




Lansdown
Eco-Industrial Precinct

Overview: Infrastructure Master Plan 2022

Northern Australia's foremost
eco-industrial precinct for **advanced**
manufacturing, processing, technology
and **emerging industries.**





The Lansdown Eco-Industrial Precinct (LEIP) is a turning point for our city. It will boost the Townsville and North Queensland economy and job market and stimulate future-focused industries while protecting our rich natural environment.

The LEIP brings together innovative organisations, passionate about driving positive change for our economy, community and the environment.

Infrastructure Master Plan: a snapshot

The LEIP Infrastructure Master Plan defines a pathway for the planned and sustainable development of the LEIP.

This overview summarises key aspects of the Infrastructure Master Plan including the LEIP's location; planning timeline and development stages; LEIP proponents; and key recommendations regarding land use and infrastructure.

Acknowledgement of Country

The Townsville City Council acknowledges the Bindal People as the Traditional Custodians of the land on which the LEIP is situated.

Working with the Traditional Custodians

While the LEIP is located in an area that has undergone major landscape alteration since European settlement due to farming activities, the cultural values of the land remain for its Traditional Custodians.

Townsville City Council is committed to working closely with the Bindal People in accordance with our Cultural Heritage Management Agreement to manage and protect sites of cultural significance.

Townsville's vibrant future

The LEIP is laying the foundation for Townsville and the region's growth, enduring success and wellbeing.

Jobs

Construction: 7,381
(2,393 direct FTEs)

Operational: 6,628
(2,509 direct FTEs)



Grow our future

Propel Townsville to the next level by securing long-term jobs, as well as supplier opportunities and flow-on benefits for local businesses.



\$815m

In additional Gross State Product per annum (\$570m locally) and provide continued investment to support the LEIP's development.



Attract + inspire all generations

Offering exciting new job, career, upskilling and reskilling opportunities in emerging industries.



↑ Reputation

As Northern Australia's largest city and gateway to Asia, and a leader in eco-industrial development, renewable energy and advanced manufacturing.



Green growth

Creating a circular economy – recycling and reducing material use with an intent to reach zero waste.



Accelerate innovation and advance research

Develop new products, processes and technologies and collaborate with Townsville's world-class tertiary education and research facilities.



Expand port + airport throughput

Increasing the volume and diversity of products to and from Townsville each year.



A turning point

Sustainability at its core

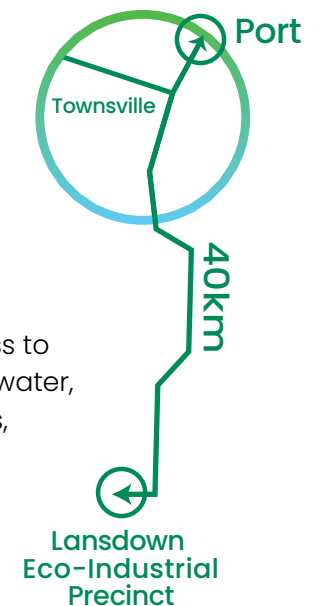
The LEIP's Sustainability Framework aligns with the United Nations Industrial Development Organisation (UNIDO) international framework for eco-industrial parks.

Underpinned by a shared commitment to globally-leading practice, it provides a lens for decision-making and encourages continuous improvement in environmental management across energy, water, waste, material use and the natural environment.

The site

The LEIP is being developed on a vacant 2,200 hectares (22 kilometre²) land parcel, 40 kilometres south of Townsville at Calcium.

With convenient access to rail, road, port, airport, water, power and natural gas, it is ideal for an eco-industrial hub.



The right fit

Townsville is the perfect home for the LEIP, with:

- Road and rail connections (national highway network, major rail links)
- Easy access to the Port of Townsville and Townsville Airport for interstate shipping and international export
- A broad and strong local economy, consistent population growth, and skilled and specialist labour
- World-class tertiary education and research facilities, including the only tertiary medical facility in Northern Australia
- Tertiary hospital and health services
- A broad range of public and private schooling options.



A hub for forward-thinking industries

The LEIP brings together diverse, like-minded organisations striving for a successful and sustainable tomorrow. It is a unique opportunity to join forces in a circular economy, deliver environmentally responsible practices, and drive real competitive advantage.

