Grassy sub-formation)	North-west Floodplain Woodlands	90 trees, 240 shrubs and 330 groundcovers per ha	Length of fallen timber: 700m/ha Hollows: 125/ha Litter: 35%/m²
PCT 52 Queensland Bluegrass +/-Mitchell Grass	Grasslands	Semi-arid Floodplain Grasslands	30 trees, 150 shrubs and 570 groundcovers per ha	Length of fallen timber: 0m/ha Hollows: 0/ha Litter: 30%/m²
PCT 55 Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions.	Semi-arid Woodlands (Grassy sub-formation)	North-west Floodplain Woodlands	90 trees, 240 shrubs and 330 groundcovers per ha	Length of fallen timber: 700m/ha Hollows: 125/ha Litter: 35%/m²
PCT 56 Poplar Box-Belah woodland on clay-loam soils on alluvial plains of north-central NSW	Grassy Woodlands	Floodplain Transition Woodlands	120 trees, 150 shrubs and 450 groundcovers per ha	Length of fallen timber: 1,125m/ha Hollows: 75/ha Litter: 60%/m²

Planting densities determined using community benchmarks for the Brigalow Belt South bioregion (DPE, 2022)

3.5 Green infrastructure planting list

The following species lists has been tailored and curated, utilising known plant community type species, and species endemic to the wider Moree area.

Table 3.4 Green infrastructure planting lists

Scientific name	Common name	Distributor	Collector	Local	Rural	Bioswale	Gateways	Feature areas	Parking areas	Small open space	Screening
Endemic trees											
Acacia oswaldii	Umbrella Wattle										
Acacia pendula	Weeping Myall	✓						✓	✓		
Acacia salicina	Cooba				✓						✓
Acacia stenophylla	River Cooba							✓			✓
Alectryon oleifolius subsp. elongatus	Rosewood		✓					✓			
Allocasuarina luehmannii	Buloke						✓				
Alstonia constricta	Quinine Bush						✓				
Atalaya hemiglauca	Whitewood			✓				✓	✓		
Callitris glaucophylla	White Cypress Pine						✓				
Casuarina cristata	Belah				✓			✓			
Corymbia tessellaris	Carbeen	✓									
Eucalyptus camaldulensis subsp. camaldulensis	River Red Gum		✓					✓			
Eucalyptus coolabah subsp. coolabah	Coolibah				✓			✓			
Eucalyptus largiflorens	Black Box				✓			✓			
Eucalyptus microcarpa	Grey Box			✓							
Eucalyptus populnea subsp. bimbil	Bimbil Box	✓						✓			
Melaleuca trichostachya	-						✓				
Notelaea microcarpa var. microcarpa	Velvet Mock Olive						✓				
Owenia acidula	Gooya						✓				

Scientific name	Common name	Distributor	Collector	Local	Rural	Bioswale	Gateways	Feature areas	Parking areas	Small open space	Screening
Other trees											
Brachychiton populneus	Kurrajong				✓						
Callistemon viminalis	Weeping Bottlebrush			✓					✓		
Carya illinoinensis	Pecan			✓							
Delonix regia	Poinciana									✓	
Eucalyptus sideroxylon ‘Rosea’	Mugga Ironbark		✓						✓		
Ficus microcarpa var. hillii	Hills Weeping Fig							✓			
Flindersia maculosa	Leopardwood		✓								
Gleditsia triacanthos	Honey Locust									✓	
Jacaranda mimosifolia	Jacaranda	✓								✓	
Pistacia chinensis	Chinese Pistachio									✓	
Ulmus parvifolia	Chinese Elm									✓	
Ziziphus jujuba	Chinese Date			✓							
Endemic shrubs											
Abutilon oxycarpum	Lantern Bush										
Apophyllum anomalum	Warrior Bush							✓			✓
Atriplex leptocarpa	Slender-fruit Saltbush										
Atriplex nummularia	Old Man Saltbush							✓	✓	✓	✓
Atriplex semibaccata	Creeping Saltbush								✓		
Atriplex stipitata	Mallee Saltbush		✓						✓		
Capparis mitchellii	Wild Orange	✓						✓	✓	✓	✓
Citrus glauca	Desert Lime	✓								✓	✓
Duma florulenta	Lignum		✓					✓			✓
Enchylaena tomentosa	Ruby Saltbush	✓									
Eremophila bignoniiflora	Bignonia Emu-bush										

Scientific name	Common name	Distributor	Collector	Local	Rural	Bioswale	Gateways	Feature areas	Parking areas	Small open space	Screening
Eremophila deserti	Turkeybush		✓					✓			
Eremophila longifolia	Emubush										✓
Eremophila maculata	Spotted Fuchsia-bush	✓						✓	✓	✓	✓
Eremophila mitchellii	Budda		✓					✓			
Exocarpos aphyllus	Leafless Ballart										✓
Geijera parviflora	Wilga	✓						✓	✓		✓
Maireana aphylla	Cotton Bush										
Maireana coronata	Crown Fissure-weed										
Maireana decalvans	Black Cotton Bush		✓						✓		
Maireana enchylaenoides	Wingless Bluebush										
Myoporum montanum	Western Boobialla		✓								
Pimelea microcephala											
subsp. microcephala	-										
Pimelea neoanglica	Poison Pimelea										
Ptilotus sessilifolius	Crimson Foxtail										
Rhagodia spinescens	Berry Saltbush	✓						✓	✓	✓	✓
Salsola australis	-										
Santalum acuminatum	Sweet Quandong							✓	✓		
Senna form taxon ‘filifolia’	-										
Senna form taxon											
‘zygophylla’	-										
Sclerolaena bicornis var. bicornis	Goathead Burr										
Sclerolaena birchii	Galvanised Burr										
Sclerolaena brachyptera	-										
Sclerolaena calcarata	Redburr										

Scientific name	Common name	Distributor	Collector	Local	Rural	Bioswale	Gateways	Feature areas	Parking areas	Small open space	Screening
Sclerolaena divaricata	Pale Poverty Bush										
Sclerolaena intricata	Poverty Bush										
Sclerolaena limbata	-										
Sclerolaena muricata	Black Rolypoly										
Sclerolaena stelligera	-										
Sclerolaena tricuspis	Giant Redburr										
Sclerolaena tubata	-										
Endemic grasses											
Anthosachne scabra	Wheatgrass										
Aristida behriana	Bunch Wiregrass										
Aristida calycina var.											
praealta	-										
Aristida jerichoensis var. jerichoensis	Jericho Wiregrass										
Aristida leptopoda	White Speargrass										
Aristida platychaeta	-										
Astrebla elymoides	Mitchell Grass	✓									
Astrebla lappacea	Curly Mitchell Grass										
Astrebla pectinata	Barley Mitchell Grass	✓									
Astrebla squarrosa	Bull Mitchell Grass	✓									
Austrostipa aristiglumis	Plains Grass										
Austrostipa blackii	-										
Austrostipa scabra subsp. scabra	Speargrass		✓								
Austrostipa verticillata	Slender Bamboo Grass	✓						✓	✓	✓	
Carex inversa	-					✓		✓			
Chloris truncata	Windmill Grass		✓								

Scientific name	Common name	Distributor	Collector	Local	Rural	Bioswale	Gateways	Feature areas	Parking areas	Small open space	Screening
Chloris ventricosa	Tall Windmill Grass										
Cyperus betchei subsp. betchei	-					✓					
Cyperus bifax	Downs Nutgrass					✓		✓			
Cyperus concinnus	Trim Flat-sedge					✓		✓			
Cyperus victoriensis	-					✓		✓			
Dichanthium sericeum											
subsp. sericeum	Bluegrass	✓						✓	✓		
Digitaria divaricatissima	Umbrella Grass										
Diplachne muelleri	Brown Beetle Grass										
Eleocharis pallens	Pale Spike-sedge										
Eleocharis pusilla	-										
Eleocharis plana	Flat Spike-sedge					✓		✓			
Enteropogon acicularis	-		✓								
Eragrostis elongata	Clustered Lovegrass										
Eragrostis leptostachya	Paddock Lovegrass										
Eragrostis parviflora	Weeping Lovegrass										
Eriochloa crebra	Cup Grass										
Eriochloa pseudoacrotricha	Early Spring Grass										
Iseilema membranaceum	Small Flinders Grass										
Juncus radula	-					✓					
Lachnagrostis filiformis	-										
Leptochloa digitata	Umbrella Canegrass		✓								
Leptochloa divaricatissima	-										
Monachather paradoxus	Bandicoot Grass		✓								
Panicum decompositum	Native Millet	✓						✓			

Scientific name	Common name	Distributor	Collector	Local	Rural	Bioswale	Gateways	Feature areas	Parking areas	Small open space	Screening
Panicum simile	Two-colour Panic										
Paspalidium caespitosum	Brigalow Grass										
Paspalidium constrictum	Knottybutt Grass										
Paspalidium globoideum	Shotgrass										
Paspalidium jubiflorum	Warrego Grass		✓								
Phyllanthus virgatus	-										
Rytidosperma fulvum	Wallaby Grass	✓						✓			
Rytidosperma setaceum	Smallflower Wallaby Grass	✓									
Sporobolus actinocladus	Katoora Grass										
Sporobolus caroli	Fairy Grass										
Sporobolus elongatus	Slender Rat's Tail Grass										
Sporobolus mitchellii	Rat's Tail Couch										
Thellungia advena	Coolibah Grass										
Themeda avenacea	Oat Kangaroo Grass						✓	✓	✓		
Walwhalleya proluta	-										
Endemic forbs											
Ajuga australis	Austral Bugle							✓		✓	
Abutilon oxycarpum var. subsagittatum	Flannel Weed										
Alternanthera denticulata	Lesser Joyweed										
Alternanthera nodiflora	Common Joyweed										
Atriplex leptocarpa	Slender-fruit Saltbush								✓	✓	
Atriplex muelleri	-								✓	✓	
Atriplex semibaccata	Berry Saltbush								✓	✓	
Boerhavia dominii	Tarvine										
Brachyscome dentata	-							✓			

Scientific name	Common name	Distributor	Collector	Local	Rural	Bioswale	Gateways	Feature areas	Parking areas	Small open space	Screening
Brunoniella australis	Blue Trumpet										
Bulbine alata	Bulbine Lily							✓			
Calocephalus sonderi	Pale Beauty-heads										
Calotis cuneifolia	Purple Burr-daisy										
Calotis lappulacea	Yellow Burr-daisy							✓	✓	✓	
Calotis scabiosifolia var. integrifolia	Rough Burr-daisy										
Chenopodium desertorum subsp. desertorum	-										
Craspedia variabilis	Common Billy Buttons							✓			
Crinum flaccidum	Murray Lily					✓					
Crotalaria dissitiflora subsp. dissitiflora	Grey Rattlepod										
Cullen tenax	Emu-foot										
Daucus glochidiatus	Native Carrot										
Einadia nutans subsp.											
nutans	Climbing Saltbush							✓	✓	✓	
Einadia polygonoides	-							✓			
Erodium crinitum	Blue Crowfoot							✓			
Eryngium paludosum	Long Eryngium							✓			
Euphorbia drummondii	Caustic Weed										
Galium gaudichaudii	Rough Bedstraw										
Glycine tabacina	-					✓				✓	
Goodenia fascicularis	-										
Goodenia glauca	-										
Goodenia pusilliflora	-										
Hibiscus trionum	Flower-of-an-hour										
Hypericum gramineum	Small S. John's Wort										

Scientific name	Common name	Distributor	Collector	Local	Rural	Bioswale	Gateways	Feature areas	Parking areas	Small open space	Screening
Leiocarpa brevicompta	Flat Billy Buttons							✓			
Leiocarpa leptolepis	Pale Plover-daisy							✓			
Leiocarpa panaetioides	Woolly Buttons							✓			
Leiocarpa tomentosa	Woolly Plover-daisy							✓			
Lepidium pseudohyssopifolium	Peppercress										
Malvastrum											
coromandelianum	Prickly Malvastrum										
Neptunia gracilis	Sensitive Plant							✓			
Oxalis chnoodes	-									✓	
Oxalis perennans	-									✓	
Plantago debilis	-										
Plantago varia	-										
Plectranthus parviflorus	Cockspur Flower									✓	
Portulaca oleracea	Pigweed										
Pratia concolor	Poison Pratia										
Ptilotus exaltatus var. exaltatus	Showy Foxtail							✓			
Pycnosorus globosus	Billy Buttons							✓			
Pycnosorus thompsonianus	Billy Buttons							✓			
Rhodanthe corymbiflora	Small White Sunray							✓			
Roepera apiculata	Common Twinleaf										
Rostellularia adscendens subsp. adscendens	-										
Sida corrugata	Corrugated Sida								✓	✓	
Sida trichopoda	Hairy Sida										
Solanum esuriale	Quena	✓						✓			
Stellaria angustifolia	Swamp Starwort					✓					

Scientific name	Common name	Distributor	Collector	Local	Rural	Bioswale	Gateways	Feature areas	Parking areas	Small open space	Screening
Swainsona galegifolia	Smooth Darling-pea							✓			
Swainsona swainsonioides	Downy Swainson-pea							✓			
Tetragonia moorei	-										
Tetragonia tetragonioides	New Zealand Spinach									✓	
Velleia paradoxa	Spur Velleia										
Verbena gaudichaudii	-							✓			
Vittadinia cuneata var. cuneata	Fuzzweed										
Vittadinia pterochaeta	Winged New Holland Daisy							✓			
Vittadinia sulcata	-										
Wahlenbergia communis	Tufted Bluebell							✓			
Wahlenbergia fluminalis	River Bluebell							✓			
Wahlenbergia gracilis	Sprawling Bluebell							✓			
Endemic ferns, gali-water plants and groundcovers											
Capparis lasiantha	Nepine										
Convolvulus clementii	Desert Bindweed										
Convolvulus erubescens	Blushing Bindweed										
Marsilea drummondii	Common Nardoo							✓			
Marsilea hirsuta	Nardoo										
Parsonsia eucalyptophylla	Gargaloo										

References:
Aurecon (2021) Moree Special Activation Precinct (SAP) Environmental Package: Biodiversity Report, prepared for the Department of Planning, Industry and Environment
Department of Planning and Environment (DPE) (2022a) BioNet Vegetation Information Systems database 2.1, available: https://www.environment.nsw.gov.au/NSWVCA20PRapp/LoginPR.aspx?ReturnUrl=%2fNSWVCA20PRapp%2fdefault.aspx

4

Infrastructure

Industrial area, Moree
Courtesy of Moree Plains Shire Council

4

This section provides:

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

It applies to infrastructure projects, subdivisions and development.

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

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

4.1 Precinct enabling infrastructure

An overview of the regional infrastructure facilitating development within the Moree Special Activation Precinct. Infrastructure is envisaged to be provided on a staged basis, with some infrastructure constructed on an interim basis with provision for later upgrade as needed.

A high-level overview of the enabling infrastructure is provided based on the concept design. This may change as part of the detailed investigations, development and finalisation of the infrastructure design. For example, the exact location of the infrastructure may vary depending on site characteristics.

4.2 Infrastructure design principles

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

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

ii) **any infrastructure for a subdivision** (connecting to a main road corridor) is to be carried out to MPSC/EE standards and requirements

iii) **any roads and utilities within a lot** will be to the lot developers requirements, and to MPSC/EE standards and requirements.

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

Aerial of Moree landscape and roads

4.1 Precinct enabling infrastructure

The staging and delivery of infrastructure across the precinct will be flexible and responsive to the timing of growth and land take up. The corporation is delivering infrastructure for the precinct to create opportunities within the northern portion of the Regional Enterprise Zone, with consideration given to future proofing the Moree Special Activation Precinct.

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

This form of infrastructure may include:

- upgrades of existing roads and provision of new road infrastructure, including roads, bridges, intersections, street lighting and other civil structures as required (including provision for integrated active and public transport)
- rail intermodal terminal connections for the northern and southern intermodal terminals
- provision of utilities, including gali-water, sewerage, storm water, electrical, and telecommunications networks
- provision within the road reserve utility corridor for additional utility services including emerging technologies.
- connections for energy generation facilities (solar/hydrogen).
- electrical substation upgrades to allow for connections from generation facilities to the main grid
- allowance for behind the meter connections between businesses
- groundwater extraction wells and storage/mixing tanks
- precinct-wide stormwater management basins (to manage stormwater quantity and quality) within the broader catchment network
- multi-purpose riparian corridors associated with Halls Creek for environmental, cultural and surface gali-water flow/wugawa-flood conveyance purposes with associated shared trails.

Asset	Early enabling works (Map 8.3)	Future enabling works (Map 8.4)
Roads and drainage (including main carriageway, local transverse and longitudinal drainage)	• Portion of a new east-west main distributor road (MC01) • Connector road running parallel to the Newell Highway to activate lands adjacent to Moree Airport (that connects the distributor road and the Newell Highway (MC02) • North-south road off the new distributor road with adjacent trunk utility corridor (MC04) • East-west road from Bullus Drive (MC07) • North-south road extending southwards from the distributor road (to access Southern Intermodal) (MC08) • Upgrade of Bullus Road to allow for new road connections north-south and east-west	• Remainder of the distributor road to create a connection for the Precinct between the Newell Highway and the Gywdir Highway • Extension of Bullus Drive southwards to connect to the distributor road (MC03) and the southern intermodal • Upgrade of Burrington Road to connect the southern intermodal with Tapscott Road (MC09) • New east-west local road to service areas identified for future solar energy generation (MC11) • Future road upgrades in the southern portion (e.g. in vicinity of the Moree Water Park) • Future expansion of a bypass road along the southern end of the Southern Intermodal Terminal
Road bridges and culverts	• Halls Creek culvert (as part of MC08) (45 Culverts 3 x 2.4 m)	• Moree Intermodal Overpass (MIO) over the Newell Highway to complete the Distributor Road connection between the Newell Highway and the Gwydir Highway (MC01)
Rail	• Rail works by ARTC as part of the Narrabri to North Star (N2NS) ARTC Inland Rail project.	• New Broadbent siding that connects to existing Inverell spur line that enable to continue the Broadbent facility loading operation without blocking the MC01 road traffic.
Utilities – potable gali-water (existing town gali-water and new groundwater extraction bore from deep source (Great Artesian Basin))	• Upgrade of existing trunk gali-water main from Moree Town to service the Precinct, utilisation of existing reservoir at the southwestern corner of the existing industrial estate • Installation of new gali-water distribution lines • New dhawun-ground reservoirs for town gali-water. • New gali-water booster pump stations (to achieve minimum gali-water pressure requirements)	• Great Artesian Basin Extraction Well and Storage/Mixing Facility (South-Eastern Facility) with associated pumps and electrical • Great Artesian Basin Extraction Well and Storage/Mixing Facility (North-Eastern Facility) with associated pumps and electrical • Cooling Towers for groundwater • Mixing Reservoirs for groundwater and town gali-water
Utilities – sewerage	• Sewer gravity mains that connect the Precinct to the existing sewerage pipeline system and the MPSC sewerage treatment facility near Greenbah Oval • Sewer pump stations in the vicinity of various road intersections (SPS) • Sewer lift stations at locations where there is limited grade (SLS) • Rising mains within the road corridor or trunk utility corridor to connect to the existing council pump station in Carol Avenue	• Sewer pump stations (SPS) as required • Sewer lift stations (SLS) as required • Rising mains as required
Utilities – gas	• Provision for future gas distribution conduits within trunk utility corridor and road corridor	N/A

Asset	Early enabling works (Map 8.3)	Future enabling works (Map 8.4)
Utilities – hydrogen	• Provision for future hydrogen distribution conduits within trunk utility corridor and road corridor	N/A
Utilities – recycled gali-water	• Provision for future recycled gali-water distribution conduits within trunk utility corridor and road corridor	N/A
Utilities – electricity	• Provision of overhead high voltage (22 kV) supply lines from existing Essential Energy substation • Upgrade of Essential Energy transformer and new switch room • Provision of overhead low voltage supply for street lighting • Provision for future electricity conduits in trunk utility corridor and road corridor (for business-to-business services)	• Provision of 132 kV north solar connection via dedicated central utility corridor to connect to existing Transgrid Moree zone substation • Upgrade of existing Transgrid Moree zone substation • Provision of overhead low voltage supply for street lighting
Utilities – optic fibre	• Provision of conduits in trunk utility corridor and road corridor for telecommunications services • Installation of telecommunications within roadside and trunk utility corridor conduits (NBN)	• Provision of conduits in trunk utility corridor and road corridor for telecommunications services • Installation of telecommunications within roadside and utility corridor conduits (NBN)
Regional stormwater basin	• Construction of a 20 ha regional stormwater basin (1.5 m depth) for wugawa-flood detention and gali-water quality treatment	N/A
Riparian corridor	N/A	• Creek rehabilitation works for Halls Creek (including cut to fill earthworks as required and revegetation with native species)

4.1.1 Early enabling works and envisaged future enabling works

In general, new infrastructure should expand from the existing assets. As such, development across the precinct will stem from the existing industrial estate in the northern portion of the precinct and grow east and south.

The early enabling works (MIO and Stage 1A/1B) are the initial commitment from the corporation with completion targeted for 2025. The envisaged future enabling works provide a logical guiding framework for future stages of development. It is expected that future enabling works will need to respond to new opportunities and evolve in response to government and business investment, and local and global market demand in coming years, as the Moree Special Activation Precinct develops in its entirety.

The corporation will ensure both the early and future enabling works are planned, designed and constructed in accordance with relevant standards from federal, state, and local authorities and service providers.

The corporation (or other entity as relevant and noted in the table) will deliver the infrastructure in stages.

4.1.2 Infrastructure in advance of enabling works

The precinct will respond to emerging needs and demands. Proposals in the precinct not directly benefiting from Early Enabling Works (out of sequence development) will be considered where the infrastructure appropriately contributes to the precincts infrastructure networks.

Variations may be considered where there is demand for a proposal and the delivery is possible in terms of:

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

4.2 Infrastructure design principles

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

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

- **roads** – required to service new development, including new road connections and property access driveways
- **stormwater management** – on site stormwater detention (up to 1% AEP flows) to be provided within a site along with works to connect the outlet to the precinct stormwater systems
- **electricity supply/connections** – including internal and external works to connect the precinct infrastructure to existing substations
- **telecommunications** – including internal and external works to connect to the precinct networks
- **wastewater networks** - including internal and external works to connect to the precinct infrastructure
- **potable gali-water networks** – including internal and external works to connect to the precinct infrastructure
- **gas and/or hydrogen** – pipelines that connect allow for connection into the future precinct network.

The design

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

- recognition of and site-specific design for local conditions and constraints:
  - existing terrain is extremely flat (0.1% slope)
  - black soils (vertosols – black earths and grey clays) which are high in clay content – these soils:
    - limit stormwater infiltration and avoid sub-surface drainage systems (particularly for pavements)
    - require specific design approaches for all types of earthworks (including trenching, cut and fill)
    - affect the design of foundations, requiring specialist geotechnical and structural advice
    - affect the design of pavements (for example, requiring a cement or lime stabilised portion of the subgrade of at least 300mm and the need for specialist geotechnical advice in this regard)
  - expansive shallow depth stormwater overland flows
  - riverine flooding associated with the Mehi River and local watercourse flooding associated with its tributaries (such as Halls Creek and Clarkes Creek)
- Design life may necessarily be less than commonly adopted for some early infrastructure that will be replaced when upgraded to accommodate growth in the precinct (such as some roads) but otherwise in accordance with utility requirements and/or Australian Standards
- Design for infrastructure that is installed with a regularly adopted design life should be able withstand the projected effects of climate change, including extreme heat, fire, drought and wugawa-flood.

Flat terrain across the Precinct

View of widespread flooding of Moree from Mehi River in March 2021
Courtesy of Rabbit Hop Films

Black soils (vertosols) are extremely difficult to traverse after rain
Courtesy of Moree Shire Plains Council

4.2.1 Roads and road sections

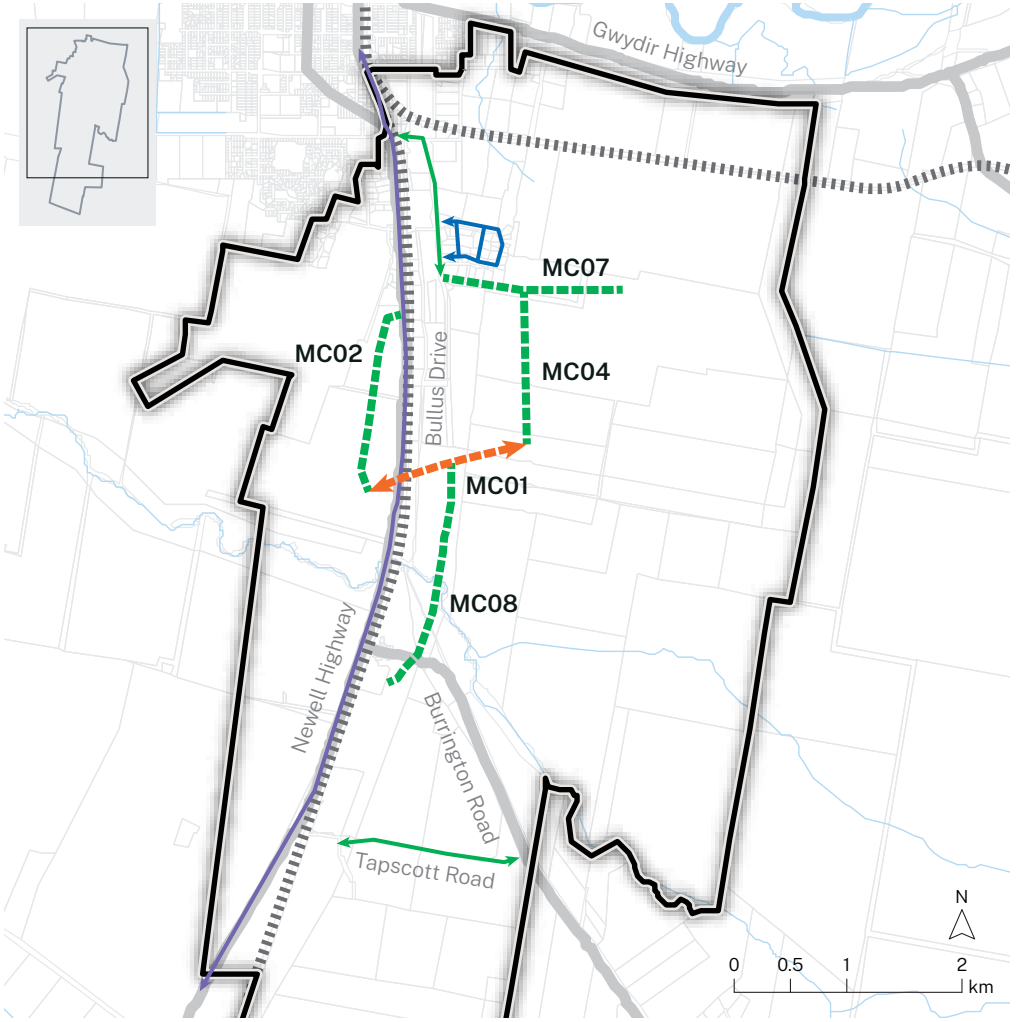
Roads and road sections in the Moree Special Activation Precinct will be based on the following principles:

- accommodate a B-Triple design vehicle as the largest vehicle servicing within the precinct with the purpose of providing additional connectivity to intermodal terminals, noting future planning for intersection upgrades to BAB-Quad vehicles. Interfaces with the Newell Highway to be designed to accommodate PBS 3A AB-triple vehicles
- roundabouts are to be mountable where required
- cul-de-sacs and temporary turning heads allow continuous turning of AB-Triples without the need for multi-point movements
- road levels set equal to or above the 0.5 per cent Annual Exceedance Probability (AEP) wugawa-flood levels
- pavement design takes into consideration the high centripetal axle loads expected due to large truck turning movements
- grade separated crossings across the Newell Highway and Inland Rail line to allow for double-stacking of containers and meet safety requirements as well as those of ARTC
- make use of recycled materials as part of the new pavement profile for road subbase
- works on classified roads are generally limited to intersection upgrades and landscape treatments. These works are to be undertaken in consultation with Transport for NSW
- individual site layouts will provide clear lines of sight for entry points
- public transport stops will be integrated into road verges in appropriate locations including any future commercial nodes, and are to link efficiently with existing network
- intersection design will incorporate the provision of utilities with utilities set back to allow future upgrade of heavy vehicle turning paths.

Figure 8 and 9 respectively show the road hierarchy for the enabling works (early and future works).

Truck on weigh bridge

Figure 8: Road hierarchy for early works

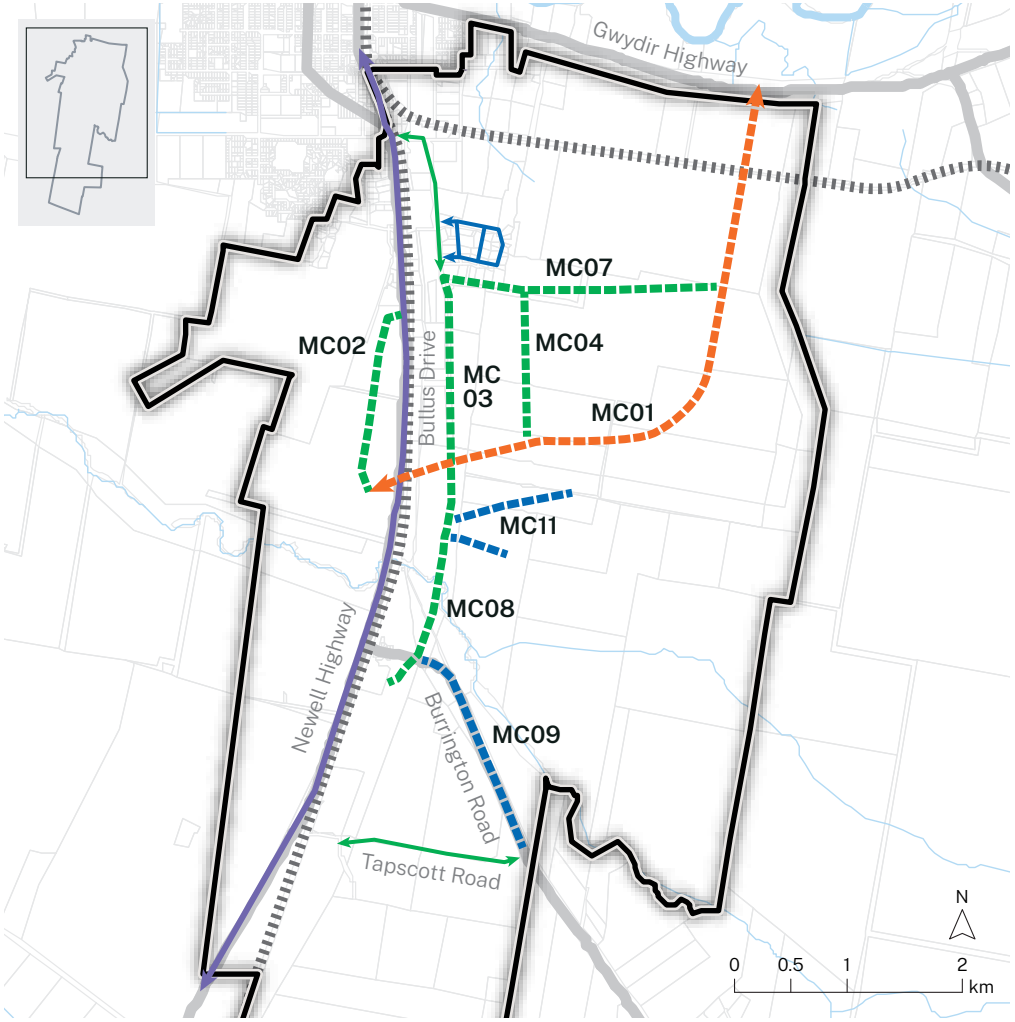


Special Activation Precinct boundary
Rail
Major roads
Rivers and creeks

Proposed roads
Collector/HPV road
Distributor

Existing roads
Local road
Collector/HPV road
Newell Highway

Figure 9: Future road hierarchy



Special Activation Precinct boundary
Rail
Major roads
Rivers and creeks

Proposed roads
Rural road
Collector/HPV road
Distributor

Existing roads
Local road
Collector/HPV road
Newell Highway

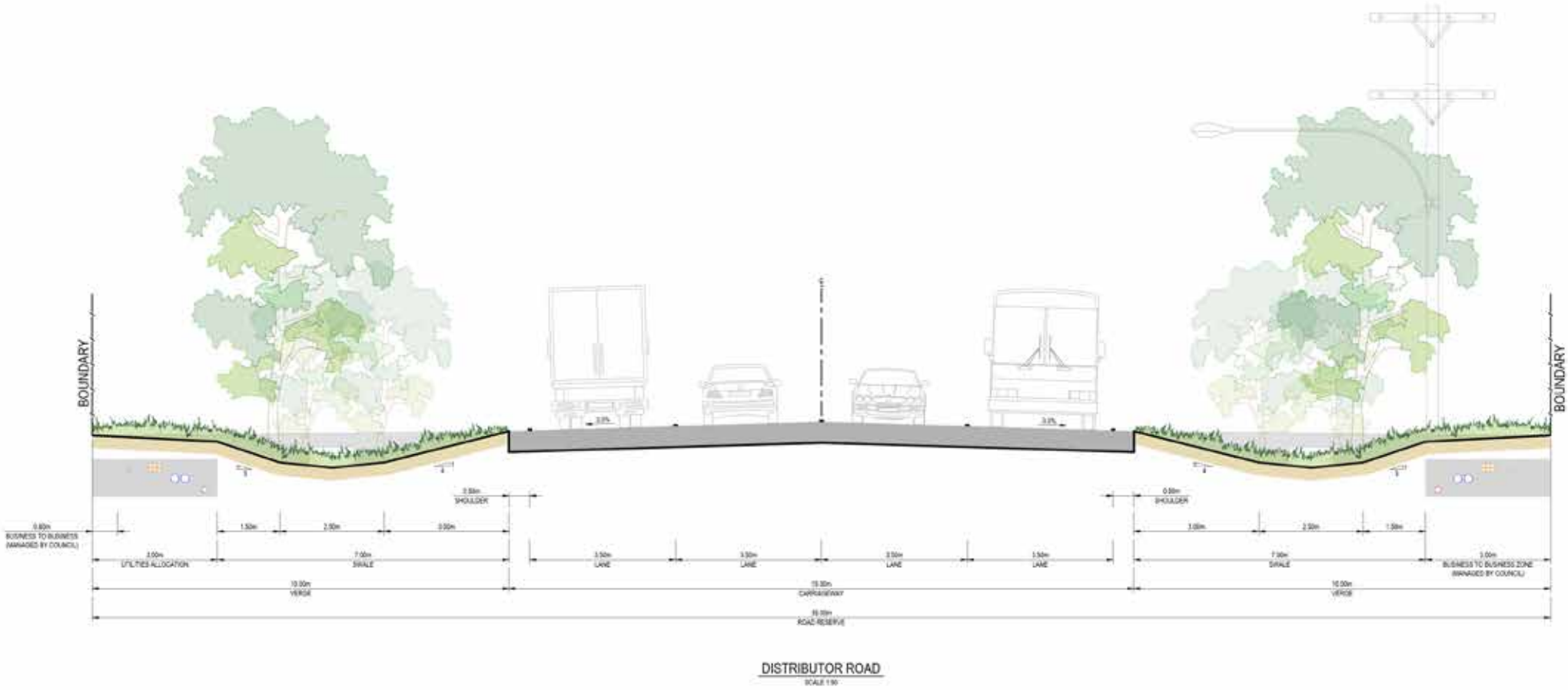
Table 4.1: Road standards of existing road network

Road name	Road classification	Target design speed (km/h)	Number of lanes	Widths			Kerb type
				Road reserve	Carriageway	Verge	
Bullus Drive	Local road	50	2	50 m	8m	10m, 6m	Table drain
Industrial Drive	Local road	50	2	20m	10m	5 m	Existing kerb and gutter
Burrington Road (west of MC08)	Road	50	2	100 m	7m	10m, 6m	Table drain
Tapscott Road	Collector	50	2	50m	9m	6m	Table drain

Table 4.2: Road standards for the new roads as part of the enabling road infrastructure.

Road name	Road classification	Target design speed (km/h)	Number of lanes	Widths			Kerb type
				Road reserve	Carriageway	Verge	
MC01	Distributor	80 -100	4	35m	15m	10m,10m	Table drain
MC02	Collector/HPV	50	2	35m	15m	10m,10m	Table drain
MC03	Collector/HPV	50	2	35m	15m	10m,10m	Table drain
MC04	Local	50	2	35m	15m	10m,10m	Table drain
MC07	Local	50	2	35m	15m	10m,10m	Table drain
MC08	Collector/HPV	60	2	35m	15m	10m,10m	Table drain
MC09	Rural	80	2	29m	9m	10m, 10m	-
MC11	Rural	80	2	29m	9m	10m, 10m	-
Ski Park Access Road	Rural	80	2	29m	9m	10m, 10m	-

Figure 10: Distributor road typical section



4.2.2 Rail and intermodals

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

- 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 and installations relating to rail infrastructure complies with the latest revision of the ARTC Engineering Standards and Australian Standards as relevant
- rail sidings and spurs to incorporate appropriate horizontal and vertical clearances for double-stacked freight trains along the alignment
- ensure for orderly and coordinated provision of rail infrastructure and associated facilities within the precinct.

4.2.3 Stormwater

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

Stormwater quantity

- the stormwater quantity strategy is shown conceptually in Figure 11
- stormwater infrastructure includes on-site management measures, along with precinct wide measures that form part of the broader stormwater and wugawa-flood management strategy for the precinct
- on site detention includes the provision of lot scale detention to maintain pre-development flowrates for all events up to and including the 1 per cent AEP event and regional detention basins that will account for the differential between the 1 per cent AEP and the 0.5 per cent AEP runoff
  Note: Where development is subsequent to and consistent with an approved subdivision which provides subregional stormwater detention infrastructure up to and including the 1 per cent AEP, site specific detention is not required
- no increase to peak discharges from overland flows or local stormwater runoff from the pre to post development case scenario
- longitudinal drainage swales (bioswales) are provided for the conveyance of stormwater along road alignments. Diversion swales are provided to direct runoff from the local catchments to the regional treatment and detention facility
- cross drainage culverts sized to provide a 0.5 per cent AEP wugawa-flood immunity at waterway crossings to minimise road access disruption within the precinct.

Stormwater quality

- the stormwater quality strategy is shown conceptually in Figure 12
- regional measures include the use of roadside drainage swales (bioswales), the provision of a large gross pollutant trap on the inlet to the regional basin (as a means of primary treatment) with a bioretention filter at the base of the regional detention basin to target finer sediment and nutrients
- proposed lot scale treatment includes rainwater tanks to capture roof runoff for landscape irrigation and internal re-use
- site runoff from certain industrial uses may need additional on-site treatment to achieve precinct water quality objectives
- impacts to groundwater resources will be managed by treating runoff from the developed catchments and, where relevant, site runoff from certain industrial sites may need additional on-site treatment to achieve precinct gali-water quality objectives. The volume of runoff that will ultimately infiltrate to groundwater is intended to be maintained as it is directed to the riparian corridors
- during construction, erosion and sediment controls will be required in accordance with guidelines such as Managing Urban Stormwater Soils and Construction - Volume 1 (Urban Development, Landcom, 2004), or 2A (Installation of Services, DECC, 2008a) or 2D (Main Roads, DECC, 2008b).

Figure 11:
Stormwater quantity strategy

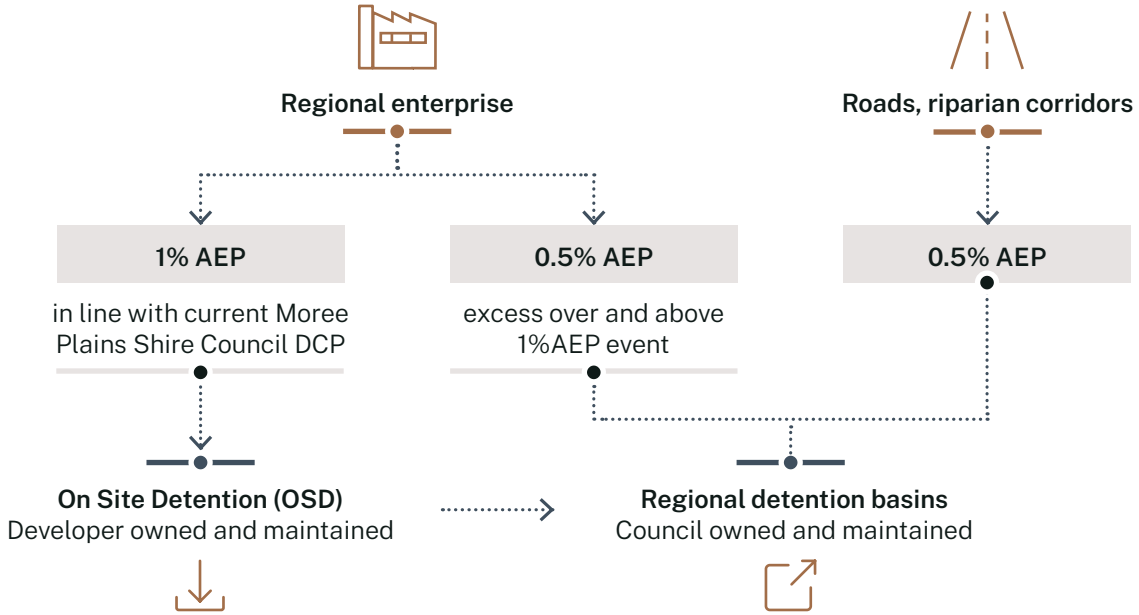
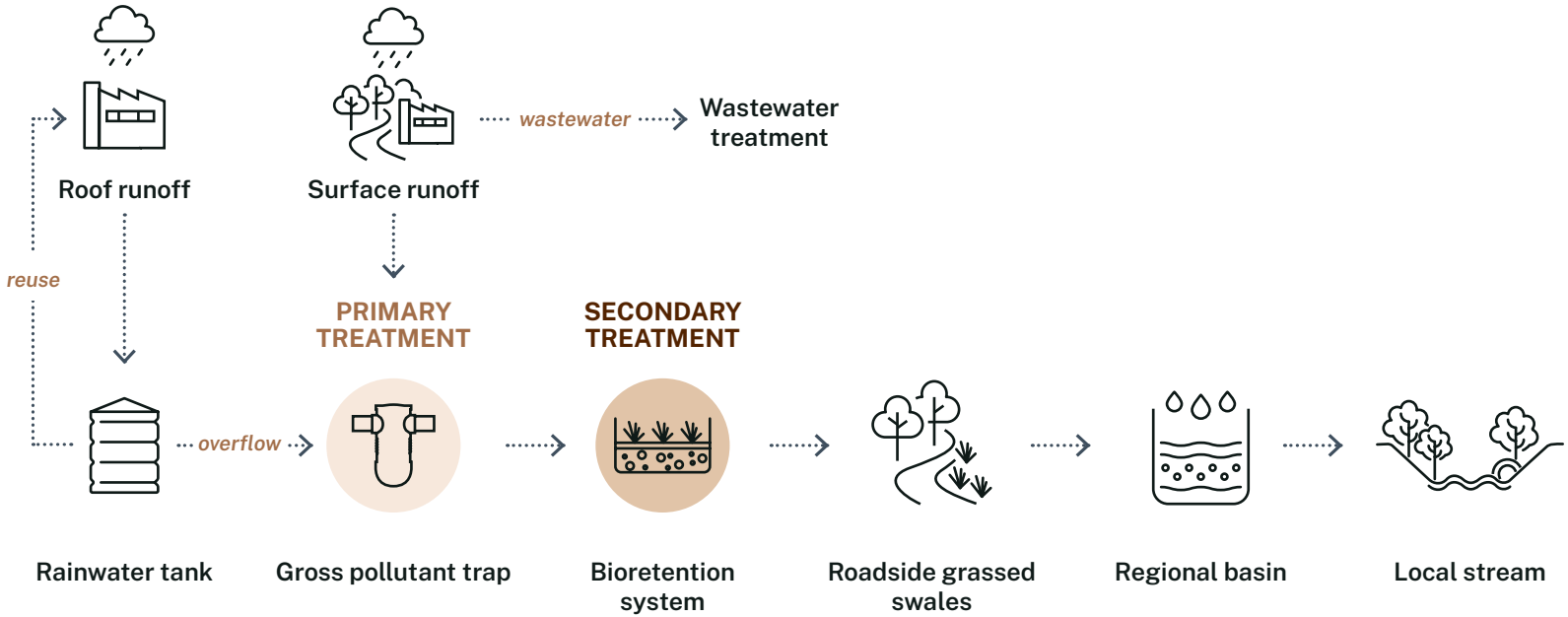


Figure 12:
Stormwater volume and quality strategy



4.2.4 Electrical

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

- supply will be provided from an existing Essential Energy 66/22 kV zone substation to the precinct. This substation is supplied from two 66 kV sub-transmission lines from the TransGrid Moree bulk supply substation (feeder numbers 721 and 722), each rated at 64MVA
- electrical transmission and distribution infrastructure to connect to these existing facilities will be provided by the corporation across the precinct to cater for the additional loads, which are estimated to be over 300 per cent of the existing load. The distribution service will be provided as either high voltage or low voltage services (e.g for street lighting)
- high voltage/low voltage utilities are to be designed in accordance with Australian and prevailing utility standards, noting that specific requirements for designs will be defined within information work packs issued by each utility prior to the commencement of detailed design
- services will be designed in accordance with the following Australian Standards (AS) relating to substation and overhead line design:
  - AS2067: Substations and High Voltage Installations
  - AS3000: Wiring Rules
  - AS/NZS7000: Overhead Line Design.

Existing overhead electricity network in the southern areas of the precinct
Courtesy of Rhelm

Existing overhead electricity network in the northern areas of the precinct
Courtesy of Rhelm

4.2.5 Lighting

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

- street lighting will be provided along the distributor road and local roads, along with all intersections
- street lighting will be provided to all shared use paths where standalone lighting is required
- smart lighting/sustainable lighting should be encouraged.

4.2.6 Gali-Water

Gali-Water supply in the Moree Special Activation Precinct will be based on the following principles:

- provision of gali-water to the precinct will initially be via an upgrade of the existing trunk gali-water main from Moree township (operated by Moree Plains Shire Council) and the existing reservoir at the southwestern corner of the existing industrial estate. From this upgraded line a series of new gali-water distribution lines will be installed in the road reserve and within the trunk utility corridor
- town gali-water is to be supplied to ANZECC drinking gali-water quality standards
- due to the flat topography of the precinct (and the region in general), town gali-water will be stored in new and upgraded dhawun-ground reservoirs
- new reservoirs proposed to be provided with associated booster pump stations, which will be sized to meet peak day demand (PDD) volumes and level of service pressure heads
- when demand increases, additional gali-water will be sourced from new deep wells extracting gali-water from the Great Artesian Basin (GAB) groundwater source. GAB gali-water is not deemed to be at drinking gali-water standard due to a high total dissolved solids (TDS) and high hardness content, resulting in the need for mixing with other gali-water sources. GAB is also hotter and requires cooling towers to reduce the temperature before it is distributed for use. GAB will be chlorinated and disinfected and mixed with town gali-water at appropriately located dhawun-ground reservoirs
- no new groundwater extraction from the Lower Gwydir Alluvium groundwater source is to occur for any purpose. This source is already fully allocated
- potable gali-water storage and reticulation is to be designed in accordance with national standard specifications defined by the Water Services Association (WSA) of Australia. When further details are required the following standards and guidelines should be used:
  - WSA 03-2011-3.1 Water Supply Code of Australia (Sydney Water Edition 2014)
  - WSA 02-2002-2.2 Sewage Code of Australia (Sydney Water Edition 1 version4)
  - WSA-04-2005-2.1 Sewage Pumping Stations
- PVC-M PN18 (for town) and DICL PN35 (for GAB sources) pipes to be provided for potable gali-water reticulation for all types of gali-water demand (potable, industrial, horticultural)
- fire flow requirements for a number of industries are significant and therefore these demands are proposed to be managed by each site owner/operator as required via fire tanks. Onsite tanks are to be filled from the potable supply and the onsite fire tanks to be sized to meet Australian Standards and Rural Fire Services (RFS) requirements.

Typical water reservoir found in Moree
Courtesy of Moree Plains Shire Council

4.2.7 Wastewater

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

- use of a gravity trunk network and maximise the areas serviced by gravity connections. Sewer pumping stations (submersible with wet well) are to be in the vicinity of new road intersections wherever possible and shall be wugawa-flood-proofed to the 0.2%AEP wugawa-flood level
- wastewater system will connect to the existing wastewater treatment plant (WWTP) in Moree (operated by Moree Plains Shire Council)
- alternately, a pressure sewer system may be delivered by the Corporation/ Council given the very low grades in the precinct
- key standards of design are:
  - gravity Mains no deeper than 10 metres
  - pump stations no deeper than 15 metres
  - allowance for septicity management as required using proposed sewer pumping station infrastructure i.e. chemical dosing, pump run times
- the Corporation will provide further trunk sewerage infrastructure developed in stages as growth occurs
- Sewer systems are to be designed in accordance with national standard specifications defined by the Water Services Association (WSA) of Australia. Where further details are required the following standards and guidelines should be used:
  - WSA 02-2002-2.2 Sewage Code of Australia (Sydney Water Edition 1 version 4)
  - WSA-04-2005-2.1 Sewage Pumping Stations
- discharge to the wastewater network will require a trade waste agreement with Moree Plains Shire Council
- onsite treatment is proposed for areas that are beyond the centralised sewer system collection zones and where the Equivalent Population (EP) on this site is expected to be low (less than 25). Specific design will be required and discharge will need to be limited given local soil conditions and facilities will require approval by Council.

4.2.8 Recycled gali-water

Recycled gali-water in the Moree Special Activation Precinct will be based on the following principles:

- where recycled gali-water is produced, it should meet the required quality for the intended end use
- where relevant, recycled customers will be responsible for building their recycled infrastructure connecting to the proposed trunk network
- recycled gali-water reticulation to be designed in accordance with WASA (Water Services Association of Australia) standards.

A centralised recycled gali-water plant is not currently anticipated for the precinct.

4.2.9 Biogas

Biogas in the Moree Special Activation Precinct will be based on the following principles:

- a space allocation has been provided within standard services allocations along all new roads for a future gas service if required. This allocation could support a potential biogas system if one was to be constructed. A future biogas facility could potentially be located near an electrical substation and would allow ready access to the Newell Highway via the proposed MIO as well as close proximity to the southern intermodal.
- any future gas network to be designed.

4.2.10 Telecommunications

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

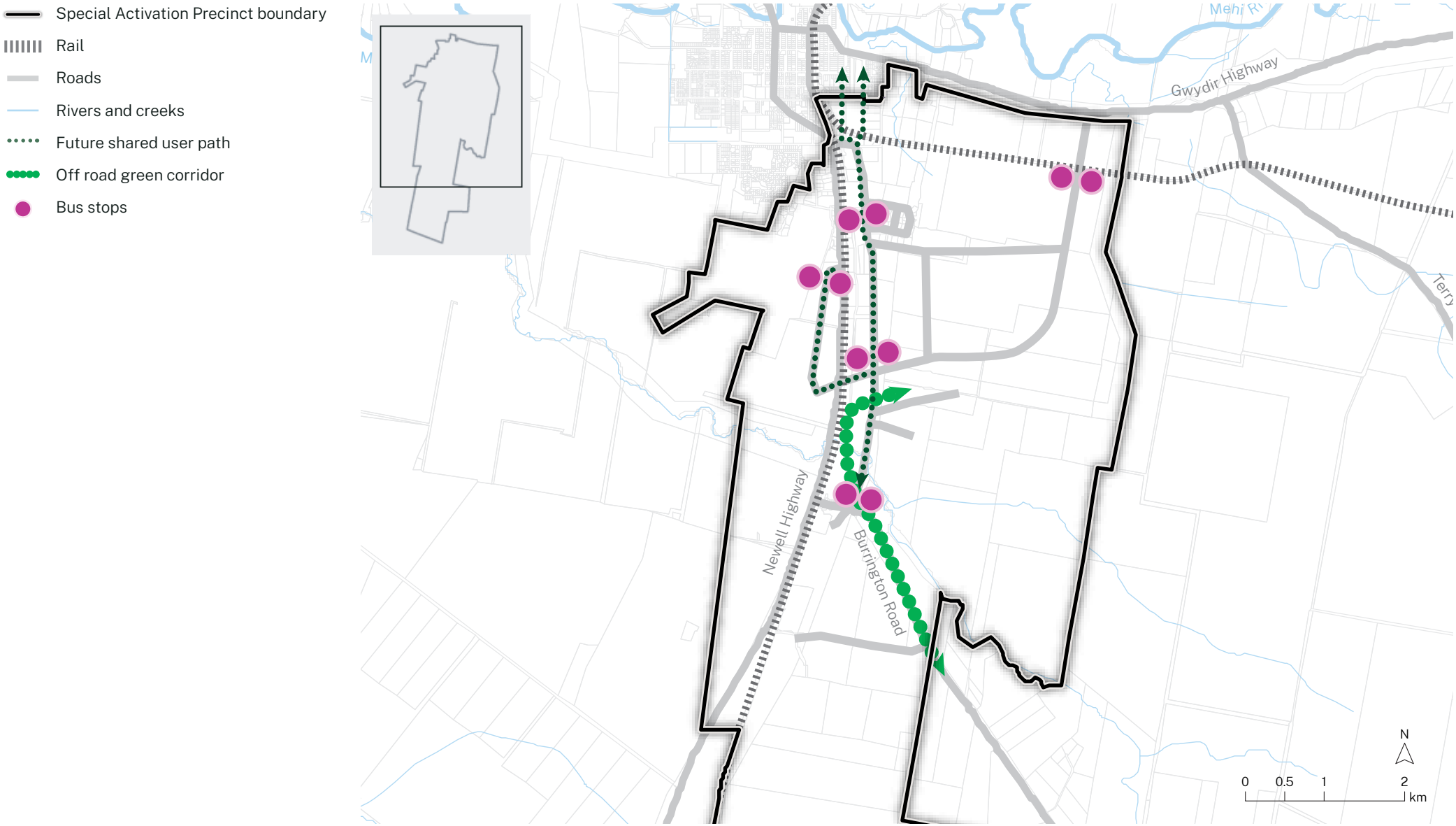
- conduits are to be installed within the trunk utility corridor and the road corridor to enable optic fibre installations (NBN)
- where appropriate, all infrastructure should be provided with digital connectivity access to allow for ease of performance monitoring and communication between networks to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

4.2.11 Active and public transport

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

- individual site layouts will provide clear lines of sight for entry points and public shared use paths
- roads designed to incorporate provision in the shoulder for shared user paths
- public transport stops will be integrated into road verges in appropriate locations to support the on-demand bus services
- active transport should be encouraged within the precinct and where this occurs in the future there is to be provision of end of trip facilities
- future commercial nodes are to provide bus route connections, which link efficiently with existing network and bus on demand services
- taxi zones/ride share are to be located at each future commercial node. A specific pick up and drop off zone should be easily visible and accessible for all users with appropriate signage and lighting provided
- future preservation of a ‘off road green corridor’ for recreational purposes such as off-road cycling, walking and bridle trails.