LEIP proponents

Queensland Pacific Metals

A production facility – operated by a modern and sustainable producer of critical metals for the emerging lithium-ion battery and electric vehicle sector.

qpmetals.com.au



Edify Energy

A green hydrogen production plant – of up to 1GW, as well as a solar photovoltaic and battery storage facility supplying the LEIP via a private network to meet the need for emission-free fuel for the LEIP, domestically and around the world.

edifyenergy.com



Drive It NQ

A driver education facility and Australia's only community owned, regional motorsport venue – spearheaded by a not-for-profit association of local organisations, clubs, and individuals.

driveitnq.com.au



RTE Energy

A world class, best practice photovoltaic (PV) manufacturing facility – with low emission outcomes while manufacturing 100% recyclable products.

rte-international.com



A circular economy

At the LEIP, proponents will join forces to share the benefits of a circular economy, complementary resources and dynamic collaboration.

Rather than a linear “make, use, discard” approach, a circular economy promotes reuse and recycling to extend the life (and value) of materials and resources. The LEIP will provide the opportunity for businesses to beneficially pool resources and exchange materials, water, energy and waste. A simple example: utilising excess heat from one process as energy for another’s production process.

The benefits range from potential lower costs (cutting waste disposal and material inputs) to reduced landfill and carbon emissions.

Solquartz

A multi-module silicon manufacturing facility – to supply silicon to the solar PV and battery manufacturing industries.

solquartz.com.au



Origin Energy Future Fuels

A commercial-scale green hydrogen production facility – enabling zero carbon fuels to be exported to Asia and Europe.

originenergy.com.au



North Queensland Gas Pipeline (NQGP)

A gas let-down station to connect to the adjacent NQGP – providing LEIP access to a reliable and low-cost gas supply. Sourced primarily from existing coal mines, gas provided to the LEIP will result in a net reduction in Queensland’s carbon emissions and support the transition to a low carbon economy.

northqueenslandgaspipeline.com.au



Planning the LEIP

Like any major development – particularly a visionary, regional scale development – the master planning process is complex and multi-faceted with multiple stakeholders participating.

Timeline

2001

Townsville City Council acquires land and the vision for an industrial precinct is born.

2017

Planning commences with initial feasibility studies.

2019

First public tender process inviting prospective proponents for the LEIP to tender.

2020

Townsville City Plan amended to include the LEIP.

LEIP development stages Subject to change based on demand

0

2022

Construction to commence on the enabling works including road access to the northern end (via Jones Rd) and raw water pipeline (from the existing Haughton pipeline).

1

2023–2025

Eastern area between Ghost Gum Road and Bidwilli Road.

2

2026–2030

Moving south following the provision of the grade-separated rail crossing and sub-arterial road at Ghost Gum Road.

3

2031–2035

The LEIP's southern and western areas.

4

2036–2041

Infill and expansion areas not initially provided with infrastructure.

1

Proponents move into full and expanded operations.

2

The LEIP continues to be further developed and enhanced as proponents' operations grow.

4

2021

Studies completed to inform the Infrastructure Master Plan.

Second public tender inviting prospective proponents and conditional allocation means the LEIP nears capacity.

Q1 2022

Townsville City Council endorses the Infrastructure Master Plan.

Q2 2022

Engagement with the LEIP proponents and other stakeholders to progress future planning. Commence negotiation of project development and infrastructure agreements with the LEIP proponents.

Q3 2022

Enabling works (Stage 0) and approved proponent construction to commence. Proponent development applications to continue.

Infrastructure Type	Responsibility	Specific Infrastructure
Core	Townsville City Council. <i>Subject to Council resolution, funding commitments, and agreements with LEIP proponents.</i>	Road, rail and raw water supply.
Proponent Led	Individual proponents.	Individual on-site sewage treatment, stormwater quality and quantity mitigation, power supply, communications connections, gas supply.
Potential	Proponents and relevant infrastructure authority (in agreement with Council). <i>Subject to further analysis and commitment by the relevant infrastructure authority and proponents.</i>	Infrastructure to improve LEIP function but not immediately necessary to meet the individual needs and operational requirements of the LEIP proponents, such as a rail siding and intermodal facility and precinct-wide effluent recycling and reuse scheme.

Infrastructure summary

Detailed analysis and stakeholder input has shaped the land use and infrastructure planning for the LEIP. These are detailed in the Infrastructure Master Plan – with clear recommendations for preferred land use and infrastructure.