Figure 13: Active and public transport network



4.2.12 Utilities and services trunk corridor

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

- a north-south services corridor will be provided adjacent to the north south road off the distributor road to support new underground services required to activate the precinct including:
  - gali-water main
  - telecommunications
  - future services such as
    - recycled gali-water main
    - gas pipeline
    - hydrogen
    - unknown future pipes/ conduits
- the new underground services will be organised inside the services corridor in accordance with the NSW Streets Opening Coordination Council Guide 2018
- the services corridor will be approximately 10 metres in width and is to be accommodated adjacent to 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 dhulu-tree should be planted above the services corridor but may be in the vicinity, providing the appropriate authority's protection measurements for the assets that are implemented. If dhulu-trees are in the vicinity of services, root barriers are required to protect the asset as well as any extra protection deemed by the asset authority
- the design, operation, maintenance and protection of new utilities will be in accordance with the specifications of the different asset owners for the entire precinct
- every asset will have the required space as per the asset owner specifications and enough clearance from other services to protect and allow maintenance activities, as well as easy access for replacement, if required
- the sequencing and staging of the services will be as per the specification of the various asset owners, and in coordination with the overall construction program.

4.2.13 Other considerations

Other considerations should include:

Cost effectiveness

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

Future proofing

- infrastructure planning should accommodate the anticipated demand for each stage, without compromising future development potential, or significant capital investment costs for upgrading or replacing infrastructure ahead of its planned lifespan.

Infrastructure should be fit-for-purpose and provide value for money

infrastructure design should embrace innovation and future change, without introducing onerous construction and operation costs.

4.2.14 A collaborative approach

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

The corporation recommends that proponents collaborate in planning and designing of infrastructure with the ultimate asset owners. This will 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.

Cotton logistics

5

Subdivision design guidelines

Aerial of orange harvesting

5

These subdivision design guidelines outline the objectives for planning a subdivision within the precinct.

These subdivision design guidelines ensure ordered and timely subdivision within the precinct and infrastructure is planned, designed and implemented in advance of need.

These subdivision design guidelines provides the design objectives for subdivision within the precinct including design objectives for topography, environment, environmental hazards, design and landscaping, stormwater and drainage, accessibility and infrastructure and services.

Figure 14: Render view looking Northwest over the early stages of the Special Activation Precinct subdivision (illustrative built form only).

5.1 Planning your subdivision

This section provides the design objectives for planning your subdivision. This includes objectives for topography, environment, environmental hazards, design and landscaping, accessibility and infrastructure and services.

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

5.1.1 Topography

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

The Moree Special Activation Precinct is a flat and expansive site where the sky meets the productive landscape in every direction. Vertical variation is achieved through minimal established dhulu-trees and large buildings and silos on site or immediately surrounding that provide locational markers and legibility. Creeklines and the travelling stock route (TSR) intersect the flat lands and provide important traces on the otherwise consistent terrain.

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

Topography objectives

01 provide a framework that promotes agricultural and industrial clustering as well as service expansion for manufacturing, processing and packing facilities

02 sensitively integrate with creeks, drainage lines and waterways and maintain visual and physical connectivity wherever possible

03 ensure subdivision and street pattern considers appropriate location and land take for swales and minor earthworks to facilitate drainage.

5.1.2 Environment

Environmental values and constraints across the site include vegetation, biodiversity corridors, and cultural heritage, as shown in the Master Plan - Structure Plan. These values and constraints should be considered and either avoided or appropriately incorporated into the subdivision design.

Objectives

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

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

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

- retains in place and integrates scarred dhulu-trees, identified artefact sites and other Aboriginal cultural heritage places of importance within areas of environmental significance that are publicly accessible; and the TSR which is Crown Land
- considers the Gamilaroi/Gomeroi planning principles provided in the master plan and incorporates storytelling and memory, through means including interpretative signage.

O3 Seek to retain areas of high value biodiversity and integrate precinct biodiversity and green corridors, riparian corridors and strategic revegetation sites.

O4 Minimise the need for vegetation clearing within the private lot.

O5 Does not detrimentally impact the region's groundwater resources and groundwater dependent ecosystems.

5.1.3 Environmental hazards

This section applies to land on the Constraints Map 8.1 subject to environmental hazards and conditions of bushfire (as shown in the Moree Special Activation Precinct Master Plan – Bushfire Protection Measures map) and flooding (Wugawa-Flood Prone Land Map 8.5 which shows flood-prone land largely associated with the flooding of tributary creeks of the Mehi River, including Halls Creek and Clarkes Creek, where flooding can be widespread but relatively shallow) and areas of contaminated land recorded on the Moree Plains Shire Council's Contaminated Lands Register. The design and construction of a subdivision should recognise, and be designed within, the environmental hazards of the site.

Objectives

O1 Avoid increasing the risks associated with natural hazards including bush fire and flooding.

O2 Ensure subdivision for commercial or industrial purposes provides suitable building areas outside the 0.2% AEP event, referred to as the Flood Planning Area (FPA) (as shown in Wugawa-Flood Prone Land Map 8.5). Where subdivision is proposed within the extent of the FPA, a wugawa-flood impact assessment comparing wugawa-flood behaviour of the proposed development (including any landform change such as cut to fill earthworks, changes in surface conditions and proposed buildings), shows that:

- wugawa-flood function can be maintained
- there is no impact on adjacent properties and
- the finished floor level of any proposed building or operational area can be located above the 0.2% AEP wugawa-flood level.

O3 Subdivision layout does not result in isolation or create evacuation challenges for users when a natural hazard occurs. The issuing authority may require a site-based wugawa-flood emergency response plan for all development within the land affected by wugawa-flooding, being that land as shown as the extent of the Probable Maximum Flood, the Special Flood Considerations (SFC) area, prepared by a suitably qualified person.

O4 Minimise the risk to life, property and the environment in the event of a bush fire, including the lives of emergency services personnel and make adequate provision for access for emergency personnel, vehicles and equipment.

O5 Lot sizes and dimensions can accommodate development and minimise risk to life and property from environmental hazards, including bush fires. Each lot created contains a suitable area for the development, including an appropriate asset protection zone to protect the property from the threat of bush fire.

O6 Development on bush fire prone land to which these objectives apply comply with the requirements of:

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

O7 Recognise that land not classified as bush fire prone land or a bush fire hazard area may still be subject to the impact from adjacent bush fire prone land, particularly through radiant heat exposure and ember attack.

5.1.4 Design and landscaping

Subdivision design can influence the ability of future development, built form and productive landscape, to achieve the desired microclimate for optimum productivity. The orientation of lots can inform the preferred location of future buildings to maximise solar access, optimise access and parking arrangements, facilitate expansion and growth of services and strategically co-locate noise and odour to minimise conflict.

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

Objectives

O1 Create a range and mix of allotment sizes that respond to existing vegetation, waterways, and other landscape features including the TSR, cultural sites, fauna movement corridors, and important physical connections.

O2 Lot orientation, size and frontages should be suitable to accommodate gali-water and energy efficient development, setbacks, landscaping, storage space, vehicle access and manoeuvring and parking.

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

O4 Provide flexibility in lot access arrangements to facilitate specific industrial, agribusiness, crops and productive landscape growth requirements.

O5 Achieve good public domain outcomes through attractive and sufficient landscaping and emphasis on shade amenity, consistent with species lists included in Chapter 3 – Precinct revegetation strategy.

O6 Limit overall impervious areas to a maximum of 60% for commercial lots and 80% for industrial lots (calculations to be inclusive of all impervious areas, including internal roads). Where practical, integrate stormwater management systems within the design of landscaped areas.

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

Figure 15: Illustrative rendering of the revegetated riparian buffer to Clark's Creek and future development interface.

Case study:
Voyager Craft Malt in Barellan, NSW

Barellan is situated in the heart of the NSW grain belt in the Riverina and has a rich history of producing some of the finest malting barley in the world. In 2012, Voyager Craft Malt started producing a series of experimental malts from selected grains sourced from their farm and other growers in the region. Over the years this led to move to a neighbouring farm, which enabled a greater level of environmental sustainability through an onsite biochar facility and the reuse of irrigation gali-water.

The company continued to grow and by 2019 had outgrown the site, seeking further expansion a new greenfield site was developed with a custom designed state of the art on-farm malt processing facility, situated alongside a malt tourism destination complex.

Increasing capacity and providing an opportunity to showcase their product, educate visitors on the vital role that agriculture plays, and further promote and support the local community.

This development demonstrates the importance of land for business expansion and subdivision controls that streamline sale and development of adjoining land for related uses, and flexibility to allow for innovation and ongoing co-location of mutually benefiting businesses.

The Moree Special Activation Precinct endeavours to learn and leverage from examples like this by promoting opportunities to minimise waste, carbon footprint and facilitate local business expansion, jobs, and upskilling through circular economy initiatives. Facilitating the growth of primary industry and agriculture, and realising opportunities for manufacturing, processing, packing, and exporting to regional and international markets.

Whitten Malt House aerial

5.1.5 Stormwater and drainage

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

Objectives

O1 Provide stormwater detention facilities to capture rainwater and surface runoff to ensure post development flows do not exceed pre-development flows, for storm events up to and including the 1 in 100 AEP storm event with climate change.

O2 All new and existing roads have roadside swale drainage and where required an underground pipe system to carry gali-water to the discharge point for each lot. Drainage will also be required to collect drainage from higher lots and avoid uncontrolled discharge onto lower lying properties.

O3 Lots are designed to allow for appropriate stormwater conveyance by swale drainage and where required either kerb and gutter or trench drainage.

O4 Gali-Water sensitive urban design measures that also meet integrated gali-water cycle management objectives are incorporated to ensure the stormwater continues to flow to receiving waters in a sustainable fashion. The target is less than a 10% change in the modelled annual runoff from each site and in the aggregate in wet, dry and average rainfall conditions (being 90th percentile, 10th percentile and 50th percentile rainfall years for the nearest relevant rainfall gauge with at least 50 years of rainfall records).

O5 Gali-Water sensitive urban design measures that also meet integrated gali-water cycle management objectives are incorporated to ensure gali-water pollution is avoided and contribute to the following Moree Special Activation Precinct Master Plan precinct-wide pollution load reduction targets:

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

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

5.1.6 Accessibility

Good subdivision offers connectivity and has a legible hierarchy of roads and through routes whilst also providing a framework for functional drainage. The nature of the SAP will require the ongoing and increasing priority of large and heavy vehicles and freight movements within the internal street network. Additionally, the SAP should maintain and enhance connectivity with the Moree township and surrounding existing and future development areas. The SAP thoroughfare network, not limited to vehicular roads, should offer a choice of routes for pedestrians and vehicles, and integrate to adjoining streets, neighbourhoods and local facilities or shops. Public corridors including creeklines and vegetation can supplement the thoroughfare network in providing movement opportunities where possible and logical.

Objectives

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

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

O2 Provide logical and legible connection to Moree Town Centre, Council's Gateway (SAP Gateway North) and future residential to the northwest of the SAP.

O3 Use creek and public vegetation buffers and top of bank setbacks as opportunities to connect into regional systems and communities for habitat and pedestrians, also ensuring that public access is maintained to Moree Water Park

O4 Provide all lots with safe, legal and practical vehicle access and manoeuvring areas for the largest design vehicle anticipated to require access to the subdivision

O5 The use of well designed cul-de-sacs, consistent with performance criteria, should be considered to respond to site constraints, minimise unnecessary expanses of pavement where access is not required and optimise development and expansion areas.

O6 Services corridor must be easily accessible as required by Chapter 4 – Infrastructure.

O7 Integrate public transport stops at appropriate locations.

O8 Road reserves, road carriage way and road verges are sized and designed to the relevant road function in accordance with Chapter 4 – Infrastructure and "Guide for Traffic Generating Development", Roads and Traffic Authority of NSW, October 2002.

O9 Swales and grass are preferred within road verges in accordance with Chapter 3 – Precinct revegetation strategy.

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

- are native to the area
- have similar gali-water consumption and drought tolerance characteristics to the equivalent vegetation type and
- will not obstruct or impede large vehicle movements.

5.1.7 Infrastructure and services

The road network and a dedicated utility corridor forms the basis of infrastructure and services to connect subdivisions. Map 8.3 and 8.4 shows the location of infrastructure and services for complementary subdivision design.

Objectives

O1 Use of easements to:

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

O2 Services easements are to be provided on each lot to allow for the connection to the following services, as appropriate to the proposed development:

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

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

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

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

- gali-water
- wastewater
- electrical
- telecommunications.

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

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

O5 Stormwater infrastructure includes on-site measures for the management of stormwater quantity and quality that form part of the precinct stormwater strategy provided in Chapter 4 – Infrastructure.

O6 The location of infrastructure does not adversely impact other properties or public land.

6

Assessment criteria

Aerial of cattle in feedlot

6

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

The Moree Special Activation Precinct Master Plan identifies supporting principles that fall into six overarching themes that have been developed to guide the planning and preparation of the Delivery Plan – The Place, Connection to Country, Environment and Sustainability, Social and Community Infrastructure, Economy and Industry, and Infrastructure and Connectivity. Specific aims and performance criteria have been developed in response to the underlying technical evidence base to guide the development of the precinct.

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

1 The place

- Develop a sustainable enterprise precinct that respects the community and reflects the region's landscape and agricultural setting.
- Protect the amenity of nearby neighbourhoods.
- Provide for a range of land uses to accommodate new and emerging industries.
- Design a world-class sustainable Precinct that attracts investors, boosts the region's economy and improves the quality of life for the people of the Moree Shire.

2 Connection to Country

- Respect the Gamilaroi people's rights, obligations, roles and connections to Country as Traditional Custodians of the land and waterways by embedding Aboriginal cultural knowledge in the Precinct's delivery.
- Partner with Aboriginal stakeholders to increase employment and enterprise development opportunities for Aboriginal people.
- Recognise and support appropriate engagement and consultation with Aboriginal stakeholders and the Aboriginal community.

3 Environment and sustainability

- Protect, promote and enhance gali-water sources, including aquifers.
- Enable gali-water reuse and sustainable energy management as standard approaches across the precinct.
- Be carbon and climate neutral and protect biodiversity and environmental values within and surrounding the precinct.
- Incorporate gali-water, bio-energy and waste cycle management and ecologically sustainable development principles.
- Locate future development outside of wugawa-flood prone areas and drainage corridors.
- Establish benchmarks for businesses to achieve environmental management standards aligned with the International Organisation for Standardisation.

4 Social and community infrastructure

- Grow education and training opportunities across the precinct that align with the skills required by industries.
- Enable the precinct to become an innovation hub that encourages commercialisation and research and development.
- Increase job prospects and up-skill the local community through enhanced job opportunities.

5 Economy and industry

- Facilitate the streamlined establishment of new and emerging industries aligned with the agricultural industry in transport and logistics, circular economy, production and manufacturing.
- Support the establishment of circular economies through industry colocation opportunities, such as aquaculture and hydroponics.
- Attract exemplar businesses with corporate social responsibilities aligned to the vision and aspirations of the Precinct.

6 Infrastructure and connectivity

- Leverage transport connections, renewable energy, innovation and agricultural expertise for horticulture and diversified agricultural production.
- Design efficient transport routes that reduce traffic and travel times and increases road safety.
- Ensure the whole Precinct has access to appropriate utility and services (gali-water, sewer, stormwater, communications and digital connectivity) including the potential for district level energy and storage.
- Lead the implementation of smart technology within the Precinct (including ag-tech revolution).
- Build on and enhance connections to regional centres which provide strong value-add opportunities for yuul-food and fibre.

Performance-based planning approach

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

Performance criteria (column 1) sets the desired outcomes for the precinct in line with the guiding principles and long-term vision for the precinct. They are organised around the following sections:

6.1 Regional Enterprise Zone	6.1.1 Land uses	Provides the desired land use intent for particular areas of land within the Regional Enterprise Zone identified by the Moree Shire Special Activation Precinct Structure Plan.
	6.1.2 Controls that apply to all development	Provides the assessment criteria that apply to all development within the Regional Enterprise Zone including requirements for subdivision, various lot sizes, setbacks, building design, car parking and access, transport infrastructure and utilities, stormwater and groundwater, earthworks, landscaping, service and storage areas, and signage.
	6.1.3 Specific development requirements	Provides the assessment criteria for specific development within the precinct including rail and intermodal development and solar energy farms.
	6.1.4 Sustainability controls	Provides the assessment criteria for specific development within the precinct including rail and intermodal development and solar energy farms.
6.2 Rural Activity Zone	6.2.1 Controls that apply to development in rural areas	Provides the assessment criteria for development within the Rural Activity Zone.
	6.2.2 Specific development requirements for certain types of development in rural areas	Provides assessment criteria that apply to specific development and uses within the Rural Activity Zone.
	6.2.3 Business signage controls	Signage in the Rural Activity Zone should reflect the type of development in this zone and be consistent with the building and landscaping.
6.3 Precinct-wide	6.3.1 Environment	Provides the assessment criteria related to protecting the rural landscape character, protecting groundwater and enhancing land with high biodiversity values, and protecting cultural heritage places, sites and objects.
	6.3.2 Environmental hazards	Provides the assessment criteria that applies to land subject to environmental hazards including flooding, bushfire and contaminated land.
	6.3.3 Environmental impact management	Provides the assessment criteria for development that may have an environmental impact, be hazardous or offensive, requires an environment protection licence or may emit noise, odour and substances into the air.
6.4 Savings and transitional provisions	6.4.1 Existing and transitional land uses	Provides the assessment criteria for existing buildings and land uses.

Acceptable solutions for achieving the performance criteria are provided in Column A. There may be more than one way of achieving the performance criteria. Where an alternate solution is proposed, column B (referred to as merit assessment) provides the merit objectives which must be met.

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

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

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

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

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

6.1 Regional Enterprise Zone

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

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

6.1.1 Land uses

The Precincts-Regional SEPP provides the land use table and objectives for each zone within the precinct including the:

- Regional Enterprise Zone
- Rural Activity Zone
- SP1 Special Activities Zone
- SP2 Infrastructure Zone.

The Moree Special Activation Precinct Structure Plan which is provided in the master plan sets out the long-term strategic planning intent for the precinct and identifies particular areas of land within the Regional Enterprise Zone for example, where particular types of industrial development and other key features such as Moree Airport, proposed intermodal sites, proposed east west connector and special purpose infrastructure.

This section sets out the desired land use areas identified by the Moree Special Activation Precinct Structure Plan.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Regional Enterprise Zone			
PC1 Development within the Regional Enterprise Zone is compatible with the future envisaged industrial development within the zone, and focused on: a. enabling economic development through circular economy industry clusters b. establishing export-orientated businesses and regionally relevant Industries c. generating employment opportunities. Note: optimising land uses and minimising the risk of conflict associated with incompatible land uses and the sterilisation of land.	**A1.1** Demonstrate economic and employment benefits, and alignment with relevant policy (including but not limited to): a. NSW Regional Development Framework b. Moree Shire Council Workforce Attraction and Retention Strategy. **A1.2** Consultation with Safe Work NSW, Fire and Rescue NSW, the Department of Planning and Environment's Industry Assessments and the EPA is undertaken for: a. hydrogen development; and b. other renewable energy opportunities where required. Note: The master plan provides that hydrogen development will be a permissible land use within the Regional Enterprise Zone. This includes production, storage and refuelling activities. Note: for developments that include solar energy generating facilities, waste and resource recovery facilities, dangerous goods and large isolated buildings to ensure agencies can implement effective and appropriate risk control measures.	Not applicable	**U1.1** Sensitive land uses (such as centre-based child care facilities) that would compromise existing or future envisaged industrial development. **U1.2** Sterilising of developable land, as well as isolating creeklines where maintenance and/or management will degrade the natural characteristics.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Rail and Intermodal			
PC2 Intermodal terminals are protected to promote a freight and logistics industry cluster including an intermodal terminal that allows the transfer of containers between road and rail, provides complementary and adjacent industrial development including warehousing and transport businesses and rail siding.	**A2.1** Land identified for rail and intermodal or future expansion of rail-sidings is for transport related facilities and industries requiring access or proximity to the railway. Generally, these areas are required for activities such as: • loading and unloading of freight and containers • storage and repair of containers • servicing of and repairs to locomotives and rolling stock • warehousing • heavy vehicle servicing and parking • transport and rail-dependent industries.	Not applicable	**U2.1** Land uses that could otherwise be established outside of future expansion of rail-siding infrastructure area, particularly where there is land and infrastructure capacity **U2.2** Land uses and buildings that would prevent the 24 hour operation of rail and road freight movements and transfer activities **U2.3** Development that prevents or impacts the continuous movement of freight along rail corridors in the precinct.
Moree Airport			
PC3 Moree Regional Airport operations are protected.	**A3.1** Development achieves compliance with Moree Airport requirements by responding to the National Airports Safeguarding Framework (NASAG Framework) and obtain concurrence as required.	Not applicable	Not applicable.

6.1.2 Controls that apply to all development

This section provides the assessment criteria that applies to all development within the Regional Enterprise Zone.

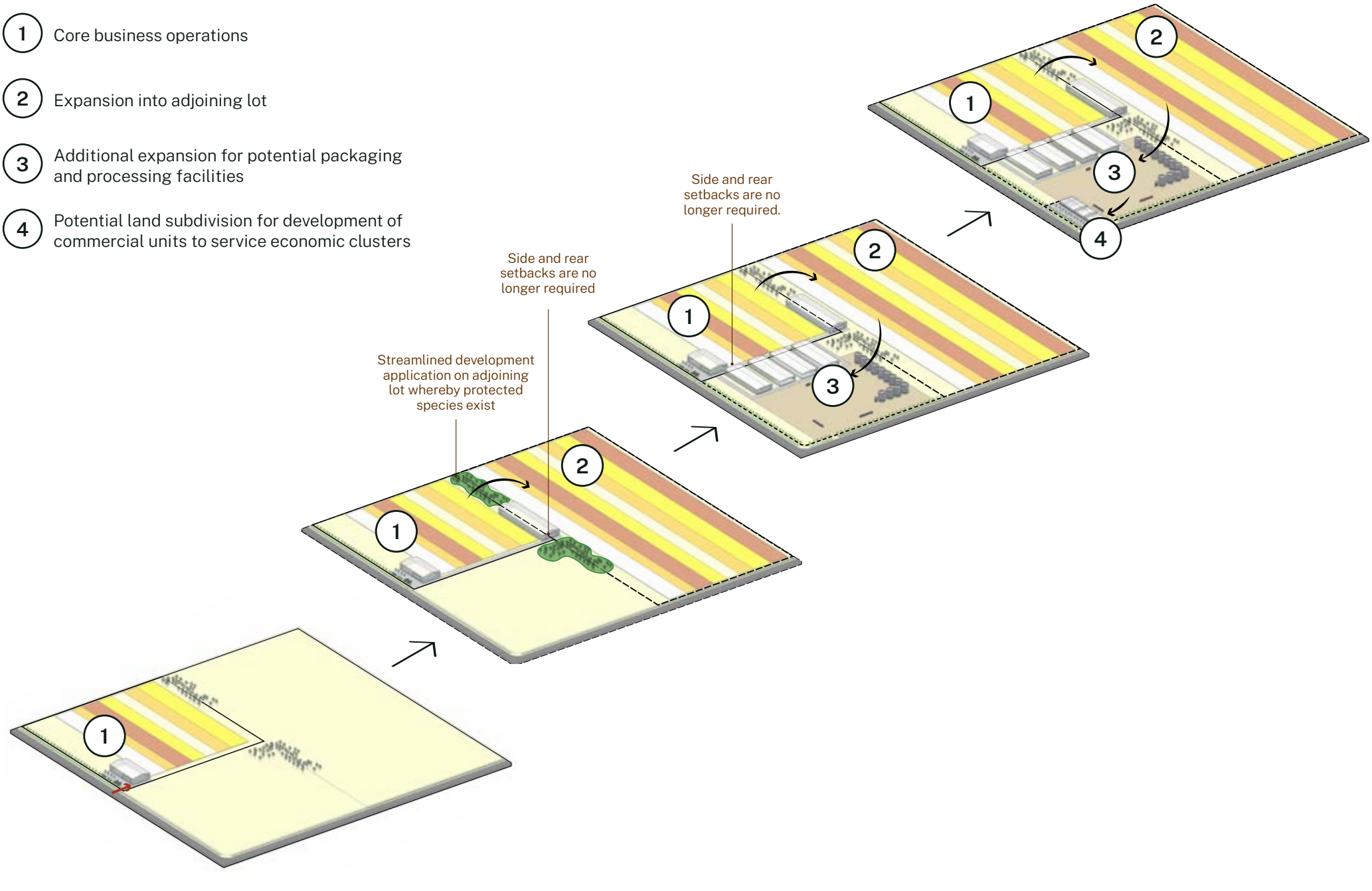
6.1.2.1 Subdivision

Subdivision guidance relates to the boundary creation and management of private lots as well as the relationship to the public domain and appropriate access arrangements. Subdivision criteria can contribute to investment attraction and streamlined development by ensuring that expansion opportunities are future–proofed and that land is not sterilised or overly onerous to develop.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
General			
PC4 Ensure that subdivision of a site results in optimum lot size and configuration to create consistent quality of streetscape presentation or adequate vehicle access, manoeuvrability and parking and provision for wugawa-flood and stormwater quality management. Note: Buffers and natural features are to be maintained through stewardship.	**A4.1** Lots that adjoin creeks, riparian corridors or other undevelopable land will be created to include and manage these assets rather than created isolated and/or inaccessible pockets. **A4.2** Public easements will be provided across any private lots that contain creeks, riparian corridors and/or the Moree Water Park considering: • appropriate lighting and direct access for safety • allowance for utility and stormwater easements and maintenance • appropriate lighting and direct access for safety.	**B4.1** Lots are sited and designed to enable retention of, and public access to, natural features of the site.	**U4.1** Isolated pockets of undevelopable land. **U4.2** Privatised open space or buffers. **U4.3** Subdivision of land that restricts/ prevents upstream development due to the absence of appropriate easements.
Expansion of existing operations			
PC5 Facilitate the expansion of existing development requiring adjoining lots in a manner that is financially viable and not prohibitive.	**A5.1** Side and rear setbacks are not applicable where an adjoining lot is developed for the purpose of expanding an existing business (this includes expansion associated with new services associated with an existing business such as processing etc).	Not applicable	**U5.1** Subdivision that results in isolated lots and/or limits the expansion of existing businesses.

Figure 16: Diagram sequence illustrating an example of how the Delivery Plan can assist in streamlined core operation expansion.

1. Core business operations
2. Expansion into adjoining lot
3. Additional expansion for potential packaging and processing facilities
4. Potential land subdivision for development of commercial units to service economic clusters



6.1.2.2 Development on various lot sizes

Development guidance relates to the lot boundary delineation, amenity, and privacy between a range of small, medium and large precinct lots. As well as, providing frontage widths, setbacks and spacing between lots.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
General			
PC6 Lot boundary delineation, amenity and privacy between lots.	**A6.1** A minimum 3 metre width of landscaping: a. is provided from front boundary; and b. comprises locally sourced, minimum 75L sized native dhulu-trees in accordance with AS2303:2018, with middle level strata shrubs native to the area in accordance with Section 3.4 – Planting palettes between the dhulu-trees. **A6.2** Buildings are set back a minimum 6 metres from the edge of the riparian corridor, creeklines and/or TSR.	**B6.1** Boundary planting may not be required if: a. existing/remnant vegetation exists b. high quality fencing is constructed consistent with PC34 fencing c. the side or rear boundary adjoins the creekline or TSR.	Not applicable
Small lots (less than 5 hectares)			
PC7 Frontage widths and side and rear setbacks provide appropriate spacing between lots.	**A7.1** A minimum 5 metre setback is provided to side and rear boundaries. **A7.2** A minimum frontage of 60 metres.	**B7.1** Reduced setbacks may be considered where good public domain outcomes are achieved through the provision of landscaping in accordance with Chapter 2 – Precinct design principles. **B7.2** Frontage width may be reduced to create optimum solar orientation.	**U7.1** Development resulting in a series of long, skinny lots where the majority of the street frontage is used for driveway/access with no space for dhulu-trees planting and/or public domain improvements.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Medium lots (5-10 hectare)			
PC8 Frontage widths and side and rear setbacks provide appropriate spacing between lots.	**A8.1** A minimum 9 metre setback is provided to side and rear boundaries. **A8.2** A minimum frontage of 100 metres.	**B8.1** Reduced setbacks may be considered where good public domain outcomes are achieved through the provision of landscaping in accordance with Chapter 2 – Precinct design principles. **B8.2** Frontage width may be reduced to create optimum solar orientation.	**U8.1** Development resulting in a series of long, skinny lots where the majority of the street frontage is used for driveway/access with no space for dhulu-trees planting and/or public domain improvements.
Large Lots (10 hectares and greater)			
PC9 Side and rear setbacks provide appropriate spacing between lots.	**A9.1** A minimum 9 metre setback is provided to side and rear boundaries. **A9.2** Access driveways and parking can be accommodated within side and rear setbacks where adjoining a compliment.	**B9.1** Reduced setbacks may be considered where good public domain outcomes are achieved through the provision of landscaping in accordance with Chapter 2 – Precinct design principles.	Not applicable.

6.1.2.3 Setbacks

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

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Setbacks			
PC10 Development contributes to good public domain outcomes by providing suitable setbacks from the street, creeklines and TSR.	**A10.1** Buildings are set back a minimum 9 metres from the edge of the road reserve for a local road and 20 metres from the edge of the road reserve from a Distributor Road. **A10.2** For sites that have a side or rear boundary fronting a local road, buildings should not be positioned more than 3 metres from any site boundary. **A10.3** Buildings are set back a minimum 6 metres from the edge of the riparian corridor, creeklines and/or TSR and include bushfire setbacks/buffers.	**B10.1** Reduced setbacks may be considered where good public domain outcomes are achieved in accordance with Chapter 2 – Precinct design principles and screen planting in accordance with Chapter 3 – Landscaping.	**U10.1** Development hard up against riparian corridor, regional stormwater basin or TSR compromising open space function, wugawa-flood conveyance, bank stability or future ability to provide access to and/or along the corridors.

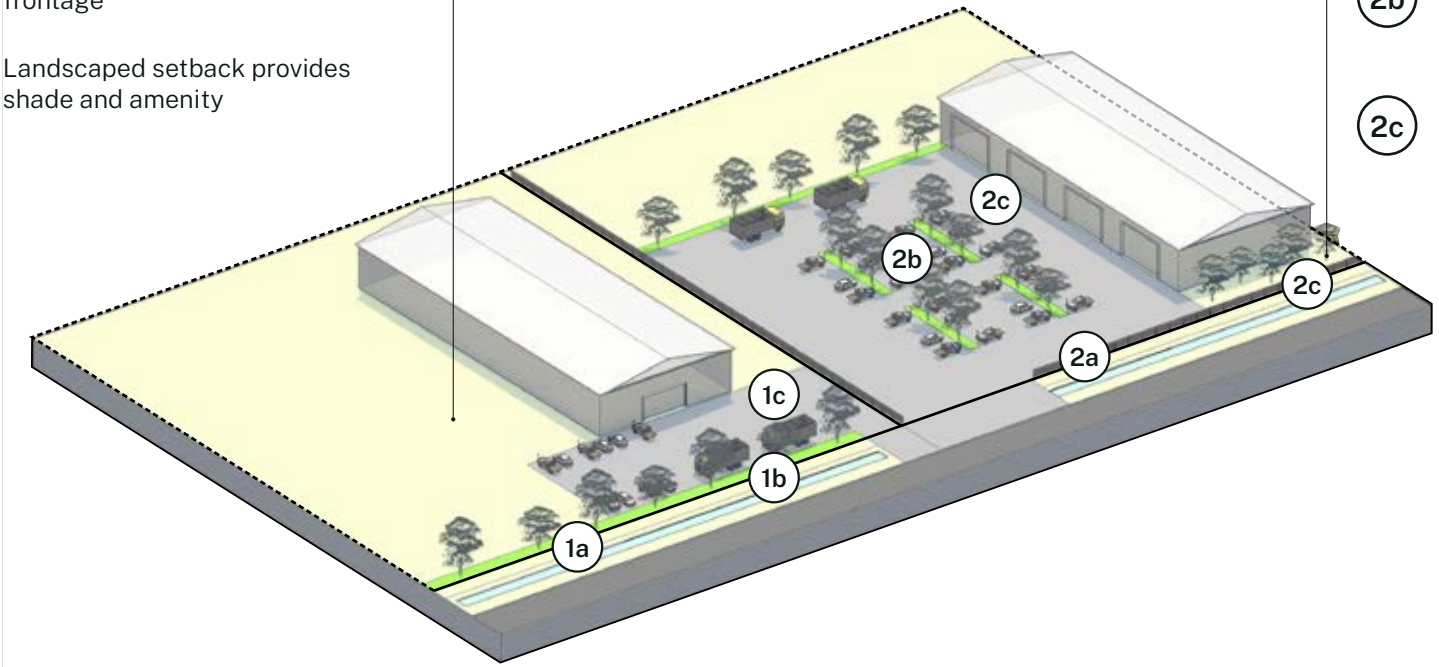
Figure 17: Diagram illustrating performance criteria-compliant frontage including landscape setback zone as well as an acceptable solution where operations require a merit-based alternative that can still achieve a quality public domain interface.

1 **Compliance with the performance criteria for setback and landscaping will be achievable for most site operations**

1a Visible front carpark with direct access for visitors, workers and customers

1b Three metre landscaped setback delineates lot boundary and street frontage

1c Landscaped setback provides shade and amenity



2 **A range of merit based solutions may be acceptable where site operations require an alternative design.**

2a Larger side car park responds to differing operational needs while maintaining visibility, legibility and convenient access for all

2b Hardwood post and rail fencing delineates boundary and street frontage

2c Landscaping is provided between building and street where no access is required as well as being integrated into the carpark layout to provide needed amenity and shading

6.1.2.4 Building design

The ultimate public and private realm development within the Moree Special Activation Precinct should embody the guiding principles and vision for the precinct. Development form should reflect the Moree industrial and rural character and relate to the primary function of the business whilst focusing on a high level of environmental and design performance. A form-based and future-proofed subdivision will provide a framework for practical and innovative buildings. Buildings and siting design that promotes and facilitates growth and expansion of businesses in a logical and cost effective manner will define that precinct as dynamic and robust in terms of market responsiveness, ability to readily deliver circular economy principles and setting a benchmark for innovative expansion of core services.

It is critical that the building design is integrated with the existing and proposed landscape, contributing to an attractive microclimate for visitors and workers and providing precinct-wide legibility.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Building performance			
PC11 Buildings are: a. oriented to accommodate energy efficient development to take advantage of solar orientation in gaining thermal efficiencies and avoiding western facade orientation b. incorporates natural ventilation as the primary measure for cooling buildings and reducing thermal loads c. maximises natural daylight d. to have a high quality appearance, reflect the function and not obstruct the visibility of neighbouring buildings to achieve their purpose e. has a roof design to maximise capture and storage of roof runoff f. clustered to promote shared benefits associated with the inland rail and Newell Highway	**A11.1** Facades are to be composed with an appropriate scale, vertical articulation and proportion responding to the building's context and use. **A11.2** Vertical farms are oriented to optimize natural light specific to growing requirements. **A11.3** Buildings are designed to maximise the north and south exposure. **A11.4** Buildings are designed to minimise east and west facing orientation or provide adequate shading. **A11.5** Glazing is provided to northern sides to benefit from winter solar access, particularly for offices and other parts of buildings where people work and inhabit. **A11.6** Buildings are orientated to maximise natural cross flow ventilation and incorporate adequate openings.	**B11.1** Building design considers natural climate control design elements to improve building energy efficiencies, natural ventilation and maximise natural daylight in accordance with Chapter 2 – Precinct design principles. **B11.2** Articulation is achieved through change of colour and materials. **B11.3** Where business function limits the ability for the building to be articulated. **B11.4** Where the intent for the primary building to be expanded in the future requires blank or unarticulated walls.	**U11.1** Buildings overshadowing planned/existing vertical farms compromising growth potential.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC11 Continued g. clustered to promote businesses with a common need and attraction to high quality black soils; promoting shared infrastructure and local gali-water resources h. designed to promote expansion from initial agricultural and industrial operations into manufacturing, processing and packing.	**A11.7** Natural daylight is maximised to workspaces and areas people inhabit by incorporating skylights, courtyards, light wells or roof lighting strips to all warehouse and process/manufacturing areas. **A11.8** Roof design and orientation facilitates capture, storage and on-site re-use of roof runoff.		

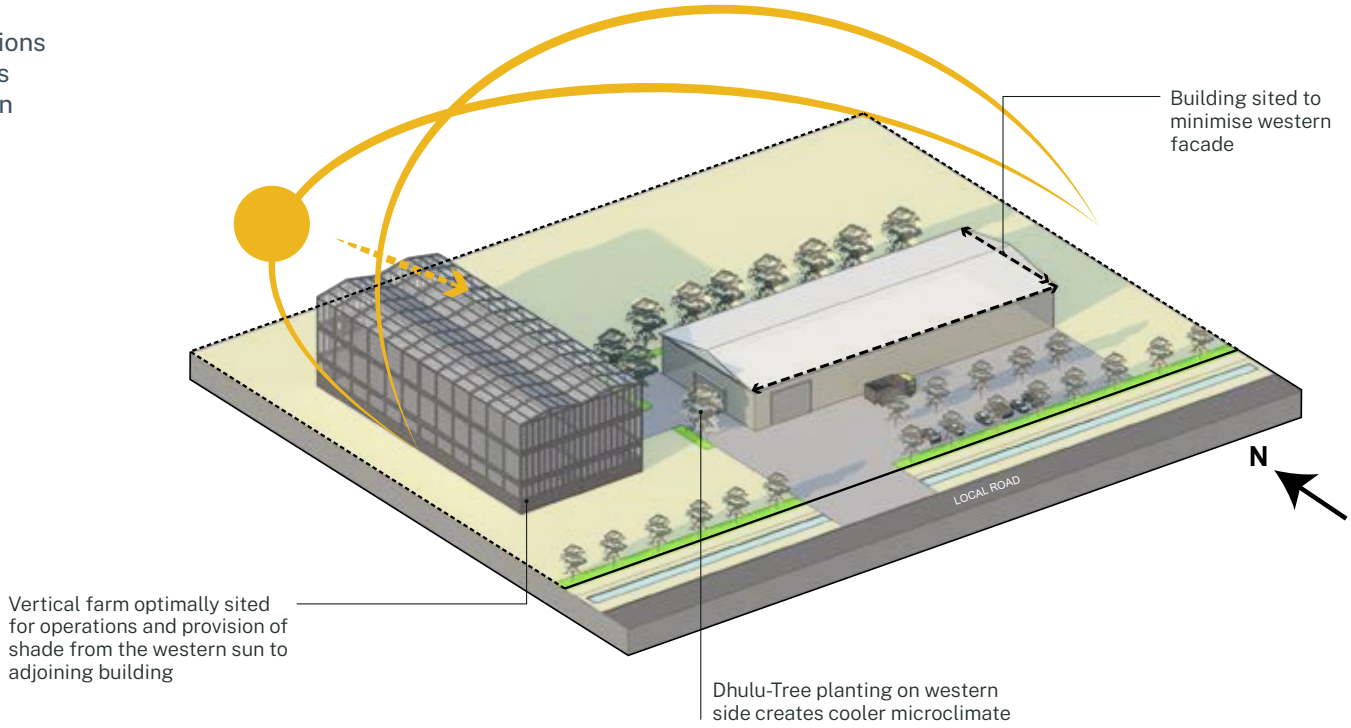


Figure 18: Diagram illustrating siting considerations that optimise sunlight for greenhouse operations whilst also providing protection from the western sun for worker facilities.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Building size, footprint and layout			
PC12 Building size, footprint and layout is functional and responds to the function and needs of the industry, user and existing and future operations.	**A12.1** Building layout provided is clear and legible from the street and any other public corridors. **A12.2** Clear delineation of customer and back-of-house facilities. **A12.3** Layout demonstrates how expansion may occur and ensures that neighbouring expansion is not impacted. **A12.4** Adequate separation between hazardous and non-hazardous uses/facilities. **A12.5** Building layout and design enhances crime prevention through passive and active surveillance achieved through: a. passive surveillance of street and public areas b. visibility of parking areas from adjacent properties and the public street c. building design which limits the ability for unauthorized entry d. clear demarcation between the public and private realm e. eliminating public areas with minimal or no surveillance f. building design and site layout which avoids entrapment areas. **A12.6** Building siting that considers the surrounding levels and minimises earthworks operations.	**B12.1** Buildings are designed through careful building placement, design, access and landscaping, in accordance with Chapter 2 – Precinct design principles. **B12.2** Mitigation of western sun through demonstrated landscape screening/shading plan.	**U12.1** Buildings located in wugawa-flood-prone areas that will adversely impact on flooding (for example, buildings compromising flood function, such as floodways). **U12.2** Buildings located in wugawa-flood prone areas that are not compatible with the wugawa-flood risk (i.e. hazardous uses or facilities). **U12.3** Building footprint sizes that result in an exceedance of overall impervious area.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Facades and main entrance			
PC13 Buildings: a. address the street with clear views to the main entrance b. express the intended function of the development.	**A13.1** The primary street frontage incorporates: a. the main building entry b. simple and bold elements and an easy to see entrance for all users c. direct access from on-site car parking for visitors, workers and customers d. access to end-of-trip facilities and amenities e. business signage and wayfinding signage into the main building entry. **A13.2** The main building entry is designed as a focus point and includes glazing to at least 50 per cent of the main office building entry. **A13.3** Glazing is shaded by awnings or building elements to avoid reflection. **A13.4** Colour palettes involve a range of subtle and natural colour tones and use local materials wherever possible: a. highlight colours used in strategic locations b. the balance of the precinct should use primary colours that are lighter in shade to increase both colour longevity, urban cooling and energy efficiency. Light colours such as cream shades are encouraged, including cooling colours such as light blues and greens c. bold colours to be used to draw attention to entrances, safe areas and/or no-go areas	**B13.1** Facades along the primary street frontage: a. express the intended function of the building and its component uses b. present a resolved form and design and represent the uses in each part of the building c. form a coherent whole as part of a complex of buildings d. include identifiable entrances that are scaled appropriately e. include external shading and passive design features with a distinct function integrated within the building façade vernacular f. provide interest to the building design and contribute to an attractive precinct g. contribute to breaking down the scale and massing of building forms when viewed from streets and other public areas.	**U13.1** Dark colours such as charcoal are not supported based on the temperature impacts of the local Moree climate and environment.

Figure 19: This industrial yuul-food processing factory in Seven Hills, NSW provides appropriate colour and form articulation as well as a landscape threshold between the driveway/carpark of a small industry and/or commercial unit building typology.

Figure 20: This agribusiness demonstrates best practice siting to balance operations functions, expansion, freight and a safe, legible layout whereby the user conflict is minimised and there is a clear and legible entry for customers, workers and servicing.

6.1.2.5 Car parking and access

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

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

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

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

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Car parking and access			
Note: The issuing authority may require a traffic and parking study prepared by a suitably qualified person.			
PC14 Ensure the safe and efficient movement of vehicles entering and exiting the development without adversely affecting the existing and future service and safety levels of the road.	**A14.1** Provide suitable staff, visitor and service access/es to the site. **A14.2** Ensure vehicular access/es have a suitable separation distance to all other access drives (including those on adjacent properties) and do not adversely impact on the safety and efficiency of the surrounding road network. **A14.3** Heavy vehicle access separated from general traffic access and circulation roads. **A14.4** Ensure the primary vehicle access provides access to the main visitor car park and the main building/s. **A14.5** Design for the maximum design vehicle expected to access the site. **A14.6** Design all vehicle accesses in accordance with the relevant Council standards and guidelines and Australian Standards 2890.1:2004 and 2890.2:2018 **A14.7** All vehicles must enter and exit the development site in a forward direction.	Not applicable	Not applicable

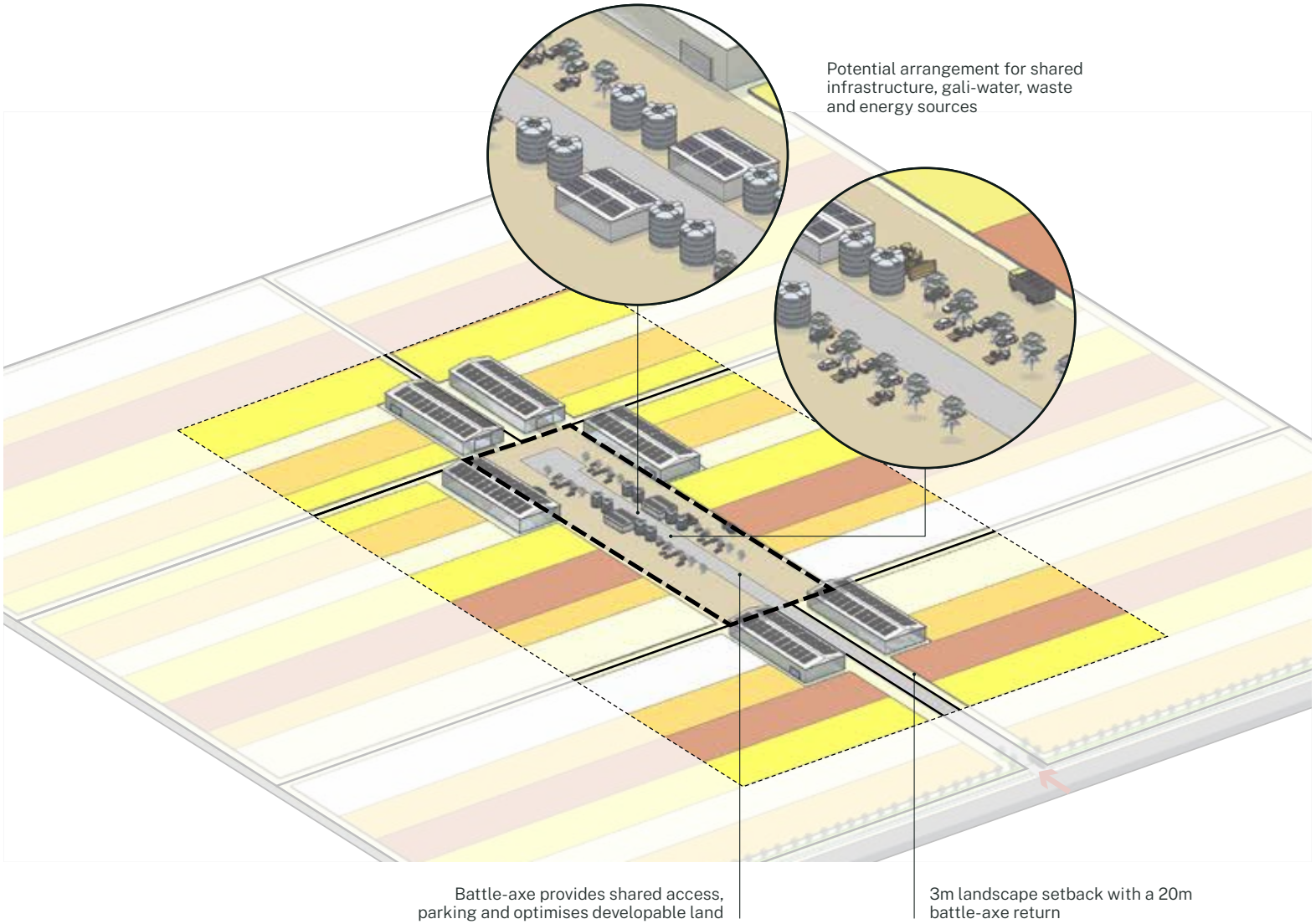
Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC14 Continued	**A14.8** Battle-axe arrangements or shared driveways are acceptable **A14.9** Cul de sacs are acceptable solutions if development ensures: a. turning circles are adequate for AB Triples b. sufficient vehicle passing and traffic distribution is demonstrated c. a public easement/shared or pedestrian path is provided as an extension of the cul de sac to provide an overall connected thoroughfare network 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.		
PC15 Vehicular access is compatible with the surrounding road network.	**A15.1** 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.	**B15.1** Vehicular access is designed to ensure that development does not compromise the effective, and ongoing operation and function of any adjoining classified roads. **B15.2** Development is designed to consolidate the access of multiple tenancies or lots to reduce the number of accesses to any classified road. Note: Where access is proposed from a classified road it is recommended that in principal support for the development be obtained from TfNSW prior to the lodgement of an application for an Activation Precinct Certificate. Issue of an Activation Precinct Certificate does not guarantee approval under section 138 of the *Roads Act 1993* for any proposed vehicular access to a classified road.	**U15.1** Vehicular access designed such that the safety, efficiency and ongoing operation of the classified road is adversely affected. **U15.2** Multiple, single service access drives to a classified road. **U15.3** Access from a classified road where suitable access is available from a local or unclassified road.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC16 Adequate light vehicle parking is provided on site that is safe and conveniently integrated within the site.	**A16.1** Visitor car parks for light vehicles are located next to the main building entry. **A16.2** Movement of pedestrians throughout the light vehicle car park is clearly delineated and visible for all users of the car park to minimise conflict with vehicles. **A16.3** Light vehicle parking is provided at a rate applicable to the proposed use or uses on the land, as contained within the RTA Guide to Traffic Generating Developments, 2002. **A16.4** 5% of the light vehicle car parks are designed, constructed and wired to be 'electric vehicle ready' level 2 car charger in convenient and visible locations. **A16.5** All car parking, access and manoeuvring areas, and internal roadways are designed in accordance with Australian Standard 2890.1:2004 and Australian Standard 1428.1:2021. **A16.6** Car parking spaces for people with a disability are provided in accordance with the Access to Premises Standards, the Building Code of Australia and Australian Standard 2890.6:2009. **A16.7** Light vehicle car parking is constructed of asphalt or concrete with parking bays and circulation aisles clearly delineated. **A16.8** Design of the car park ensures that passive surveillance is possible and, where appropriate, incorporate active measures such as cameras and security patrols. **A16.9** Where car/light vehicle parking is proposed in a H2 and above wugawa-flood hazard area, provision of bollards to prevent vehicles floating off-site in a flood wugawa-flood up to the Probable Maximum Flood.	**B16.1** Light vehicle/car parks are designed: a. having regard to the activities proposed on the land and the intensity of the use b. in accordance with the Australian Standards for efficient and safe vehicle circulation and parking c. to provide adequate space for parking and manoeuvring of vehicles (including bicycles) d. to reduce pedestrian and vehicle conflicts e. to be safe and conveniently integrated within the site; and f. to minimise the visual impact of on-site parking through landscaping. **B16.2** A reduced rate of parking (including a reduced rate of electric vehicle parking) may be appropriate if it can be demonstrated that: a. the development has operational management or specific activities that warrant a reduced demand or b. the development has formal access to car parking in other locations.	**U16.1** Development that does not provide adequate parking. **U16.2** Large, uninterrupted areas of car parking visible from streets without any landscaping.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC16 Continued		**B16.3** Where parking rates are not defined by the RTA Guide to Traffic Generating Developments, 2002 the proposed parking rate shall be supported by parking surveys of similar land uses or if a unique development based on a first principles approach. Note: The issuing authority may require a traffic and parking study to be prepared by a suitably qualified person to demonstrate the reduced rate of parking is appropriate.	
PC17 Development provides adequate space for parking and manoeuvring of service and heavy vehicles.	**A17.1** Heavy vehicle and trailer parking is provided separately to light vehicle/car parking. **A17.2** On-site loading facilities are provided to accommodate the anticipated heavy vehicle demand for the site. **A17.3** Loading dock circulation areas for service and heavy vehicles are: a. integrated into the design of developments b. separated from staff/visitor car parking areas and waste storage and collection areas c. located away from the circulation path of other vehicles d. located at the rear or sides of the buildings behind the front building line e. screened from the street. **A17.4** Access, parking, manoeuvring and loading facilities for industrial development are designed in accordance with Australian Standard 2890.2-2018 and Performance Based Standards 'An introduction for road managers' (National Heavy Vehicle Register – May 2019). **A17.5** Adequate space is provided on site for reversing of heavy vehicles in designated loading bays and loading docks.	**B17.1** The design of parking and manoeuvring areas for service and heavy vehicles accessing the site meets the day to day needs of the business and does not create any safety risks or impacts on the public road network. Note: The issuing authority may require a traffic and parking study to be prepared by a suitably qualified person to demonstrate the design and space for parking and manoeuvring of service and heavy vehicles is adequate.	**U17.1** Loading, unloading or servicing within the public right of way.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC18 Safe and convenient pedestrian paths and cycle ways are provided.	**A18.1** End of journey facilities are provided on site for staff, including: a. secure, highly visible and conveniently located bike racks b. shower facilities c. lockers. **A18.2** Pedestrian and cyclist access is: a. provided from the street frontage to the main building entry b. a minimum 1.5 metres wide. **A18.3** Pedestrian and cyclist access is designed for universal access and to the relevant Australian Standards 1428.1-2009 and *Disability Discrimination Act 1992* Standards and Guidelines relating to site and building access for people with disabilities and mobility difficulties. **A18.4** All cycle routes and facilities are consistent with the relevant requirements of "Austroads Cycling Aspects of Austroads Guides" and Roads and Maritime Services' "Bicycle Guidelines" including line-marking, signage and logos and Moree Shire Council policies regarding bicycle access.	**B18.1** The design of the site ensures that pedestrian and cyclist needs are adequately and safely accommodated.	Not applicable.