Primary Access

Ghost Gum Road

Access for up to Type 2 B-Triples (53.5m) will be via the grade separated crossing near Ghost Gum Road (bridge over rail).

Secondary Access

Jones Road

Vehicles up to Type 2 B-Triples (53.5m) will access the LEIP via the Jones Road railway level crossing with active control. This will also be used to provide initial access to the LEIP.

Tertiary Access

Manton Quarry Road

Manton Quarry Road rail crossing has been temporarily approved until internal roads and grade separated crossings are constructed. Queensland Rail approval will be sought for the upgrade to the Manton Quarry Road rail level crossing with active control for use by general access vehicles including semi-trailers or truck and dog (19.0m).

Road infrastructure: Access to the LEIP

- Road Upgrade
- Existing Roads
- +++++ Rail
- LEIP Boundary

Jones Road

Woodstock Giru Road

Ghost Gum Road

Bidwilli Road

Manton Quarry Road

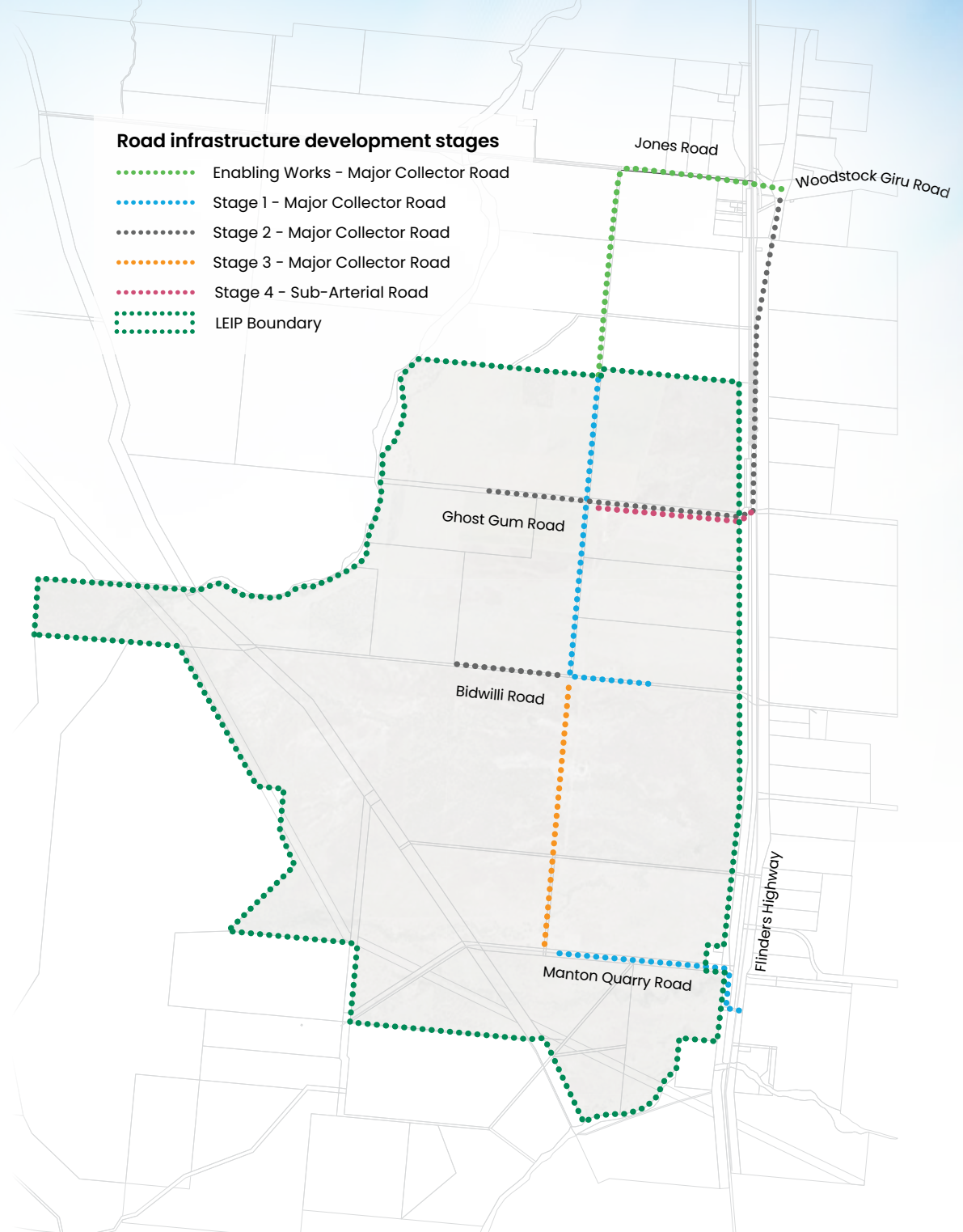
Flinders Highway

Stage 0 to 4

Road

- Road infrastructure planning covers internal road hierarchy, including new major collector roads and local industrial service roads.
- Direct access to the Port of Townsville via Flinders Highway.
- Consolidation and improvement of the Woodstock railway crossing to provide east-west connectivity between the LEIP and Flinders Highway.
- Development and infrastructure in 5-year increments from 2021 to 2041 – as well as for beyond 2041.*
- Initial LEIP access is to be provided via the upgrading of the railway level crossing at Woodstock Giru Road; the Glen Road intersection to allow for triple road trains; and Jones Road to Ghost Gum Road. This will subsequently function as the secondary access to the LEIP.
- Primary access via a new grade separated crossing near Ghost Gum Road.
- Tertiary access via Manton Quarry Road to southern development areas –subject to Queensland Rail and Department of Transport and Main Roads approval.*
- Existing Ghost Gum Road, Shaw Road and Bidwilli Road railway crossings are to be decommissioned.*
- From Ghost Gum Road, access to central and southern precincts via a central spine road (North-South Major Collector Road).

* Pending proponent requirements



Infrastructure summary

Rail

- Rail access available via the Mount Isa rail line located on the LEIP's eastern boundary.
- Upgrade of existing passing loop at Glenn Road (to 1.7km) to the south of Ghost Gum Road as part of the enabling works.
- Future potential for rail siding and Intermodal Hub Facility.*