Figure 21: Diagram illustrating the design intent and shared infrastructure benefits of a battle-axe or shared driveway arrangement. Development land is optimised by removing significant land take associated with access and turning circles occurring on each individual lot and providing a shared area for this function; resulting in land and operations that are affordable and productive. This arrangement can also provide a more sustainable and energy efficient business model through concentred and shared gali-water and energy site planning.



6.1.2.6 Transport infrastructure and utilities

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

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

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

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Streets and movement			
PC19 Development ensures a safe and efficient road network is provided for all users within the precinct.	**A19.1** A servicing road network is in place to the standards set out in Chapter 4 and intersection capacities can accommodate the anticipated additional traffic volumes of the development. **A19.2** Development provides for public transport where required in accordance with Section 4.2.11 – Active and public transport.	**B19.1** Provision of new public roads or upgrades to a road or intersection, for development in advance of public road provision to safely cater for the anticipated traffic flows or specific vehicle types servicing the development and demonstrate that: a. road and lane widths allow for two-way movement and turning movements of the largest design vehicle b. provide adequate turning paths for the largest design vehicle at intersections and for property access c. road widths are set to minimise kerbside restrictions and regulatory signage d. sufficient width is provided for drainage functions and drainage facilities are provided	**U19.1** Roads that are not suitable to service the development in terms of traffic volumes or vehicle types. **U19.2** Roads are designed and/or constructed in a manner that is not suitable for asset transfer to the relevant public authority. **U19.3** Roads that do not include provision for planned and anticipated utilities. **U19.4** Roads that do not include provision for pedestrians, cyclists and public transport.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC19 Continued		e. either sufficient space for shared infrastructure, or provision of infrastructure within the road reserve is not required due to its location elsewhere or within an easement on adjacent private property f. life cycle costs for construction and maintenance are minimised g. provide adequate on-street parking, where required h. provide landscaping and street dhulu-tree planting in accordance with Section 3.4 – Species list i. provide lighting in accordance with relevant local and/or Australian Standards. **B19.2** Development in advance of public road provision demonstrate the advanced roads (and utilities) will integrate with the staged public road provision. Note: A traffic impact assessment prepared by a suitably qualified person is required and considers the principles in Chapter 4 – Infrastructure and the suitability of the proposal in terms of the design and location of the road, and the likely nature, volume or frequency of traffic generated by the development.	

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Transport asset			
PC20 Development on land that interfaces with an existing or future transport asset is designed to protect the safety, function and performance of the transport asset.	**A20.1** Development on land within or adjoining a transport asset is undertaken in accordance with: a. the Guidelines for external and developer-led works affecting Transport Assets and b. Part 3, Division 2 of the Precincts-Regional SEPP. Note: The Precincts-Regional SEPP prevents an Activation Precinct Certificate from being issued unless the issuing authority has consulted with the Rail Authority for the rail corridor for certain development in rail corridors. The Roads Authority and/or the Rail Authority should be consulted at the earliest possible time during the Activation Precinct Certification Process and relevant approvals obtained where required.	Not applicable	**U20.1** Development impacts the safety, function or performance of transport assets.
Utilities and services			
PC21 Adequate services are available to facilitate development.	**A21.1** Development sequencing and staging is consistent with the infrastructure provision and capacity for the precinct in accordance with Chapter 4 – Infrastructure. **A21.2** Development makes provision for and connects to the key infrastructure in accordance with Chapter 4 – Infrastructure, Moree Plains Shire Council's relevant guidelines and policies and/or the relevant Australian Standard, and/or the respective utility suppliers standards and specifications, including as required:	**B21.1** A reduced design standard or design approach may be acceptable if the infrastructure is intended to be temporary whilst other development is established or the permanent infrastructure is being built, provided the design does not present a risk to life or property.	**U21.1** Development that compromises the planned and orderly delivery of infrastructure throughout the precinct, either due to location, sequencing, or demand generation.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC21 Continued	a. gali-water b. wastewater c. electrical d. telecommunications e. other utilities and services as required such as gas, hydrogen reticulation (including future hydrogen), recycled gali-water etc. Note: The relevant utility suppliers should be consulted at the earliest possible time. The following suppliers service the Moree precinct: • electricity supply – Essential Energy • gali-water supply – Moree Plains Shire Council • wastewater – Moree Plains Shire Council • telecommunications – NBN Co • drainage – Moree Plains Shire Council. Note: Council should be consulted on connections to utility services including for sewerage, drainage and approval under section 68 of the *Local Government Act 1993*. The process for seeking approval from the Council should commence at the earliest possible time and should run in parallel with the Activation Precinct Certification Process where possible. Note: Information will be required on the proposed sewer outflow requirements including general sewer and trade waste. For trade waste, nominate the expected material/ chemical composition. Depending on the trade waste, a separate approval may be required from Council or the Department of Planning and Environment.	**B21.2** Development may occur in advance of infrastructure provision being in place, provided it can demonstrate that: a. capacity and loads for all utilities and services is known for future connection to infrastructure b. the development is a catalyst project that cannot be accommodated within existing land areas currently able to be serviced by existing infrastructure or c. the applicant contributes to the provision of infrastructure, at a rate commensurate to the bringing forward of such infrastructure. **B21.3** Alternative locations for key infrastructure are identified as a result of further investigations and feasibility assessment.	

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC22 Development protects existing and proposed utilities and services corridors.	**A22.1** Development is appropriately designed, constructed, operated and maintained to protect existing and proposed utility and services corridors in accordance with: a. Chapter 4 – Infrastructure b. Part 3, Division 2 of the Precincts-Regional SEPP; and relevant requirements for development adjacent to or likely to affect utility and services corridors within the Transport and Infrastructure SEPP.	Not applicable	**U22.1** Development that impacts on existing and proposed utilities and services corridors.

6.1.2.7 Stormwater and groundwater

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

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

Gali-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.

Groundwater extraction on sites via the installation of additional bores into the Lower Gwydir Alluvium Aquifer is prohibited. Great Artesian Basin groundwater use or re-use (where available) should be undertaken with consideration of groundwater quality (including temperature). Spent artesian basin groundwater is not permitted to be discharged to the surface gali-water system.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Stormwater			
PC23 Stormwater generated on-site is appropriately managed to ensure minimal nuisance, danger and damage to people, property and the environment. Note; Any future development of water quality targets, at a precinct-wide scale, should be set out using the *Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land Use Planning Decisions (2017)* to help guide design.	**A23.1** Sites include 40 percent pervious surfaces to control runoff generation and capture rainwater and surface gali-water runoff and maintain pre-development flow rates for all events up to, and including, the 1% AEP. Note: pervious surfaces may include: • dhulu-tree planting • mulched garden beds with planting • planting for screening purposes • pervious surface treatments, including compacted rubble, decorative gravels and inorganic mulches/sands • drainage areas and WSUD treatments • grasslands and rehabilitated/revegetated areas • planting to any existing creek lines or surrounding remnant vegetation.	**B23.1** When sites include less than 30 per cent pervious surfaces, on-site stormwater detention infrastructure is provided to capture rainwater and surface runoff and maintain pre-flow rates for all events up to, and including, the 1% AEP at a capacity nominated by a Stormwater Management Plan prepared by a suitably qualified Chartered Professional Engineer of Engineers Australia.	**U23.1** Suitable onsite stormwater detention infrastructure is not provided. **U23.2** Onsite stormwater detention infrastructure impacts precinct-wide stormwater infrastructure, flood risk management requirements or other utilities. **U23.3** The subdivision and development of land does not appropriately consider the spatial requirements required for the management of stormwater within the subject property and for the immediate properties surrounding.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC23 Continued	**A23.2** On-site stormwater detention infrastructure is: a. provided to capture rainwater and surface runoff and maintain pre-development flow rates for all events up to, and including, the 1% AEP at a specified capacity per lot b. constructed and operated in accordance with Australian Rainfall and the Australian Standard for Plumbing and Drainage: Part 3 Stormwater Drainage AS/NZ3500.3.2021	**B23.2** Onsite stormwater 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 the Australian Standard for Plumbing and Drainage: Part 3 Stormwater Drainage to ensure that the system capacity is calculated in accordance with Australian Rainfall and Runoff (Engineers Australia, 2019).	
PC24 Development integrates best-practice gali-water cycle management initiatives with both quantity and quality aspects for gali-water management.	**A24.1** Development provides the following onsite rainwater capture, storage facilities and re-use of gali-water in irrigation, industrial processes, toilet flushing, evaporative cooling or for other non-drinking purposes: a. for development with a building footprint less than 6,000 square metres a rainwater tank with a minimum of 10,000 litres or b. for development with a building footprint greater than 6,000 square metres onsite rainwater storage tanks equivalent to a minimum of 1.65 litres storage per square metre of gross floor area. Note: Information is required to be provided on the proposed potable gali-water and non-potable gali-water demands and percentage to be delivered via onsite gali-water systems for the proposed development.	**B24.1** Development demonstrates equivalent or better alternatives for integrating best-practice gali-water cycle management initiatives in order to reduce potable gali-water use but maintain environmental flows. Note: This is defined by less than a 10% change in the modelled annual runoff from each site and in the aggregate in wet, dry and average rainfall conditions (being 90th percentile, 10th percentile and 50th percentile rainfall years for the nearest relevant rainfall gauge with at least 50 years of rainfall records).	**U24.1** Development does not seek to reduce potable gali-water use.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Groundwater			
PC25 Groundwater can only be extracted for use from existing approved bores, with the exception of groundwater extracted from the Great Artesian Basin (GAB) and available to sites through the network to be provided by the corporation (integrated with the town gali-water supply – See Chapter 4 – Infrastructure).	**A25.1** Use of groundwater as supplied by the reticulated network installed by the corporation. This will be cooled, chlorinated and disinfected for mixing and use in the precinct.	**P25.1** Re-use of spent artesian groundwater from sources in the township of Moree for industrial process purposes. **P25.2** Re-use of spent artesian groundwater from sources in the township of Moree that has been treated on-site to meet Class A gali-water quality standards.	**U25.1** Additional groundwater extraction bore from the Lower Gwydir Alluvium. **U25.2** Re-use of spent artesian basin groundwater for potable uses.
PC26 Development in the precinct does not detrimentally impact the region's groundwater resources, including the town's drinking gali-water supply, neighbouring registered bores (used for stock, domestic, irrigation, industrial, or drinking gali-water supply) and groundwater dependent ecosystems	**A26.1** Management of gali-water on-site that ensures groundwater is not impacted.	**P26.1** Solutions that are accompanied by geotechnical investigations and soil testing by a suitably qualified Chartered Professional Geotechnical engineer and the use of hydrogeological modelling by a suitably qualified hydrogeologist to demonstrate no impact on groundwater quality or quantity.	**U26.1** Discharge of untreated gali-water to groundwater (stormwater, effluent or other).

6.1.2.8 Earthworks

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

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

David Piccolo, Garry Mostyn & Agustria Salim (2019) A unified approach to earthworks for residential, industrial and commercial developments consistent with AS3798-2007, Australian Journal of Civil Engineering, 17:1, 50-62, DOI: 10.1080/14488353.2019.1615721

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Earth works and retaining walls			
PC27 To: a. protect and minimise disturbance to natural landforms and design buildings and siteworks that respond sensitively to the natural topography b. take into account the stability of land having regard to its topography, geology and soils as part of site planning principles c. minimise disturbance of vegetation that stabilises land.	**A27.1** Earthworks should be designed and specified in accordance with AS3798 and the recommendations of Piccolo et al (2019) whereby there should be a landform performance specification documented in an Interim Geotechnical Design Advice letter (IGDA) (informed by relevant geotechnical testing). The earthworks design should describe the design intent and document the inspection, testing reporting and certification requirements for the Geotechnical Inspection and Testing Authority. The earthworks are to be designed by a geotechnical engineer registered on the National Engineers Register of Engineers Australia. **A27.2** Design and site layout minimises the need for cut and fill, including minimisation of offsite disposal of fill. **A27.3** Proposed batters for the creation of building pads are designed to be stable with considerations to expected drainage and flooding. **A27.4** Levels for access are assessed for the expected vehicles. **A27.5** Retaining walls (if required) are designed and integrated into the landscape. Note: All retaining walls (if required) proposed for the site are to be identified in the application for the proposed Activation Precinct Certificate.	**B27.1** Earthworks outcomes that require offsite disposal of fill to a development site within the precinct that requires fill to establish its earthworks. Applications for both developments sites would need to be lodged concurrently for council to assess the movement of material.	**U27.1** Filling, excavation or retaining walls that impact on areas of high value biodiversity or the amenity and functionality of adjoining properties. **U27.2** Filling, excavation or retaining walls located within easements. **U27.3** Filling, excavation or retaining walls that do not consider access from the planned road network. **U27.4** Filling, excavation or retaining walls that impede or restrict access to existing and proposed utility infrastructure.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Erosion and sediment control			
PC28 Protect waterways, drainage systems and groundwater quality, flows and drainage patterns during demolition, construction and ongoing operation phases of development.	**A28.1** An Erosion and Sediment Control Plan (ESCP) is prepared by a suitably qualified person in accordance with Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom, 2004) prior to applying for a Complying Development Certificate. The ESCP should specifically address the local soil type and include relevant constructon phase treatment measures, such as flocculation prior to discharge.	Not applicable	**U28.1** Development results in an impact upon surface or ground gali-water quality.

6.1.2.9 Landscaping

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

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Landscaping			
PC29 Landscaping creates a distinctive and memorable experience for users and are used in high-visitation areas. Note: A landscape plan prepared by a qualified landscape architect or consultant will be required for all development proposals that illustrates the proposed landscape design for the development proposal.	**A29.1** Landscaped areas to the primary street frontage, main entrance driveway, street interfaces, car parks and other open space areas provided for customers and staff within developments include: a. mulch to a depth of 75mm b. irrigated garden beds to a minimum width of 1500mm, except for any garden bed to the primary street frontage along the front fence is to be a minimum 2 metres width c. plant species in accordance with Section 3.4 – Planting palettes. **A29.2** Car park landscaping: a. provides one large tree at a minimum between every 5 car spaces or one medium tree every 3 spaces, evenly through the parking areas. All tree stock to be in accordance with Australian Standard 2303:2018 tree stock for landscape use, with a minimum pot installation size of 200L. b. is located adjacent to the edge of all car parks and pathways c. includes plant species in accordance with the planting palettes in Section 3.3.2 Landscape treatments d. retains existing vegetation of ecological value and e. uses recycled gali-water or on-site stormwater for irrigation.	**B29.1** Landscape responsive streets and places are developed, in accordance with Chapter 2 – Precinct design principles.	Not applicable

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC29 Continued	**A29.3** Irrigated mature dhulu-trees are provided along both sides of the driveway with dhulu-trees height and spread at maturity considering the height of the largest design vehicle to use the driveway. **A29.4** Gali-Water sensitive urban design (WSUD) measures are integrated into landscape design such as irrigating garden beds using stormwater captured on-site and recycled gali-water.		
PC30 Landscaping: a. retains and protects areas of high value biodiversity in the site landscape design b. builds on the ecology, habitat and biodiversity of the precinct and wider region c. uses revegetation practices and predominately endemic species d. uses perimeter buffer planting to screen development	**A30.1** Landscape design integrates the following areas: a. remnant vegetation, including paddock dhulu-trees b. precinct biodiversity corridors, riparian corridors and strategic revegetation sites. **A30.2** New vegetated and landscaped areas that form a green corridor are integrated into the landscape design on the site and provide additional connectivity to existing vegetated areas. **A30.3** Where feasible, vegetation clearing is minimised. **A30.4** The planting palette in Section 3.4.1 – Biodiversity focused revegetation is used to inform the species selection and minimum planting density for the site.	**B30.1** Landscaping contributes to enhanced public domain outcomes consistent with Chapter 2 – Precinct design principles and Chapter 3 – Precinct revegetation strategy.	Not applicable

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Fencing			
PC31 Fencing is integrated with the development and suitable for its intended purpose.	**A31.1** Primary street frontage fences: a. are open in character and of a contemporary, high-quality fence style consisting of either hardwood timber, corten steel, vertical aluminium blade or laser-cut aluminium or steel b. are below 2.1 metres in height c. incorporate complementary gates d. are integrated with the main entrance e. may incorporate customised panels or features to reflect the intended character of the built form and landscaped areas f. must achieve 70% permeability to allow for passive surveillance g. are to be located, designed and constructed to avoid removing or damaging existing high-value vegetation. **A31.2** Side and rear fences are a maximum of 2.1 metres in height. **A31.3** Areas requiring solid fencing for screening should: a. be recessive and use corrugated, powder coated metal panels with a matte finish, in light grey b. be minimised to areas adjacent to the proposed building or service areas c. be softened and screened by low and medium height landscaping within a garden bed of at least 1 metre in width. **A31.4** Traveling stock route and riparian corridor fencing: a. black star picket fencing, with star pickets spaced a maximum 2.5m apart	**B31.1** Fencing is designed to enhance the visual amenity of the precinct and ensure that drainage flow paths are maintained, in accordance with Chapter 2 – Precinct design principles.	**U31.1** Security fencing, cyclone mesh and chain wire fencing forward of the building line and not suitably screened with landscaping. **U31.2** Fencing in flood-prone areas that forms of blockage to the conveyance of floodwaters.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC31 Continued	b. infill to be high strength fencing wire c. strainer post to be galvanised tube steel d. is a minimum of 1.4 metres high e. must enclose extent of TSR perimeter and contain stock f. access gates to be galvanised steel mesh gate (cyclone or similar).		
Lighting			
PC32 Ensure lighting: a. is energy efficient and maximises on site comfort, safety and security b. avoids impacts to surrounding sensitive receivers.	**A32.1** Development achieves compliance with Australian Standards 4282:2019 for outdoor lighting. **A32.2** Development achieves compliance with Moree Airport requirements. **A32.3** Development ensures lighting is located, directed and shielded to avoid glare directly to surrounding habitable areas. **A32.4** Main building entry lighting includes: a. solar lit bollards or pole top lights along the main building entrance path b. controlled uplighting (timer) to selected dhulu-trees along the primary vehicle access c. appropriately illuminated (backlighting, uplighting) business signage, as required d. security and sensor lighting, as required. **A32.5** Car park lighting: a. is designed to ensure safe and continuous access to the main building entrance/s b. is designed in a way that considers CPTED principles c. includes solar lit bollards or pole top lights along pedestrian path/s d. includes security and sensor lighting, as required.	**B32.1** Lighting is provided along the main building entry, primary vehicle accesses and in car parks which contribute to the achievement of a safe night-time environment for staff and visitors as well as supporting an active and connected precinct, in accordance with Chapter 2 – Precinct design principles.	**U32.1** Development that does not mitigate lightspill to sensitive receivers that are adjacent or within direct line of sight. **U32.2** Development that creates dark corners or pockets, risking user safety. **U32.3** Development that does not appropriately light pedestrian pathways creating slip or trip hazards and risking user safety.

6.1.2.10 Service and storage areas

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

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Service and storage areas			
PC33 Service and storage areas: a. are functional and practical b. do not detract from the operational efficiency of the precinct or surrounding areas.	**A33.1** Service and storage areas are: a. located behind the main building line and to the rear or side of buildings, where possible b. appropriately sealed or treated c. screening structures are a maximum height of 3 metres. Note: Screening can use a range of approaches including landscaping, perforated metal screens, fencing and other creative approaches that integrate screening into the site appearance so as not to be a dominant element of the site's presentation to a street. **A33.2** Service and storage areas include a dedicated area set aside for waste storage and collection based on calculated waste and recycled material generation rates for the particular business, building size, and potential future expansion. Note: The issuing authority may require a waste management plan to be prepared which details the waste management and minimisation activities to be carried out during operation of the premises/development. **A33.3** 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	Not applicable	**U33.1** Waste collection within the public right of way. **U33.2** Waste collection within the site's car parking and pedestrian movement areas where user safety is at risk or compromised. **U33.3** Waste, chemical and hazardous goods storage areas within drainage easements and/or on flood prone land.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC33 Continued	c. suitably screened from public areas to reduce the impacts of noise, odour d. designed and located to ensure the access and manoeuvring area is suitable for the collection vehicle and allow the vehicle to enter and exit the site in a forward direction, where possible e. provide grease traps where there is a likelihood of liquid waste entering the drainage systems. **A33.4** Service and storage areas are located and sized to take into account potential synergies with neighbouring businesses as part of a circular economy where waste transfer to and from sites can occur in an efficient manner. **A33.5** Communal storage/collection facilities are located and sized: a. where the design makes it difficult for all tenants to have ready access to a collection point or b. where the site characteristics restrict vehicle entry. **A33.6** Service and storage areas include space and facilities for bin washing that are bunded and connected to a treated wastewater system.		

6.1.2.11 Signage

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

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

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

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Business signage			
PC34 Business signage visible from the public realm contributes to legible, coherent and visually attractive identification of businesses and locations throughout the precinct, and provide for business identification that is: a. appropriate for the industrial and agricultural use b. designed and positioned for safety of motorists and freight transport.	**A34.1** Signage is to be high quality, durable and compatible with the design and construction of the development. **A34.2** Building signage: a. is limited to a logo/company badge/name b. is made from suitable materials such as acrylic letters/logos or recycled materials that maintain a high quality visual appearance for the anticipated life of the sign c. is visible from the primary street frontage d. complies with Australian Standard 1319-1994. **A34.3** freestanding pylon signage is a maximum height of 8 metres, maximum width of 2.5 metres and maximum advertising area of 15 square metres per advertising face and limited to advertisements for all relevant businesses on the site (including where multiple tenancies apply). **A34.4** Where illuminated: a. include illumination, time automation and overrides as required b. include sensors to control lighting in concert with natural daylighting c. utilise the most energy efficient LED fittings including light colour control, dimming and output. Note: The Roads Authority must be consulted early in the Activation Precinct Certification process with regards to signage within 250 metres of, and visible from, a classified road, and appropriate approvals obtained where required.	**B34.1** Additional signage may be appropriate where it can be demonstrated that it is: a. complementary to the scale of the allotment and buildings on the site b. compatible with the signage that is within the streetscape c. needed to provide directions and identification to additional entries on the site, particularly if located on another street frontage d. needed to aid in identifying key building entry points to particular elements of the land use activity (such as reception and other departments), or separate buildings on the site e. consistently sized and designed as a suite with a common appearance and materiality.	**U34.1** Signage that: a. flashes, moves or is animated in any way and/or b. incorporates LED screens. c. Large and obtrusive signage that detracts from the visual character of the precinct. **U34.2** Proliferation of signage along site frontages. **U34.3** Provision of third-party advertisements within the precinct. **U34.4** Signage that encroaches into turning paths and/or does not meet height clearances for the highest design vehicle.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Wayfinding signage			
PC35 Wayfinding signage is used and designed to assist visitors, staff and customers to navigate large sites with multiple buildings and access points.	**A35.1** Wayfinding signage is located at key vehicle and pedestrian entry points, building entries and other key sites of cultural significance. **A35.2** Wayfinding signage: a. is designed as a suite and integrated into the landscape design b. is appropriately sized to suit users of all abilities navigating the site c. remains visible during all hours of the day and night d. provides for users of all abilities through their positioning, size and content e. is constructed of hardy and sustainable materials sourced locally, including the use of steel and hardwood timber. **A35.3** Wayfinding signage emphasises Gamilaroi culture and is designed in conjunction with the Gamilaroi community. Signage should: a. incorporate 'Welcome to Country' acknowledgment in key locations b. integrate Indigenous design iconography through interpretive elements c. communicate dual naming of locations and features d. identify sites with cultural importance, communicating cultural heritage, traditional practices or story telling; and integrate interpretive elements into built form, such as pavements, walled surfaces.	**B35.1** Development enhances the experience and functionality of businesses within the precinct through wayfinding signage which reflects Moree's rural character and Gamilaroi cultural heritage.	**U35.1** Signage that: a. is roof mounted or applied to roof materials b. flashes, moves or is animated in any way c. incorporates LED screens. **U35.2** Large and obtrusive signage that detracts from the visual character of the precinct. **U35.3** Proliferation of signage along site frontages.

Figure 22: Sanctuary Estate, Fletcher NSW. Signage element communicating the sites indigenous significance, cultural storytelling, and incorporates dual language. Signage should be uncluttered, simple and utilise hardy and durable material, reflective of local rural context.

Figure 23: Koala Sanctuary, Port Stephens NSW. Directional wayfinding signage to direct visitors and users of the site to important facilities and amenities. Signage should be uncluttered and concise, utilising simple arrows, text, and infographics to communicate information. Materials should be durable and hardy and reflect the built form vernacular of the wider precinct.

6.1.3 Specific development requirements

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

6.1.3.1 Rail and intermodal development

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Rail and intermodal			
PC36 Development in the rail and intermodal area preserves opportunities for rail and transport infrastructure crucial to maintaining the precinct's competitive advantage as a rail-focused freight and logistics hub.	**A36.1** Development is established to take advantage of proximity to appropriate transport routes and does not adversely impact on the safe and efficient functioning of the rail corridor as well as integrated rail and road transport routes. Note: Development requiring rail access shall consult with the relevant rail infrastructure provider as part of preparing the application for an Activation Precinct Certificate. **A36.2** Rail spurs and sidings, including the uploading, loading or discharge of freight carried by road or rail are designed by a suitably qualified engineer in accordance with appropriate design and structural standards. **A36.3** Development that consists of the construction or installation of any of the following items are designed by a suitably qualified engineer in accordance with the appropriate design specifications and structural standards: a. a bridge used for a purpose other than a road b. a rail-mounted crane, crane rails for a rail mounted crane or a fixed crane c. a ship loader, unloader, or cargo handling facilities	Not applicable	Not applicable

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC36 Continued	d. a dry bulk storage silo e. road and rail terminal facilities f. a stacker-reclaimer, stacker or reclaimer g. wharves and berthing infrastructure h. a conveyor system. **A36.4** Industrial development and support services: a. take advantage of the access to key rail and road networks and b. maximise opportunities for the clustering and co-location of synergistic developments, including supporting infrastructure.		

6.1.3.2 Solar energy farms

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Solar energy farms			
PC37 Solar energy farms are appropriately located and minimise any impacts on surrounding areas.	**A37.1** Solar energy farms: a. incorporate a minimum 15 meter setback to allow for buffer planting to the perimeter of sites, as well as an access road at the perimeter of the solar arrays b. are designed to run with the existing landform to reduce earthworks.	Not applicable	Not applicable
PC38 Solar energy farm design and operations are resilient to flood events.	**A38.1** Development ensures: a. solar panels and supporting electrical services are located either outside of the wugawa-flood planning area as shown in Map 8.5 or b. suitable mitigation is undertaken to avoid flood impact on solar panels and other infrastructure in the flood planning area as shown in Map 8.5, including locating equipment above the flood planning level (0.2%AEP flood level).	Not applicable	**U38.1** Site design and operations that can result in avoidable damage or disruption from flood events.

6.1.4 Sustainability

The master plan has been prepared to ensure that development maximises sustainability opportunities to achieve 'Eco-Industrial Park' recognition in accordance with the United Nations Industrial Development Organisation (UNIDO) framework. An Eco-Industrial Park is a place where businesses work together to achieve enhanced environmental, economic and social performance through collaboration. This collaboration could involve the physical exchange of materials, energy, gali-water and by-products, creating a circular economy where one business' 'waste' becomes another's input.

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

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

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Sustainability			
PC39 Development supports and contributes to the principles of the UNIDO for Eco-Industrial Park framework and a carbon neutral precinct.	**A39.1** Development demonstrates a commitment to contributing towards the Moree Special Activation Precinct accredited ISO14001 EMS framework **A39.2** If required, the applicant commits to contributing data in accordance with the precinct EMS framework. Note: Access to the Moree Special Activation Precinct accredited ISO14001 EMS framework can be obtained from the corporation.	**B39.1** The applicant: a. commits to developing an ISO14001 EMS framework within 12 months from the date of approval or provides a copy of an existing ISO14001 EMS accreditation for the development and b. commits to contributing data in accordance with the precinct EMS framework.	**U39.1** 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 gali-water consumption would be required e.g. by supplying electricity bills.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC40 Development supports energy efficiency through the use of renewable energy.	**A40.1** Development: a. maximises energy capture and reuse through roof top mounted solar PV b. utilises an equivalent or better alternative onsite renewable energy generation system and/or c. utilises/connects to an offsite renewable energy resource. Note: Information on the proposed electricity demand and consumption and percentage proposed to be delivered via renewables (onsite and offsite) will be required. Note: Information on the proposed gas demand and percentage to be delivered via hydrogen will be required in circumstances that the development proposes to utilise hydrogen as a renewable energy resource.	Not applicable	Not applicable
PC41 Opportunities for establishing a circular economy are enabled through infrastructure and the colocation of industries requiring transport and utility/service connections.	**A41.1** Development: a. design and layout considers shared infrastructure such as driveways and car parking, where applicable b. provides space for required service corridor easements in accordance with Chapter 4 – Infrastructure c. contributes to the clustering of like land uses with similar transport, utility and service infrastructure needs, where applicable and d. takes advantage of existing and proposed shared systems relating to resource handling and storage, fuel or gali-water storage, on-site energy generation, resource processing and the use of by-products from other businesses.	Not applicable	Not applicable

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC42 To minimise the overall environmental impacts of waste by: a. encouraging development to facilitate ongoing waste avoidance b. encouraging development to embed circular economy principles into its planning and operations c. requiring on-site waste separation and other design and siting standards which assist waste collection and management d. encouraging building designs and construction techniques that minimise waste generation e. maximising opportunities to reuse and recycle building and construction materials as well as other waste in the ongoing use of a premise and f. reducing the demand for waste disposal.	**A42.1** 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. Note: The issuing authority may require a waste management plan to be prepared which details the waste management and minimisation activities to be carried out during operation of the premises/development. **A42.2** Development incorporates the use of recycled or reclaimed materials in construction where possible. Note: The issuing authority may require a waste management plan to be prepared which details the waste management and minimisation activities to be carried out during demolition and/or construction of the development.	Not applicable	**U42.1** Development that does not identify how it aims to reduce waste to landfill.

6.2 Rural Activity Zone

The Rural Activity Zone performs an important function in providing for sufficient separation from industries to sensitive land uses located west of the precinct, as well as maintaining the attractive rural landscape setting.

This section provides the assessment criteria that needs to be considered when planning and designing a site within the Rural Activity Zone, including requirements for site layout, site access, built form and signage.

It is noted that the Precincts-Regional SEPP provides that the following provisions of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* apply to development specified as exempt development on land in the Rural Activity Zone in the precinct:

- for land in the Rural Activity Zone—clauses 2.9–2.14, 2.27–2.30, 2.30A, 2.30B, 2.35, 2.36, 2.46A–2.48, 2.51, 2.52, 2.54A–2.56, 2.71–2.72B, 2.75, 2.76, 2.79, 2.80, 2.98, 2.99, 2.104 and 2.105.

6.2.1 Controls that apply to all development

The master plan has created the Rural Activity Zone as a buffer to the Regional Enterprise Area, while enabling the Rural Activity Area to have productive uses and activities.

Development in the Rural Activity Zone should consider the landscape setting, existing vegetation, natural drainage paths, and opportunities to incorporate new dhulu-tree and vegetation plantings that build vegetated connections that contribute to the biodiversity, vegetation and riparian corridors for the precinct.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Development in rural areas			
PC43 Development in rural areas is compatible with the site context and designed and sited to minimise conflict between the industrial development located within the Regional Enterprise Zone and sensitive land uses located west.	**A43.1** Demonstrate suitable buffer areas and setbacks to minimise conflict with neighboring land uses. Where there is potential for a conflict between land uses, priority will be given to the existing productive use. **A43.2** Use landscaping and other screening options to help integrate new uses and developments into the rural landscape. **A43.3** Traditional rural fencing, such as post and wire are encouraged. Use vegetation barriers where needed to provide visual screening between adjoining properties. **A43.4** Uses must be capable of operating within capacities of available existing utilities and services and/or provide appropriate onsite utilities and services where required.	Not applicable	Not applicable

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC43 Continued	**A43.5** Provide adequate facilities for additional traffic in terms of vehicle access and movements, parking areas, and loading and unloading of goods. **A43.6** In the case of larger projects, the issuing authority may require the applicant to demonstrate that the roads in the locality are of satisfactory construction and condition to accommodate the size, weight and volume of vehicles that could be generated by the use, and that the local traffic conditions are suitable. **A43.7** Provide satisfactory arrangements for storage and disposal of waste.		

6.2.2 Specific development requirements

This section provides assessment criteria that apply to specific development and uses within the Rural Activity Zone.

The following provisions of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* will apply to the specified development on land in the Rural Activity Zone:

- Demolition – Part 7 Demolition Code

Note: A licence is required to conduct certain types of demolition work. Consultation with Safe Work NSW should be undertaken early in the Activation Precinct Certification process and appropriate licences obtained where required.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Solar energy farms			
PC44 Solar energy farms are appropriately located and minimise any impacts on surrounding areas.	**A44.1** Solar energy farms: a. incorporate a minimum 15 metre setback to allow for buffer planting to the perimeter of sites, as well as an access road at the perimeter of the solar arrays b. are designed to run with the existing land form to reduce earthworks.	Not applicable	Not applicable
PC45 Solar energy farm design and operations are resilient to flood events.	**A45.1** Development ensures: a. solar panels and supporting electrical services are located either outside of the wugawa-flood planning area as shown in Map 8.5 or b. suitable mitigation is undertaken to avoid flood impact on solar panels and other infrastructure in the flood planning area as shown in Map 8.5, including locating equipment above the flood planning level (0.2%AEP flood level).	Not applicable	**U45.1** Site design and operations that can result in avoidable damage or disruption from flood events.

6.2.3 Business signage

Business signage in the Rural Activity Zone should reflect the type of development in this zone and be consistent with the building and landscaping.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Business signage			
PC46 Business signage is appropriate to the character of the Rural Activity Zone.	**A46.1** Business signage is limited to entry signage at the road entry which includes a maximum: a. height of 2 metres b. width of 1.5 metres c. advertising area of 2 square metres.	**B46.1** Additional signage may be appropriate where it can be demonstrated that it is: a. complementary to the scale of the site and Rural Activity Zone b. needed to provide directions and identification to additional entries or buildings on the site c. does not adversely impact the safety and efficiency of the surrounding road network.	**U46.1** Signage that: a. is illuminated b. flashes, moves or is animated in any way c. incorporates LED screens. **U46.2** Large and obtrusive signage that detracts from the visual character of the precinct. **U46.3** Provision of third-party advertisements within the precinct.

6.3 Precinct-wide

6.3.1 Environment

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

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

6.3.1.1 Landscape character

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

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Landscape character			
PC47 Protect the rural landscape character and features such as riparian corridors and remnant vegetation within the precinct.	**A47.1** Development is designed and sited to: a. retain and enhance areas of remnant vegetation, biodiversity corridors, riparian corridors, culturally significant dhulu-trees and rocky outcrops b. maintain existing mature dhulu-trees c. identify indigenous heritage features which should be protected and retained in place on site d. avoid or minimise alteration to natural features such as drainage lines and waterways, hill tops and ridgelines.	**B47.1** Where mature dhulu-tree are unable to be retained suitable offset plantings are provided on the site.	**U47.1** Development that does not integrate site specific solutions.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC48 Protect and enhance the rural landscape character of the precinct adjacent to major arterial roads, rural land and existing creek lines	**A48.1** A minimum 5 metre privately owned and maintained landscaped buffer applies to all lots adjacent to the Newell Highway and proposed bypass. Note: Landscaped buffers should be informed by the site's natural features and landscape and reflect the bioregion and vegetation typologies of the precinct in accordance with Chapter 3 – Precinct revegetation strategy.	Not applicable	Not applicable

6.3.1.2 Aboriginal Cultural Heritage

Heritage items and conservation areas have special qualities that make them significant. The land identified to be reserved for heritage, culture and habitat on Figure 3: Moree Special Activation Precinct Structure Plan in the master plan is to be retained as a place of significance.

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

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

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Gamilaroi cultural heritage			
PC49 Aboriginal culturally significant places, sites and objects are protected.	**A49.1** Development avoids impacts to Aboriginal cultural heritage and is undertaken in accordance with the precinct's Cultural Heritage Management Plan. Note: Access to the precinct's Cultural Heritage Management Plan can be obtained from the corporation. **A49.2** The design and layout of development, streets, lots and infrastructure retains (in place) and integrates scarred dhulu-trees, identified artefact sites and other indigenous cultural heritage places of importance within areas of environmental significance and green space that is publicly accessible. **A49.3** Development promotes the history and landscape values of the site by considering story-telling and memory through site layout, building design and/or interpretative signage. Note: The Cultural Heritage Management Plan provides further guidance on how development may promote the history and landscape values of the precinct. **A49.4** Ensure that the Aboriginal community have access to sites and places of cultural significance.	**B49.1** 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.	**U49.1** Aboriginal culturally significant places and sites are harmed, except where an Aboriginal Heritage Impact Permit has been issued. **U49.2** The Aboriginal community being prevented from accessing sites and places of cultural significance.

6.3.1.3 Biodiversity, vegetation and riparian corridors

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

The preservation and enhancement of riparian habitats and natural waterways is important for environmental outcomes in the precinct.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Biodiversity			
PC50 Protect and enhance areas of high value biodiversity through landscaping and open spaces.	**A50.1** Development is to be sited, designed and managed to avoid adverse impacts, and protect and enhance areas of high value biodiversity as shown in Map 8.2 **A50.2** Development retains dhulu-trees and native grasslands where possible, and incorporates them into site landscaped areas. **A50.3** Development increases the number of dhulu-trees and area of native grassland in the precinct in accordance with Chapter 3 – Precinct revegetation strategy. Note: The issuing authority may require a written advice statement to be prepared by a suitably qualified person which confirms that the development proposal will not directly or indirectly impact on areas of high value biodiversity. Note: The issuing authority may require an arborists report to be prepared by a suitably qualified arborist where any Tier 1 and/or Tier 2 dhulu-trees are to be removed or may be affected by the development proposal. Note: A landscape plan will be required for all development proposals. Note: Development consent is required under the Precincts-Regional SEPP for clearing of native vegetation on land identified within an environmentally sensitive area on the Moree Activation Precinct Environmentally Sensitive Areas Map.	**B50.1** Where development is likely to impact areas of high value biodiversity, it demonstrates: a. there is no feasible alternative and b. planting of additional native species in other locations on the site will be undertaken at an area ratio of 10:1 in accordance with Section 3.4.1 – Biodiversity focused revegetation. Note: A report will be required to be prepared by a suitably qualified person that identifies any potential adverse impact the proposed development may have on the following: a. a native vegetation community b. the habitat of any threatened species, population or ecological community c. a regionally, state or nationally significant species of plant, animal or habitat d. a habitat corridor e. a wetland f. the biodiversity values within a reserve, including a road reserve or a stock route and g. a description of any proposed measures to be undertaken to ameliorate any such potential adverse impacts. Note: Any clearing of native vegetation will need to be assessed and offset in accordance with the Biodiversity Conservation Act 2016.	**U50.1** Avoidable removal of areas of high value biodiversity or mature dhulu-trees. **U50.2** Overly dense planting of riparian corridor areas or other areas of flood conveyance that has not been assessed using flood modelling and which may result in a flood impact on adjacent lands.

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

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

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

Riparian corridors

PC51 Contribute to the preservation and enhancement of natural waterways and riparian habitats in order to improve gali-water health and protect the area's character and biodiversity.	**A51.1** Development: a. avoids or minimises alteration to natural features such as drainage lines and waterways b. makes provision for buffer areas in accordance with the *Water Management Act 2000* and as set out in the master plan for the preservation and maintenance of riparian corridors and habitat protection as shown in Map 8.2 c. revegetates riparian corridors in accordance with Chapter 3 – Precinct revegetation strategy. Note: The issuing authority may require a report to be prepared by a suitably qualified person which identifies any potential adverse impacts on waterways and riparian habitats and a description of the proposed measures that may be undertaken to ameliorate any potential adverse impact. Note: A landscape plan prepared by a qualified architect or consultant will be required for all development proposals that illustrates the proposed landscape design for the development proposal.	**B51.1** Reduced setbacks to riparian corridors may be considered in accordance with the requirements of the *Water Management Act 2000*. Note: Consultation with the NSW Natural Resources Access Regulator is undertaken early in the Activation Precinct Certification process and appropriate approvals obtained where required.	**U51.1** Riparian corridor works that are not compatible with flood conveyance requirements.

6.3.1.4 Groundwater

The controls in this section provide protection for groundwater.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Groundwater			
PC52 Protect groundwater quality, flows and drainage patterns during demolition, construction and ongoing operation phases of development. Note: Where applicable, a development must obtain the appropriate gali-water licence in accordance with the *Water Management Act 2000* and consider the relevant Water Sharing Plan.	**A52.1** Development that the issuing authority considers has the potential to contaminate groundwater is supported by a Groundwater Management Plan prepared by a suitably qualified person. The Groundwater Management Plan is prepared in accordance with best practice groundwater management requirements in developing site specific usage, drainage, and mitigation measures for the site. **A52.2** Development proposals that will temporarily or permanently interfere with groundwater flows and impacts the gali-water table will require a hydrogeological report to be prepared by a suitably qualified hydrogeological and/or geotechnical engineer. Note: The master plan provides that the following land uses are not appropriate within the groundwater protection zone unless the issuing authority is satisfied that the development is unlikely to adversely impact existing groundwater sources, is unlikely to adversely impact future extraction from groundwater sources for domestic and stock gali-water supplies and is designed to prevent adverse environmental impacts, including the risk of contamination of groundwater sources from onsite storage or disposal facilities: a. industries b. intensive livestock agriculture c. rural industries d. sewerage systems e. turf farming f. waste or resource management facilities g. gali-water supply systems h. works comprising waterbodies (artificial).	Not applicable	**U52.1** Extraction of groundwater from the Lower Gwydir Alluvium. **U52.2** Direct seepage of untreated stormwater or industry liquids into the dhawun-ground.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC52 Continued	**A52.3** Development within 750 metres of an existing registered bore for stock, domestic, irrigation and/or gali-water supply use must ensure that the proposed works do not create an aquifer interference activity as designed within the *Water Management Act 2000*. Note: Consultation with the NSW Water is undertaken early in the Activation Precinct Certification process and appropriate licences or approvals obtained where required. Note: The *Water Management Act 2000* defines an aquifer interference activity as that which involves any of the following: • the penetration of an aquifer • the interference with gali-water in an aquifer • the obstruction of the flow of gali-water in an aquifer, NSW Aquifer Interference Policy 2 | DPI-NSW Office of Water, September 2012 • the taking of gali-water from an aquifer in the course of carrying out mining or any other activity prescribed by the regulations • the disposal of gali-water taken from an aquifer in the course of carrying out mining or any other activity prescribed by the regulations.		

6.3.2 Environmental hazards

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

6.3.2.1 Flood risk management

The assessment criteria in this section apply to land that is identified as flood prone on Map 8.5.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Flood risk management			
PC53 Development is compatible with the flood function and the flood hazard of the land.	**A53.1** Development within the flood planning area, shown in Map 8.5: a. ensures building floor levels and flood sensitive equipment (including electric motors and switches) are located at or above the flood planning level (being the 0.2% AEP flood level) b. ensures utilities and services (e.g. electrical and telecommunications services) are adequately flood proofed.	**B53.1** Development may be considered appropriate where it is unable to meet the minimum levels available from the corporation but is supported by a flood engineering report that demonstrates how flood risk will be managed and mitigated. **B53.2** 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.	**U53.1** Buildings and other structures located within areas of higher risk. **U53.2** Buildings (and the operations within them) or supporting structures with a high capital value of machinery or materials being at risk of damage from flooding (up to and including the PMF).

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC54 Development will not significantly alter flow distributions and velocities to the detriment of other properties or the environment of the floodplain.	**A54.1** Filling is not undertaken in the flood planning area as shown in Map 8.5, except where it can be demonstrated that there are no adverse changes to flood behaviour or environmental impacts associated with changes to flood behaviour (such as erosion). **A54.2** The use of structural controls (including fences) that physically alter the flow behaviour is minimised. Note: A flood engineering statement, prepared by a Chartered Professional Engineer with expertise in flood risk management will be required as part of any development addressing filling within the flood planning area.	**B54.1** 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).	**U54.1** Large scale bulk earthworks to make land available for development below the Flood Planning Level. **U54.2** The use of large-scale mitigation infrastructure on private land that substantially alters the natural flow of floodwaters across the precinct.
PC55 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.	**A55.1** 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 to be prepared by a suitably qualified person.	Not applicable	**U55.1** The following sensitive, vulnerable or critical uses are not proposed within the flood planning area or the special flood considerations area: a. community facilities b. centre-based child care facilities c. educational establishments d. emergency services facilities e. research stations (flood vulnerable activities only).
PC56 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.	**A56.1** Hazardous materials are: a. stored above the flood planning level; and/or b. stored or contained in a way that is designed to avoid release of the materials during floods.	Not applicable	**U56.1** Release of hazardous materials during flooding events (including rarer flood events up to and including the Probable Maximum Flood). This includes pollutants such as onsite effluent or tailings treatment or chemical storage.

6.3.1.2 Bush fire protection

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

It is noted that the NSW Department of Planning and Environment ePlanning Spatial Viewer - 'Bushfire Prone Land (Non-EPI) map' will identify whether the land in the precinct is bush fire prone land. Most undeveloped land within the SAP boundary is considered 'Vegetation Category 3' grassland.

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

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Bushfire protection			
PC57 Development identified on grassland, as shown on the NSW Department of Planning and Environment ePlanning Spatial Viewer - 'Bushfire Prone Land (Non-EPI) map', requires an asset protection zone from the grass fire hazard.	**A57.1** Where development is not within 50 metres of grassland no further assessment is required. Representations are made to the issuing authority that demonstrate that the proposed development is not within 50 metres of grassland. **A57.2** Development within 50 metres of grassland must comply with the requirements of: a. the latest version of PBP b. *Rural Fires Act 1997* (including requirements for bush fire safety authority for development for a 'special fire protection purpose'). Note: To satisfy this requirement a bushfire hazard assessment and management plan will be required in accordance with PBP.	Not applicable	Not applicable
PC58 Development for a special fire protection purpose minimises risk to life and property from bush fire.	**A58.1** Development for a special fire protection purpose must comply with the requirements of: a. the latest version of PBP b. *Rural Fires Act 1997*. Note: A bushfire hazard assessment and management plan will be required in accordance with PBP for a special fire protection purpose. Note: A bush fire safety authority will be required in accordance with section 100B of the *Rural Fires Act 1997* for development of bush fire prone land for a special fire protection purpose.	Not applicable	**U58.1** Development of a special fire protection purpose that would compromise existing or future envisaged industrial development within the Regional Enterprise Zone.

6.3.1.3 Managing development on contaminated land

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

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Managing development on contaminated land			
PC59 Development adequately addresses contaminated land.	**A59.1** The site is suitable, or can be made suitable, for the proposed development having regard to land contamination in accordance with State Environmental Planning Policy Resilience and Hazards (2021) and the Moree Plains Shire Council's Contaminated Lands Register. Note: The master plan provides that Category 1 and 2 remediation works are required to be undertaken in accordance with SEPP Resilience and Hazards (2021) (shown in Figure 18, p57). Category 1 remediation works will require a development application. Category 2 works will need to be undertaken separately as development without consent in compliance with SEPP Resilience and Hazards (2021), and not as part of an application for Complying Development under the Precincts-Regional SEPP. The Precincts-Regional SEPP requires that an Activation Precinct Certificate cannot be issued unless the issuing authority has considered whether the land is contaminated and is satisfied the subject land is suitable for the proposed development or will be after remediation.	Not applicable	Not applicable

6.3.3 Environmental impact management

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

6.3.3.1 Potentially hazardous and offensive development

The following section applies to development considered as potentially hazardous or offensive in accordance with the State Environmental Planning Policy - Resilience and Hazards (2021) Chapter 3 Hazardous and Offensive Development.

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

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Potentially hazardous and offensive development			
PC60 Potentially hazardous and potentially offensive industries are appropriately managed to protect human health, property and the biophysical environment.	**A60.1** A preliminary hazard analysis is undertaken in accordance with clause 3.11 and 3.12 of State Environmental Planning Policy Resilience and Hazards (2021). Note: Clauses 3.11 and 3.12 of State Environmental Planning Policy Resilience and Hazards (2021) 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. **A60.2** Development that is a potentially hazardous and/or potentially offensive industry: a. has been identified as either low, medium or high risk by the Department of Planning and Environment b. complies with State Environmental Planning Policy Resilience and Hazards (2021) Chapter 3 Hazardous and Offensive Development. Note: Any development that is determined to be hazardous or offensive, is prohibited in the precinct. The master plan requires that prior to an Activation Precinct Certificate being issued, potentially hazardous development must be identified as either low, medium or high risk by the Department of Planning and Environment. Potentially hazardous development that is high risk is not complying development and will require a development application. The Department of Planning and Environment should be consulted, and written advice sought on whether a proposed development that is 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	**A60.1** Development that is determined to be hazardous or offensive.

6.3.3.2 Air quality and odour

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

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Air quality			
PC61 Development that is a scheduled activity listed in Schedule 1 of the POEO Act reduces the risks to human health and the environment by reducing the discharge of substances into the air to the maximum extent achievable. Note: The Environment Protection Authority should be consulted with early in the Activation Precinct Certification process to determine whether an assessment is required.	**A61.1** Development that produces air emissions and requires an Environment Protection Licence (EPL) under the POEO Act for a scheduled activity: a. identifies the potential air quality risk and determines the level of assessment and management required. Guidance on how the air quality risk can be determined is contained within the SAP Assessment Framework – AIR b. is designed to achieve the impact assessment criteria contained in the Approved Methods for Modelling and Assessment of Air Pollutants in NSW, 2017 (the Approved Methods) (or as updated) c. complies with the prescribed discharge concentration contained in the Protection of the Environment Operations (Clean Air) Regulation 2010 (or as updated) (the Clean Air Regulation) d. is designed to include best management practices to minimise the emission of air pollutants to the maximum extent achievable. Note: The Environment Protection Authority should be consulted to discuss the potential air quality risk of the development and determine the level of air quality assessment and management required. Note: The SAP Assessment Framework - AIR is under development in 2022/2023, an expected to be in place in 2023.	**B61.1** Prior to the finalisation of the SAP Assessment Framework and/or where the issuing authority considers that a development may produce air emissions that could result in adverse effects to human health and amenity or to the surrounding air quality, the development: a. is designed to achieve the impact assessment criteria contained in the Approved Methods (or as updated) b. complies with the relevant prescribed discharge concentration contained in the Clean Air Regulation for scheduled activities.	**U61.1** Development is not designed to achieve the impact assessment criteria in the Approved Methods. **U61.2** Development is not designed to achieve the prescribed discharge concentrations contained in the Clean Air Regulation. **U61.3** Air pollutants are not minimised through the implementation of best practice process design and/or emission control.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC61 Continued	**A61.2** Development undertakes monitoring and reporting as required by their EPL and commits to providing the corporation an annual statement setting out how the EPL requirements has been complied with. Note: An operational environmental management plan should identify the environmental impacts, and management activities and controls related to managing and minimising air emissions, including how the environmental management activities and controls will be monitored and reviewed. As part of an Environment Protection Licence, an annual return is required to be provided to the EPA. An extract of the part of the annual return which sets out how any site-based air quality monitoring and reporting regime required by the licence has been complied with may be provided to the corporation to satisfy A59.2.		
PC62 Non-scheduled activities reduce the risks to human health and the environment by reducing the discharge of substances into the air to the maximum extent achievable.	**A62.1** Development that produces emissions to air a. identifies the potential air quality risk and determines the level of assessment and management required. Guidance on how the air quality risk can be determined is contained within the SAP Assessment Framework – AIR b. is designed to achieve the impact assessment criteria contained in the Approved Methods for Modelling and Assessment of Air Pollutants in NSW, 2017 (the Approved Methods) (or as updated c. is designed to include best management practices to minimise the emission of air pollutants to the maximum extent achievable d. implements an ongoing monitoring and reporting requirements as outlined in the SAP Assessment Framework - AIR.	**B62.1** Prior to the finalisation of the SAP Assessment Framework and/or where the issuing authority considers that a development may produce air emissions that could result in adverse effects to human health and amenity or to the surrounding air quality, the development: a. is designed to achieve the impact assessment criteria contained in the Approved Methods (or as updated) b. complies with the relevant prescribed discharge concentration contained in the Clean Air Regulation for scheduled activities.	**U62.1** 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 A60.1 or B60.1.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
PC62 Continued	Note: The SAP Assessment Framework - AIR is under development in 2022/2023, and expected to be in place in 2023.	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. 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.	