* Potential

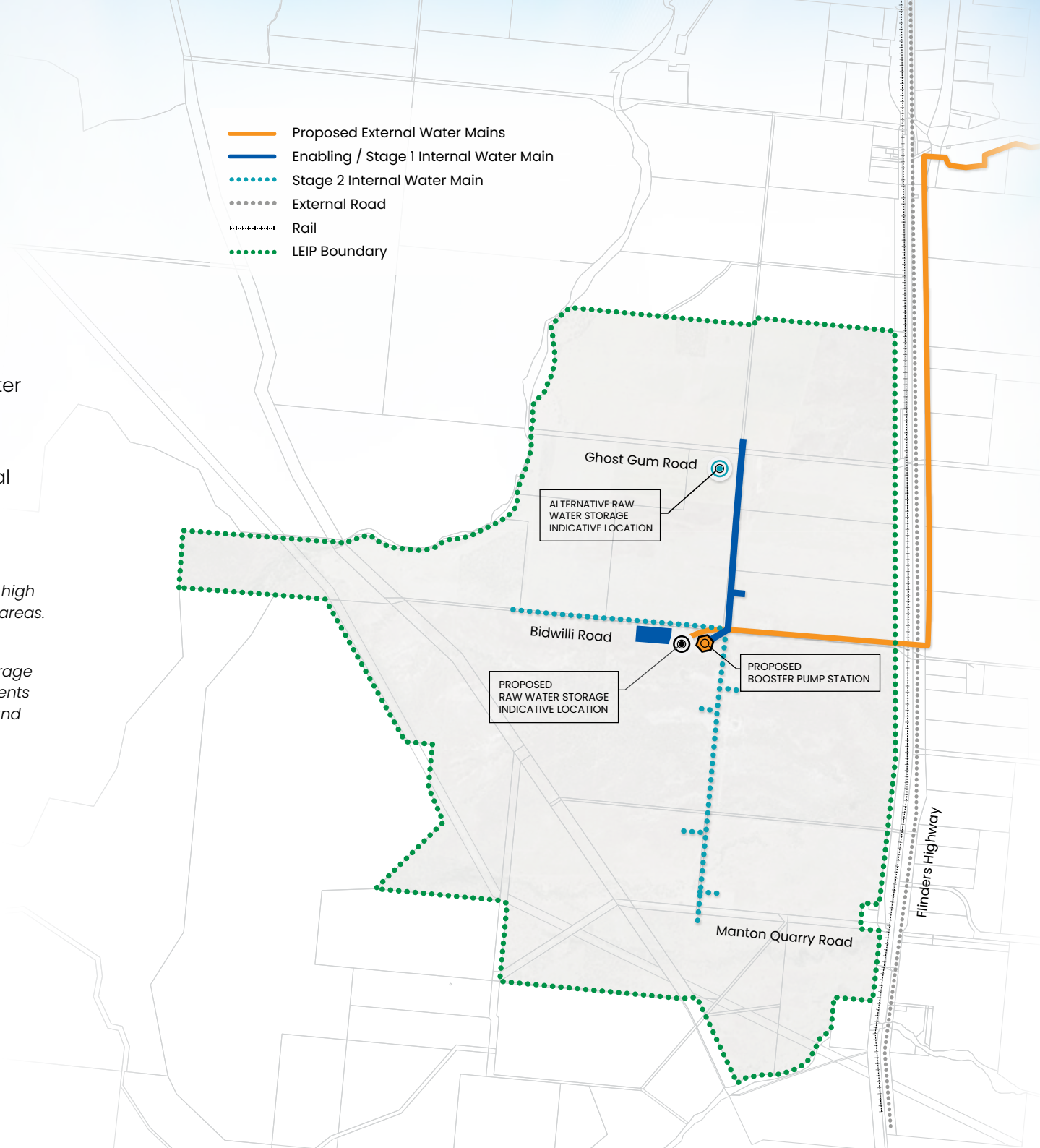


Water

- Raw water supply via a new pipeline from the Houghton Pipeline with booster pump station.
- LEIP proponents are to provide on-site potable water to match their individual requirements.

Water infrastructure sizing is based on the initial proponents' water demands (above standard for high impact industry) and standard practice for other areas.

Townsville City Council will provide a raw water connector to the LEIP, storage lagoon (12 days storage volume) and pump station. Individual LEIP proponents will provide on-site water storage for firefighting and two days water consumption volume.





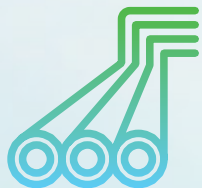
Waste water

- Site-based wastewater treatment facilities, delivered by the LEIP proponents to match their individual requirements.



Electricity reticulation

- Proposed Majors Creek Solar Farm is the preferred option for energy supply.
- Point of energy supply and final electricity network configuration is subject to ongoing liaison between the LEIP proponents and electricity providers.



Gas

- Gas supply from the North Queensland Gas Pipeline via construction of a gas let-down station and micro-LNG facilities by the pipeline's operator on dedicated land inside the LEIP, following agreements with the LEIP proponents.



Telecommunications

- NBN fixed-wireless array already established in the vicinity of the LEIP.
- NBN fixed-wireless upgrades or satellite connection may be considered by the LEIP proponents based on their individual requirements.



Stormwater