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Odour			
PC63 Development is designed to not cause offensive odour as defined by the POEO Act.	**A63.1** Development that produces odour emissions: a. identifies the potential odour risk and determines the level of assessment and management required. Guidance on how the odour risk can be determined is contained within the SAP Assessment Framework – AIR b. located based on the identified odour risk level and in accordance with the Odour Map provided in the SAP Assessment Framework – AIR c. implements an ongoing monitoring and reporting requirements as outlined in the SAP Assessment Framework - AIR Note: The SAP Assessment Framework - AIR is under development in 2022/2023, and expected to be in place in 2023.	**B63.1** Development identified as high risk with the potential for adverse odour impacts: a. will require an odour impact assessment prepared by a suitably qualified person in accordance with the NSW EPA's Technical Framework: Assessment and management of odour from stationary sources in NSW b. is designed to include best management practices to reduce the emission of air pollutants to the maximum extent achievable c. prepare an odour management plan including details of odour mitigation measures to be incorporated as part of the development. **B63.2** 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.	**U63.1** Development that results in offensive odour impacts at the nearest existing or future sensitive receiver.

6.3.3.3 Noise

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

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Noise			
PC64 To minimise impacts on the acoustic amenity of noise-sensitive receivers Note: The Environment Protection Authority should be consulted with early in the Activation Precinct Certification process to determine the level of assessment required. Guidance on how the noise impact risk can be determined and the associated level of assessment required is contained within the SAP Assessment Framework - NOISE.	**A64.1** Development that produces noise emissions must: a. identify the potential noise impact risk and determine the level of assessment and management required. Guidance on how the noise impact risk can be determined is contained within the SAP Assessment Framework - NOISE b. be designed to achieve impact assessment criteria established in accordance with the NSW EPA Noise Policy for Industry (2017) (NPfI) (or as updated) c. be designed to include best management practice (BMP) and best available technology economically available (BATEA) to minimise noise emissions. **A64.2** Development that has the potential to significantly impact sensitive receivers will require a noise impact assessment prepared by a suitability qualified person in accordance with the NSW EPA Noise Policy for Industry (2017) (NPfI) (or as updated) to be submitted with the application for an Activation Precinct Certificate. **A64.3** 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. Note: The SAP Assessment Framework - NOISE is under development in 2022/2023, and expected to be in place in 2023. Note: An operational environmental management plan should identify the environmental impacts, and management activities and controls related to managing and minimising noise emissions, including how the environmental management activities and controls will be monitored and reviewed. Note: 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.	Not applicable	**U64.1** Development is not designed to achieve the noise outcomes in accordance with the NSW EPA Noise Policy for Industry (2017) (NPfI) (or as updated). **U64.2** Noise emissions are not minimised through the implementation of BMP and BATEA. **U64.3** Development that will generate significant noise impact at noise-sensitive receptors.

6.3.3.4 Biosecurity

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

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Biosecurity			
PC65 Development addresses biosecurity requirements to protect the environment and community from the negative impacts of pests and diseases, weeds and contaminants.	**A65.1** 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. The issuing authority may require an emergency disposal and biosecurity protocol prepared by a suitably qualified person.	Not applicable	**U65.1** Development results in an unacceptable biosecurity risk.

6.4 Savings and transitional provisions

6.4.1 Existing and transitional land uses

Under the Precincts-Regional SEPP, an issuing authority can only issue an Activation Precinct Certificate for land only if there is a master plan and delivery plan that applies to the land concerned. The intent of these controls is to ensure that development or extensions to existing land uses that were existing before the commencement of the master plan, and to buildings on land not included within stage 1 can occur where appropriate.

Performance criteria	*Acceptable solutions* How to achieve it	*Merit assessment* Objectives for considering alternate solutions	*Unacceptable solutions* What we do not want to see
Existing and transitional land uses			
PC66 Expansion of existing and transitional development occurs where it does not compromise the development of the precinct.	**A66.1** For existing uses that were existing before the commencement of the master plan, the following documents continue to apply to the expansion of existing land uses on land within the Rural Activity Zone and to land not included as part of stage 1 of the delivery plan: a. State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 b. Moree Development Control Plan. Note: The expansion of existing land uses may include: • the development of buildings and structures that supports existing farming and primary production uses on the associated land while the farming use is in transition or the land is not included within stage 1 of the precinct or • minor extensions, additions or alterations to existing habitable buildings within the precinct such as: a. verandahs b. decks c. carports and garages d. living areas. **A66.2** Temporary land uses on land that would support the active use of the land. Examples include: a. farming and primary production activities b. special events.	Not applicable	**U66.1** Intensification of existing or establishment of new sensitive land uses that compromise the development of the precinct. Note: Sensitive land uses include community facilities, centre-based childcare facilities, educational establishment, emergency services facilities, sewerage systems, gali-water supply systems. **U66.2** Development of structures or land uses that compromise the establishment of important road, rail or open space/vegetation connections for the current or future stages of the precinct.

7

Monitoring, reporting and compliance

Scenic grounds of Mary Brand Park along the Mehi River, Moree
Courtesy of Destination NSW

7

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

7.1 General

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

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

An annual baseline audit will inform the actions required to protect and improve the precinct's targets, actions, management and mitigation measures. 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 Moree Plains Shire Council, the NSW Environment Protection Authority, industry and businesses, the community, and research and conservation sectors.

The delivery plan will be amended or updated as required.

Purpose and objectives

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

The program will report across different themes, including:

- sustainability
- circular economy
- energy management
- gali-water management
- waste management
- biodiversity
- 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 for industry across the precinct, the corporation would seek to also capture the data that is monitored and reported on under the Environment Protection Licence through liaison with proponents.

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 monitoring, reporting and compliance program across the precinct:

- monitoring is linked to management targets, objectives and outcomes in the precinct
- collaboration is essential between industry, businesses, research, education, academic and other partner organisations
- information and data are transparent, accountable, comprehensive 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 gali-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 Advisory Committee and will be made publicly available. This report will be prepared by the corporation and provide an assessment of progress delivering and achieving the precinct's outcomes, objectives and targets.

Compliance

Construction and operation

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

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

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

- Moree Plains Shire Council for planning related matters for a Complying Development Certificate, such as an already constructed structure
- accredited certifier or Moree Plains Shire Council for conditions relating to a Complying Development Certificate depending on the level of action required
- Secretary, Department of Planning and Environment for thermal electricity generating works in the precinct
- Secretary, Department of Planning and Environment for the removal of dhulu-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
- Moree Plains Shire Council for non-scheduled activities.

The NSW Environment Protection Authority (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, gali-water quality, forestry, contaminated sites, dangerous goods, hazardous materials and pesticides. The EPA requires regulated industry to report on its compliance. All Environmental Protection Licensees must provide an Annual Returns 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:

- 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 Moree Plains 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, prior to Moree Plains Shire Council issuing any statutory compliance /enforcement response. For scheduled premises the EPA is the regulatory authority and any non-compliance with licensing provisions must be reported immediately to the EPA, in concordance with the terms of the license.

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 Moree Plains Shire Council, Department of Planning and Environment, EPA, industry and businesses, the community, and research and conservation sectors.

7.2 Precinct-wide monitoring program

Throughout the delivery of the 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 and becoming a leading organisation, nationally and internationally, in sustainable development and implementing the sustainability framework to connect organisations, processes and source in a circular economy to gain efficiencies and minimise waste.

Mehi River, Moree

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 the government agency 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. This will include monitoring and reporting on greenhouse gas emissions data from activities and operations within the precinct to meet the net-zero emissions target.

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 operational 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, including reporting on greenhouse gas emissions during both construction and operation.

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 and 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:

- gali-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 is provided:

Gali-Water quality

- Gali-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 on groundwater
- The EMS register will identify developments with a high potential risk to groundwater, and any groundwater monitoring requirements that apply through an Environment Protection Licence
- The groundwater baseline register will be a live document which will be updated and amended as new development occurs within the precinct.

Air quality

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

Noise

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

Odour

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

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 the Department of Planning and Environment
- 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 buildingSMART 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 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 the corporation will adopt for data management include:

Public good	Should deliver public good
Value	Should provide ongoing value and insights of infrastructure across 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.

EMPs will ensure:

- application of best practice environmental management to a project
- the implementation of a projects 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.

8

Mapping

Two kids leaning over a fence looking at sheep

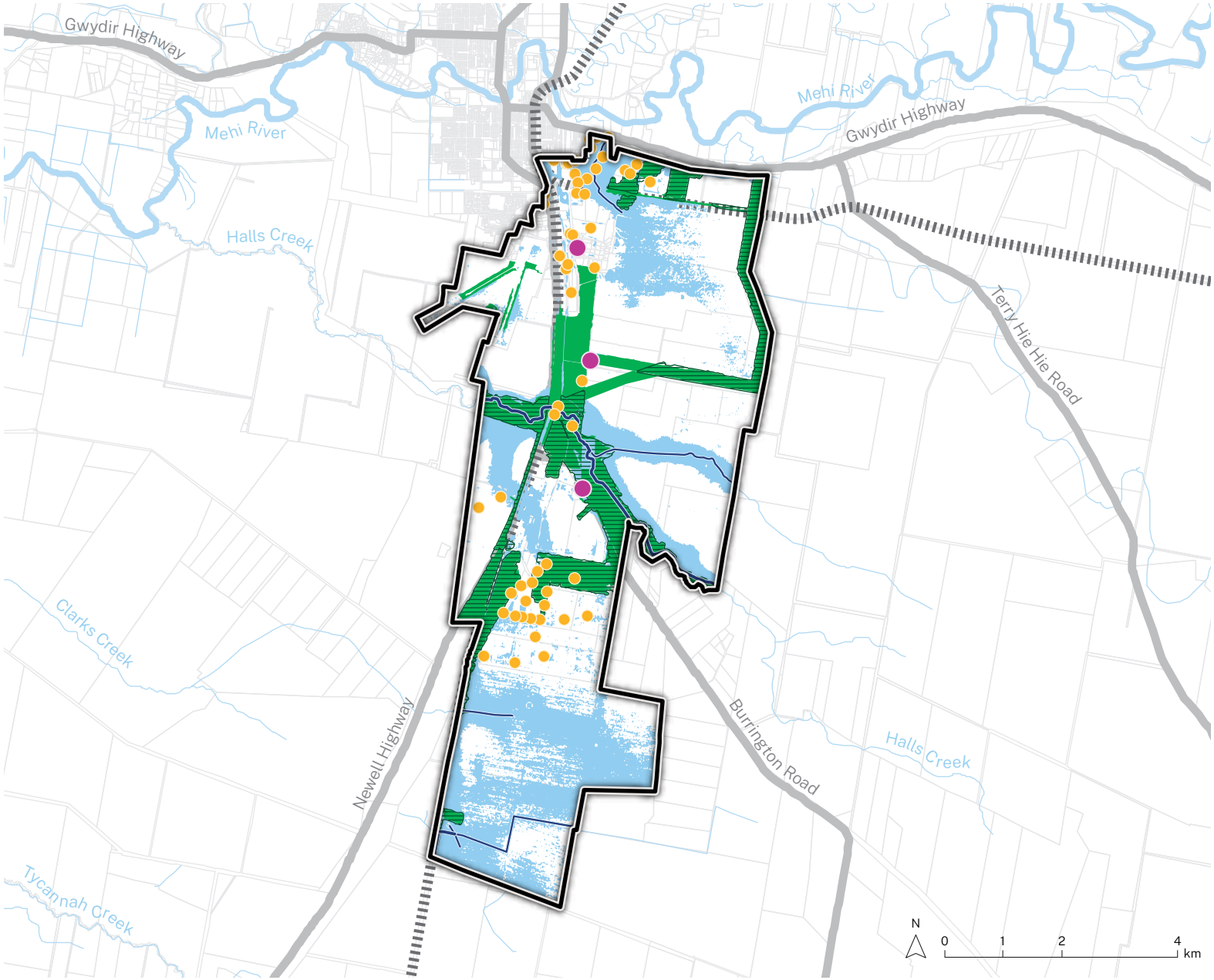
8

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

8.1 Constraints

This map identifies areas where additional consideration is required prior to development.

- Special Activation Precinct boundary
- Rail
- Major roads
- Rivers and creeks
- Wugawa-Flood Planning Area and Special Flood Considerations (PMF)
- Riparian zone
- Monitoring groundwater bores
- NGIS groundwater bores
- Terrestrial GDE and biodiversity recreated habitat connectivity corridor
- Protected vegetation

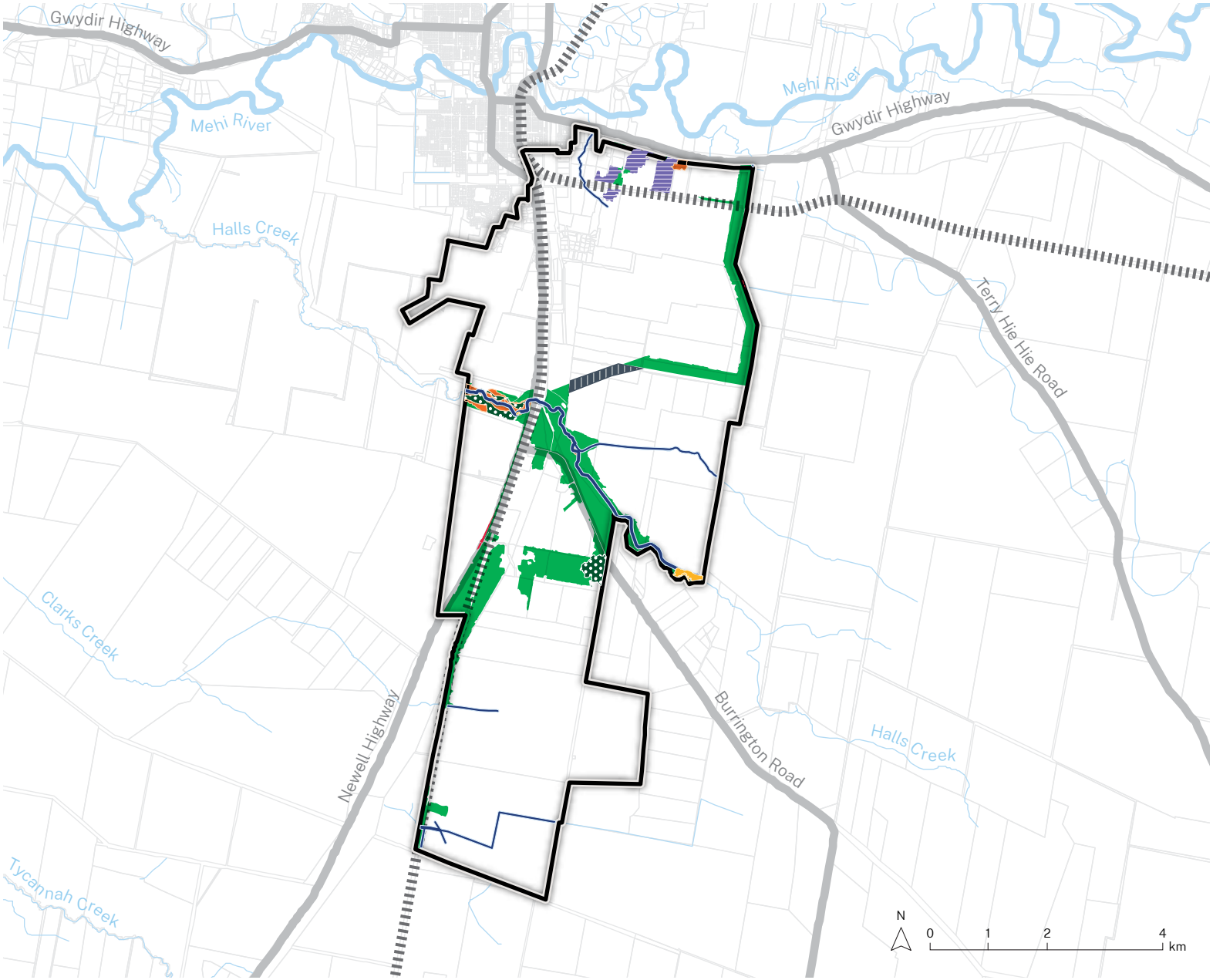


8.2 High value biodiversity

- Special Activation Precinct boundary
- Rail
- Major roads
- Rivers and creeks
- Riparian zone
- Biodiversity recreated habitat connectivity corridor

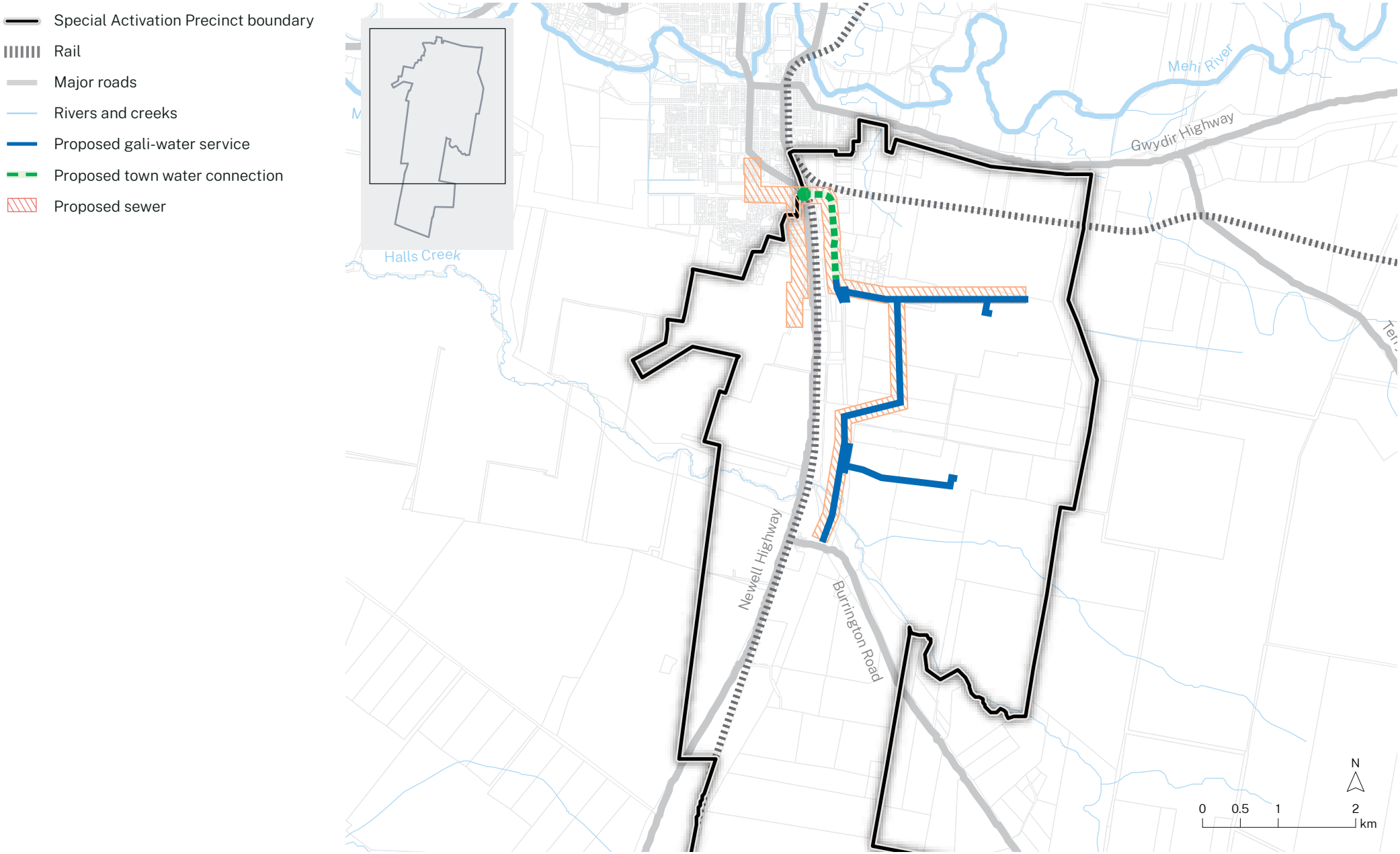
Protected vegetation

- Belah woodland on alluvial plains and low rises in the central NSW wheatbeltto Pilliga and Liverpool Plains regions
- Candidate Native Grasslands
- Coolibah-River Coobah-Lignum woodland wetland of frequently flooded floodplains mainly in the Darling Riverine Plains Bioregion
- Poplar Box-Belah woodland on clay-loam soils on alluvial plains of north-central NSW
- Queensland Bluegrass +/-Mitchell Grass
- Weeping Myall open woodland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion



8.3 Early works infrastructure

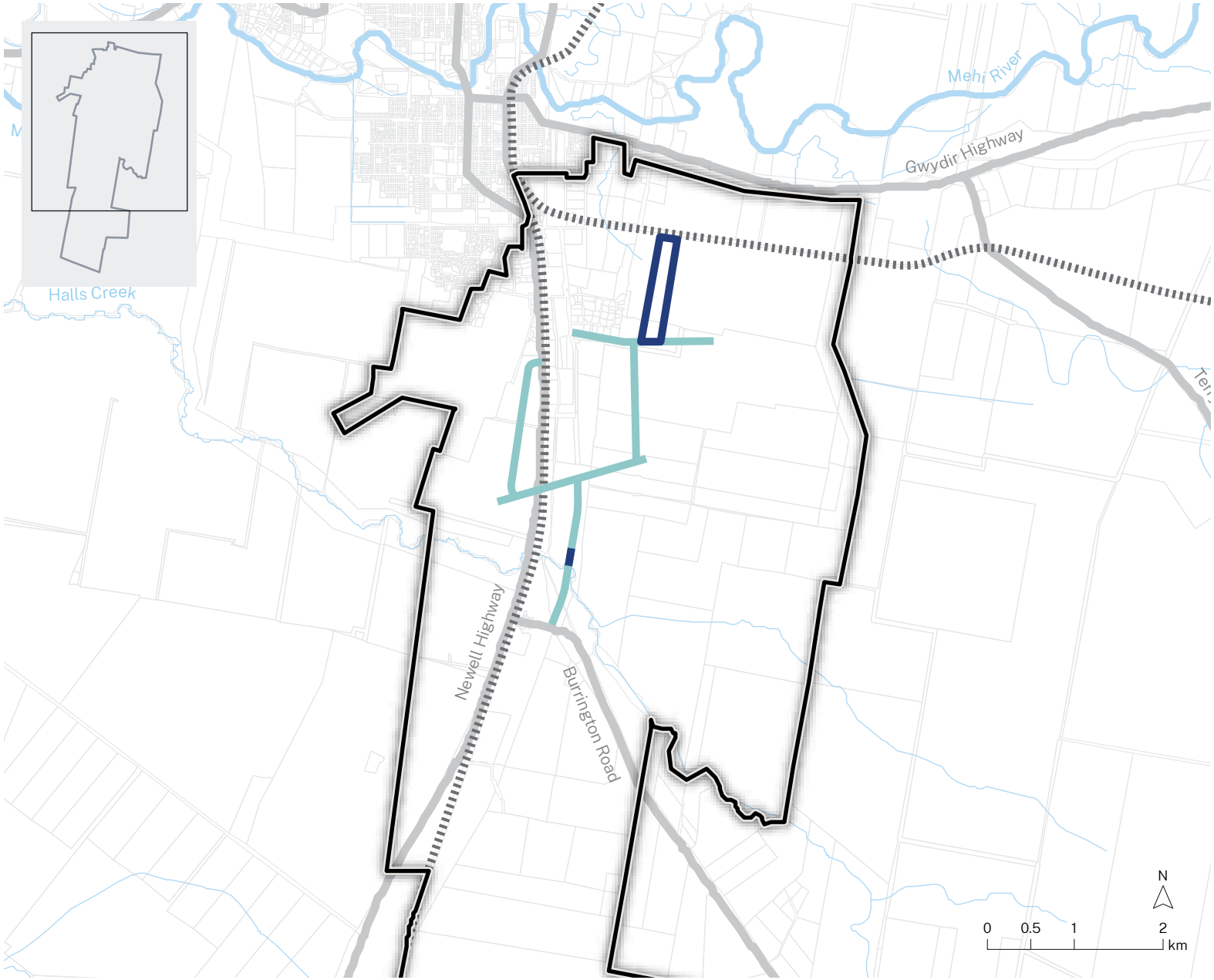
8.3.1 Gali-Water and sewer



8.3 Early works infrastructure

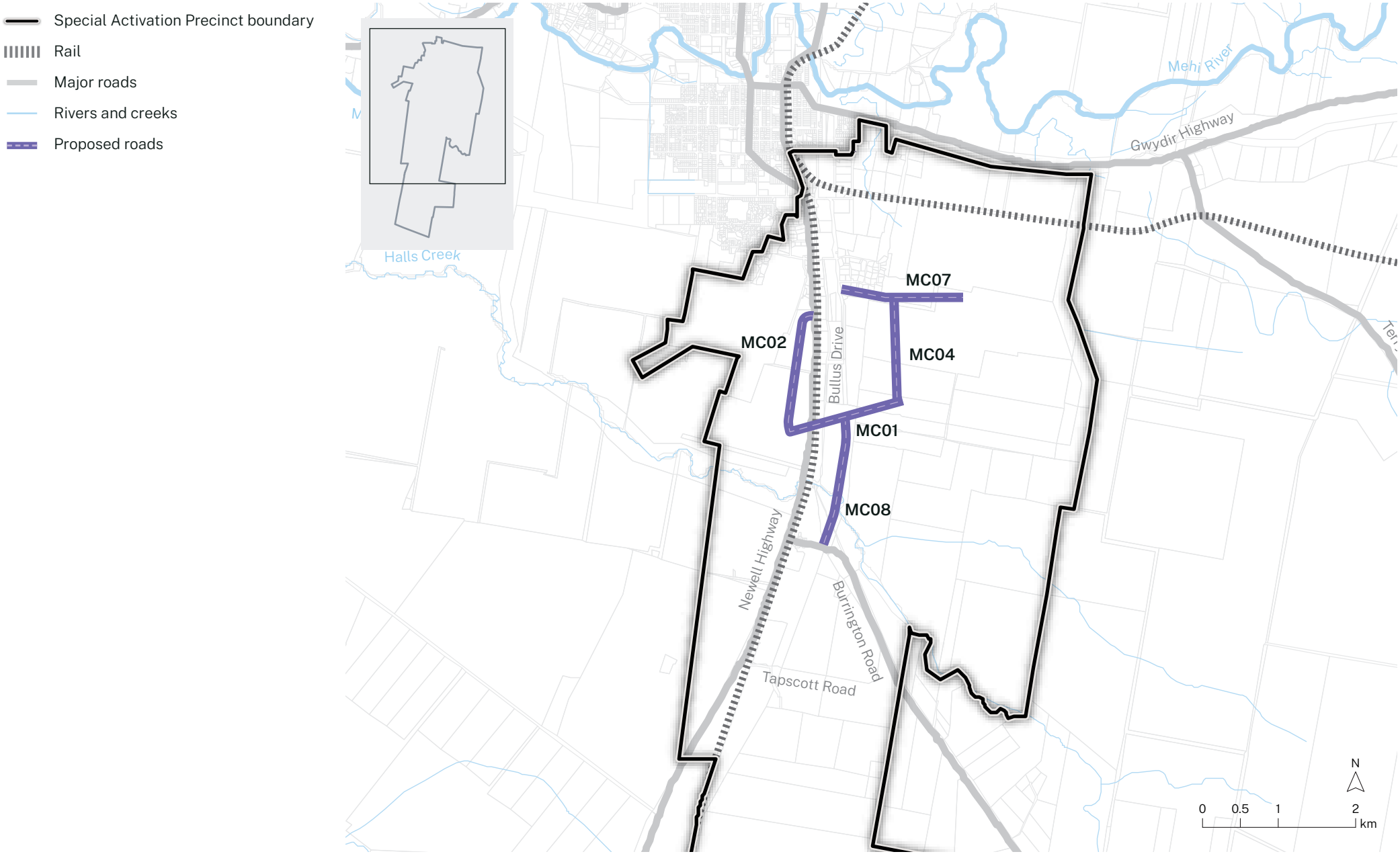
8.3.2 Stormwater

- Special Activation Precinct boundary
- Rail
- Major roads
- Rivers and creeks
- Proposed stormwater drainage basin and culverts
- Proposed drainage channel