- Townsville City Council-owned and maintained stormwater quality control devices for road infrastructure (e.g. bioretention swales) to be located in the verge of Council-controlled roads.
- Stormwater mitigation and quality control for individual sites to be addressed by the LEIP proponents in compliance with Townsville City Plan's assessment benchmarks.
- Proponent-controlled and maintained stormwater quality improvement devices to be located within each LEIP proponent's site.

In adopting a **circular economy**, options to pool resources and exchange materials, water, energy and waste are to be further investigated.

A shared vision for Townsville, Queensland and Australia

The LEIP's development and vision aligns with future-focused local, Queensland and Australian Government strategies and initiatives including:

- Townsville City Deal
- Modern Manufacturing Strategy
- Advanced Manufacturing 10-year Road Map
- Queensland Hydrogen Industry Strategy 2019–2024
- National Hydrogen Strategy
- North Queensland Regional Plan
- Advance Queensland Strategy
- Australia's Long-Term Emissions Reduction Plan to achieve net zero emissions by 2050.
- Northern Australia Agenda.





For more information about the Lansdown
Eco-Industrial Precinct, please contact:

 LEIP@townsville.qld.gov.au

 townsville.qld.gov.au/lansdown

This Infrastructure Master Plan Overview is a high-level overview of the Lansdown Eco-Industrial Precinct Infrastructure Master Plan. It does not contain all of the information that may be relevant for your purposes. You should refer to the Infrastructure Master Plan for more detailed information. The Infrastructure Master Plan is available by contacting Council.

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