8.3 Early works infrastructure

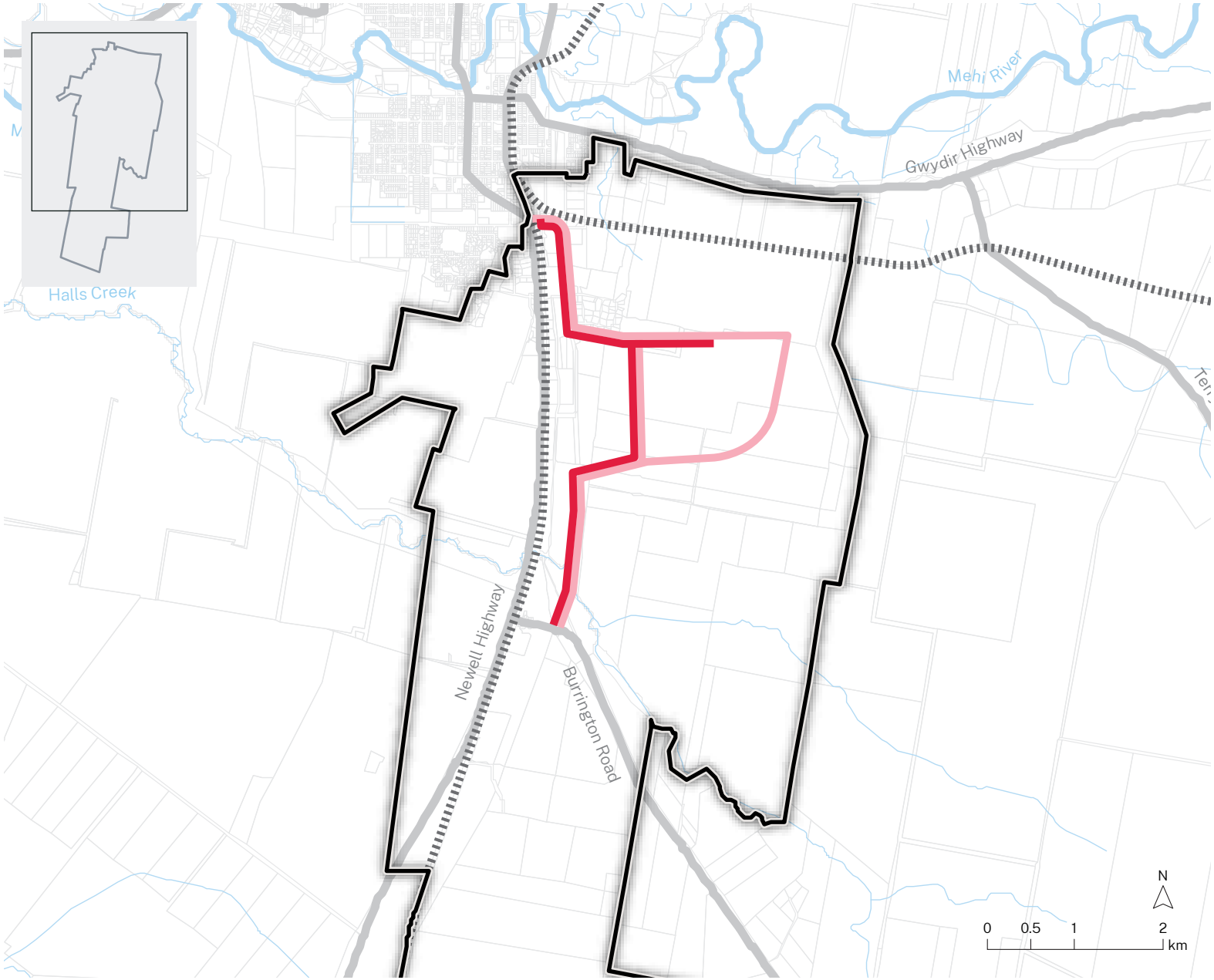
8.3.3 Road and rail



8.3 Early works infrastructure

8.3.4 Energy and communications

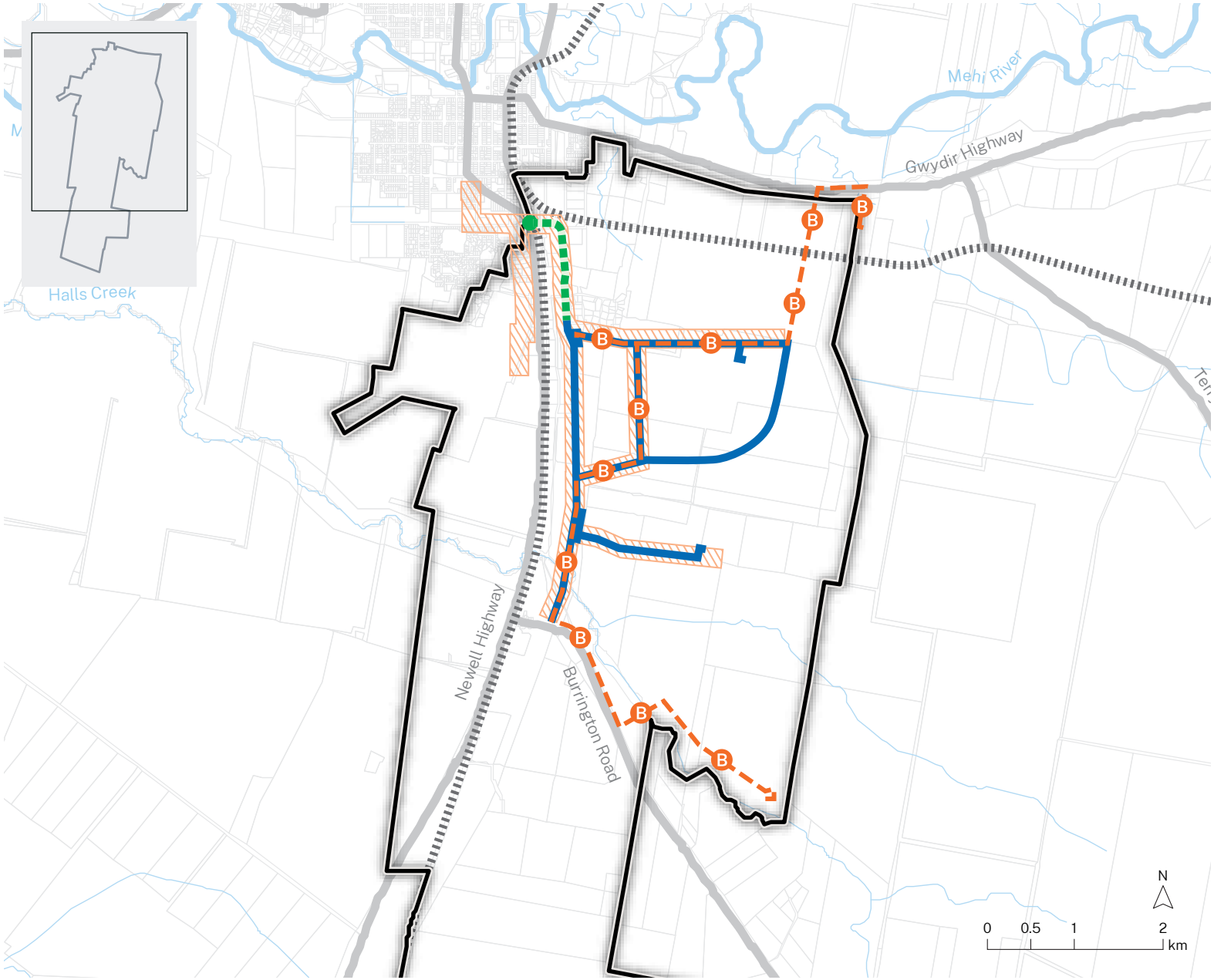
- Special Activation Precinct boundary
- Rail
- Major roads
- Rivers and creeks
- Proposed low voltage and electrical line
- Proposed communications



8.4 Future works infrastructure

8.4.1 Gali-Water and sewer

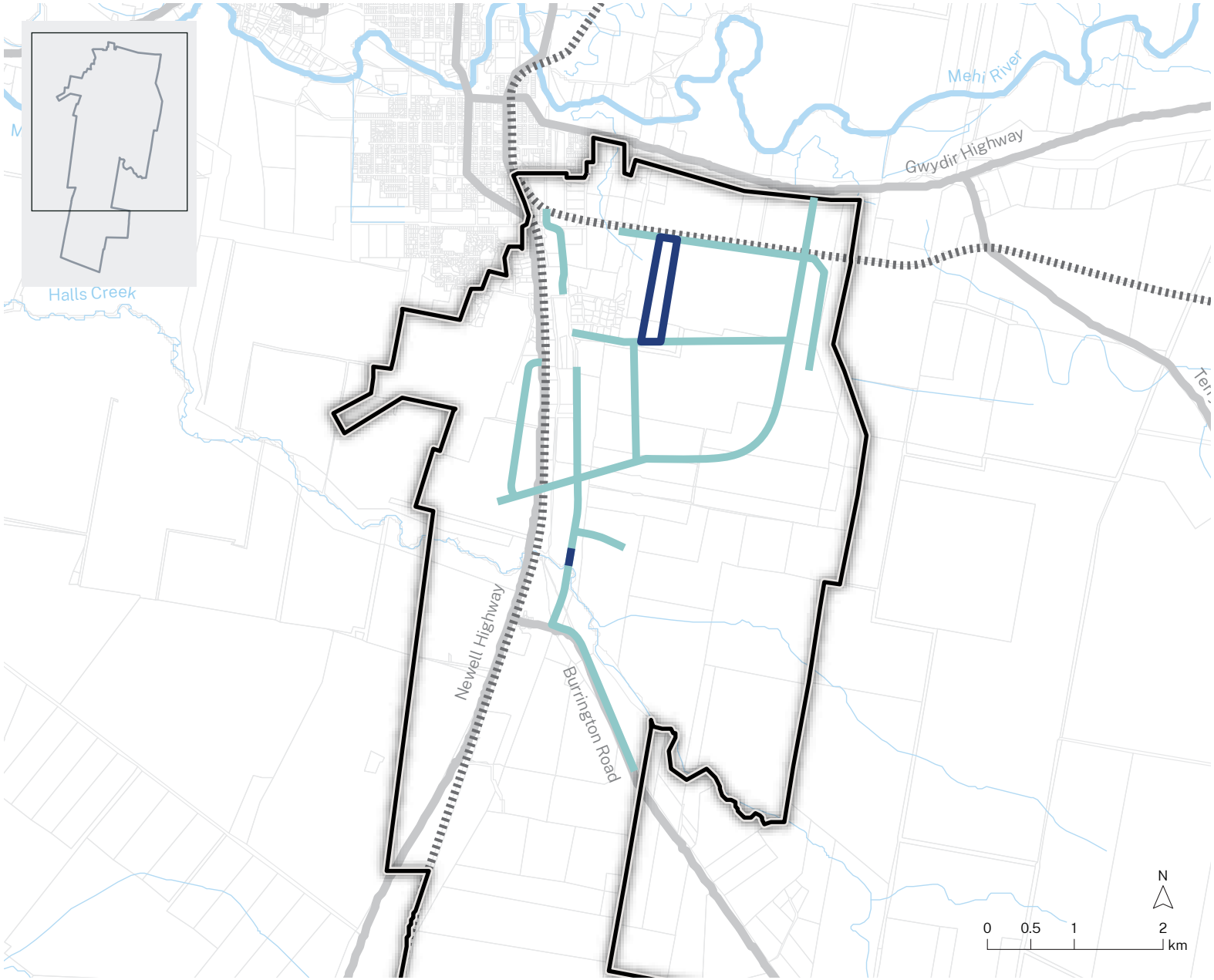
- Special Activation Precinct boundary
- Rail
- Major roads
- Rivers and creeks
- Proposed gali-water service
- Proposed town gali-water connection
- Proposed bore water line
- Proposed sewer



8.4 Future works infrastructure

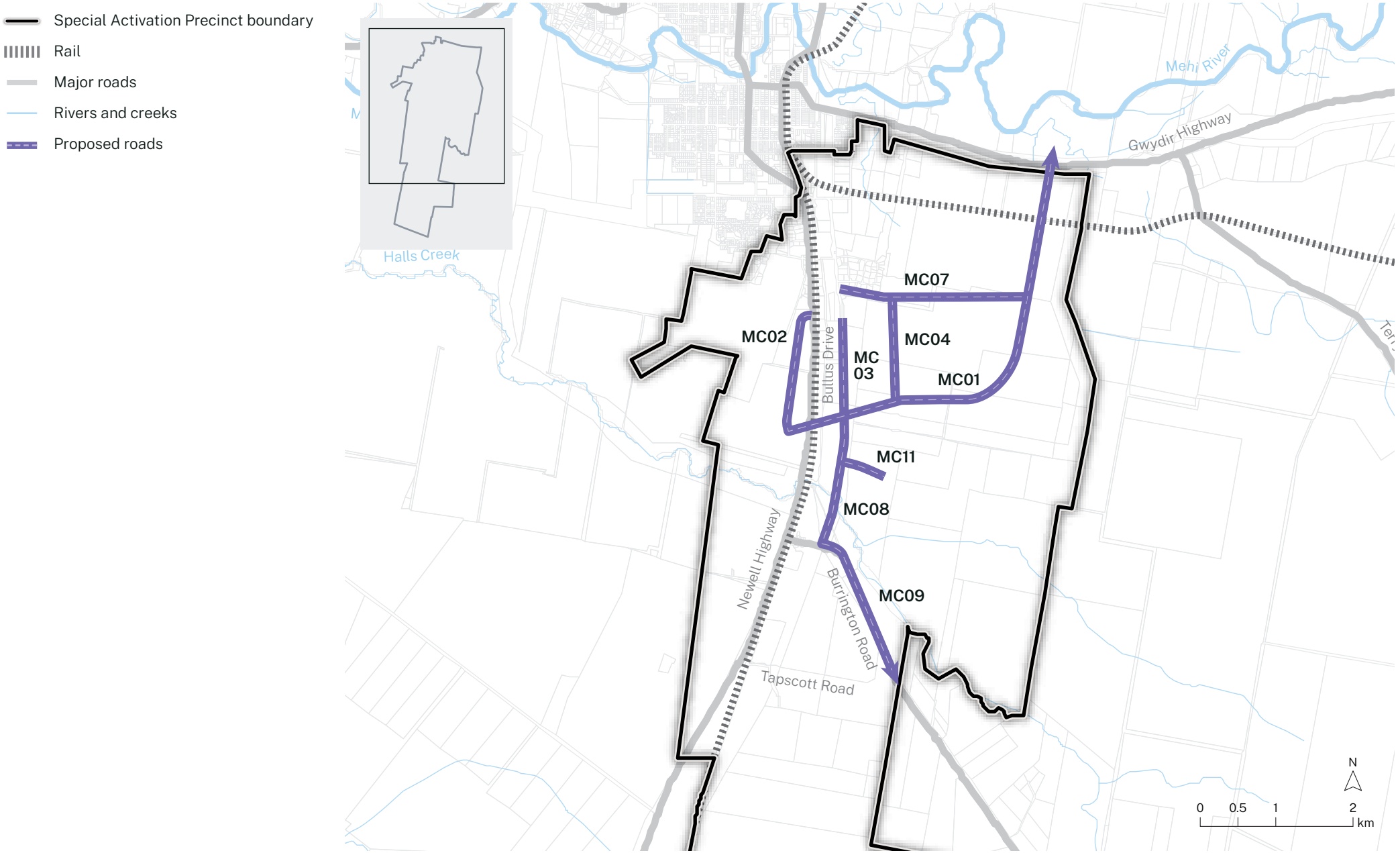
8.4.2 Stormwater

- Special Activation Precinct boundary
- Rail
- Major roads
- Rivers and creeks
- Proposed stormwater drainage basin and culverts
- Proposed drainage channel



8.4 Future works infrastructure

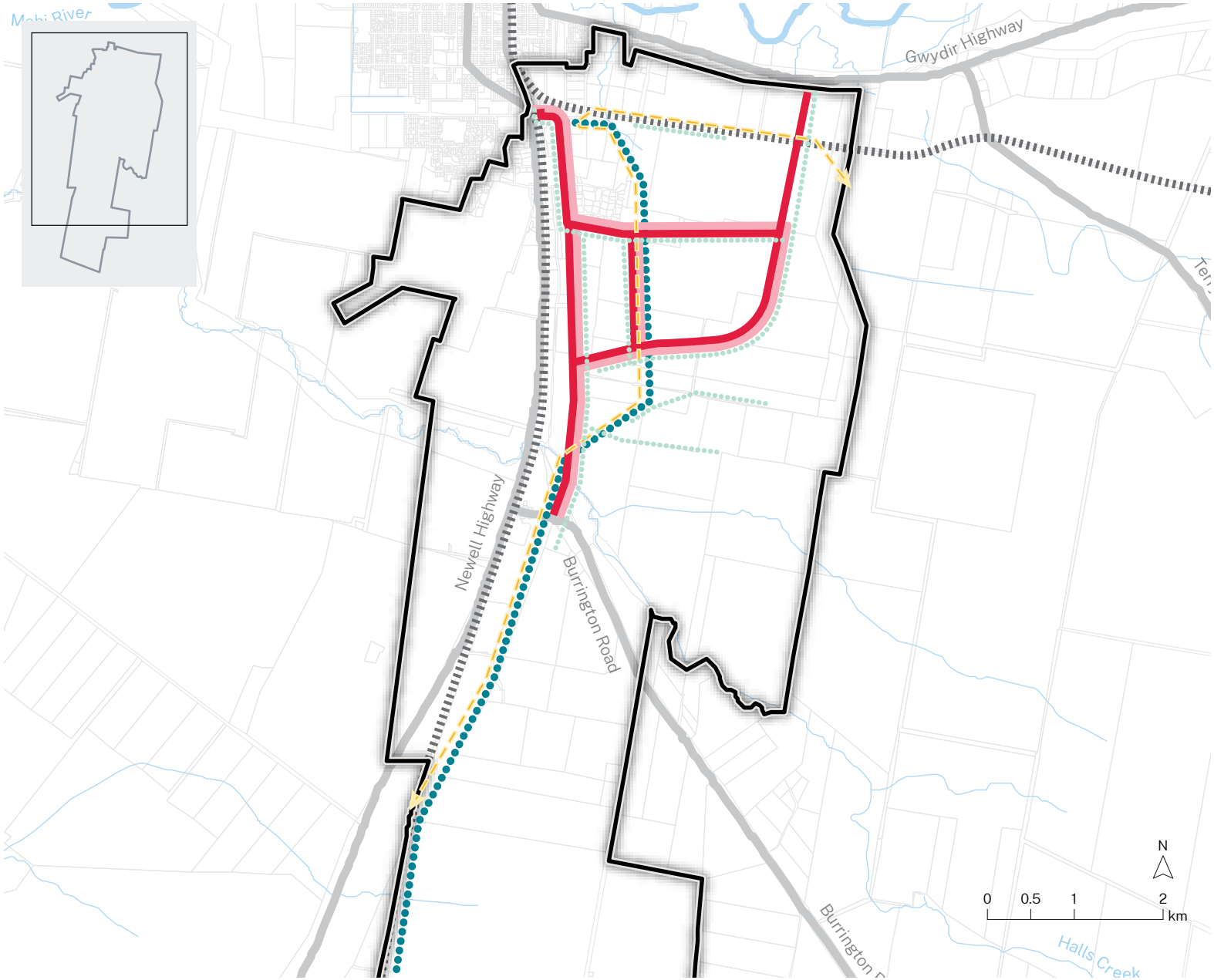
8.4.3 Road and rail



8.4 Future works infrastructure

8.4.4 Energy and communications

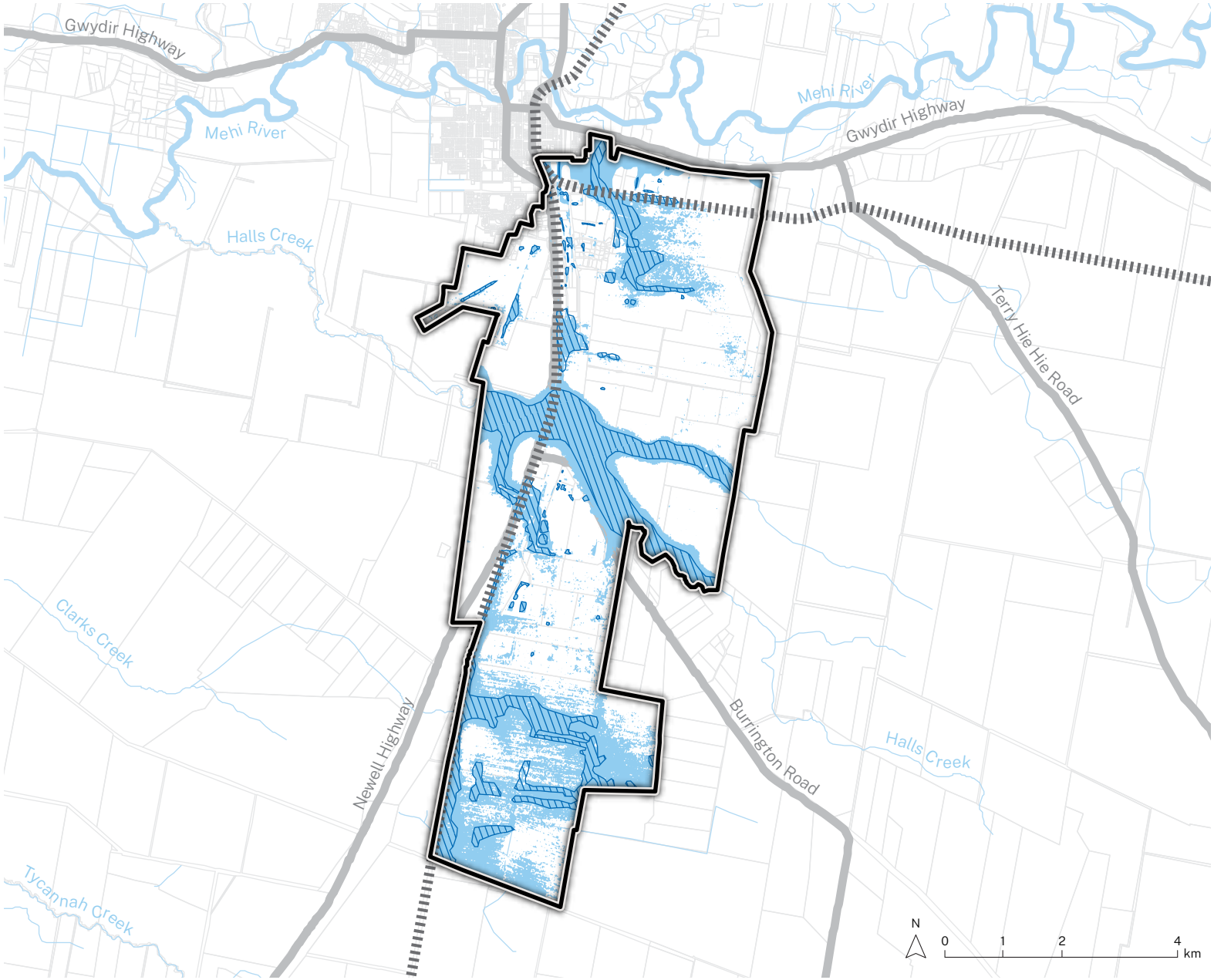
- Special Activation Precinct boundary
- Rail
- Major roads
- Rivers and creeks
- Proposed electrical service
- Proposed low voltage electrical line
- Proposed 132KV electrical line
- Proposed 22KV electrical line
- Proposed communications



8.5 Wugawa-Flood prone land

- Special Activation Precinct boundary
- Rail
- Major roads
- Rivers and creeks
- Wugawa-Flood Planning Area
- Special Wugawa-Flood Considerations (PMF)

Note: Flood depth in the Special Wugawa-Flood area is generally relatively shallow (less than 0.5m) in a Probable Maximum Flood event.



NSW GOVERNMENT

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