TOOWOOMBA GREEN.IS

131 872 | info@tr.qld.gov.au | www. tr.qld.gov.au

TOOWOOMBA REGION

This document has been prepared for the benefit of Toowoomba Regional Council by E2Designlab. Report graphics have been produced by Oxigen. No liability is accepted by Council or any employee or consultant with respect to its use by any other person.

Message from the Mayor

It gives me great pleasure to present Toowoomba Regional Council's Green Infrastructure Strategy. Green infrastructure is integral to all we do and who we are in the Toowoomba Region. It weaves together a rich and diverse tapestry of landscapes that underpin our thriving communities and vibrant economies. From Toowoomba City's iconic street trees and 'garden city' image to the rich and fertile landscapes of the Darling Downs food production area, our economy and lifestyle depend on living assets and systems.

'Green infrastructure' includes parks, vegetation and habitat corridors, farmlands, urban creeks and even green walls on buildings. This network of diverse natural assets are part of a great living system that makes life in our region healthier and more enjoyable.

As the Region grows and takes shape, green infrastructure continues to provide essential services for communities and landscapes through increased resilience against natural disasters, addressing climate challenges, cleaning the air and water and providing habitat for native flora and fauna. Importantly, increasing the amount of green in the places where we live also improves our physical and mental health and wellbeing.

Green infrastructure can and should be planned, delivered, managed and assigned a value, much the same as we do with 'hard' infrastructure networks, like road networks and utilities.

Developing a strategy around living assets is unique and challenging. It is a bold ambition. This strategy is innovative and positions the Toowoomba Region as a leader in Green Infrastructure planning and delivery.

Council has an important role to play in delivering this strategy, but its success will best be achieved through partnering with the community and organisations who work in our Region to celebrate and build-on our rich tradition of green places and spaces.

The Green Infrastructure Strategy will ensure that embracing the liveability and sustainability of the Region, by preserving, enhancing and expanding our green infrastructure networks will be at the core of every decision we make and every action we take.

Paul Antonio
Mayor

Executive summary

Toowoomba's Green.IS

The Toowoomba Region is a tapestry of natural assets spreading from the Great Dividing Range into the Darling Downs. Across these diverse landscapes, green infrastructure underpins the local identity, from the famous gardens in the city and the iconic trees that line suburban streets, to the fertile agricultural plains and bushland parks.

This strategy sets out a new approach that recognises the value of nature in shaping who we are and how infrastructure is planned and delivered to respond to this. The varied urban and rural landscapes across the Region offer a range of opportunities to shape, preserve and create a network of green infrastructure that will support our communities and enrich our environment in a changing climate.

Our vision

A rich tapestry of green and healthy landscapes that support thriving communities and a vibrant economy, where nature is valued, embedded and enriched at every opportunity.

Objectives

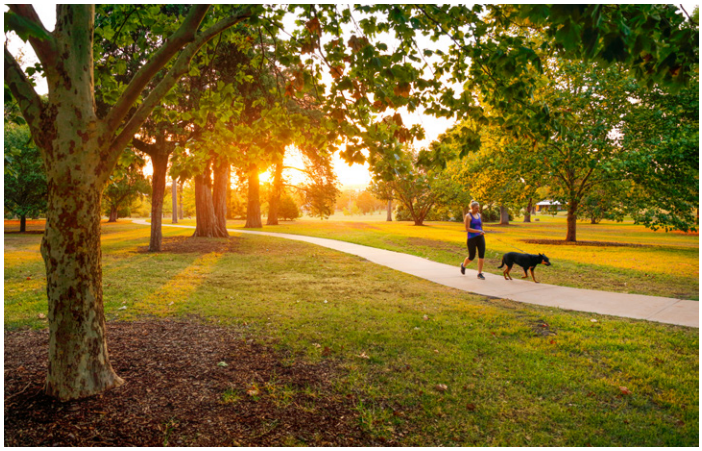
Our Green Infrastructure Strategy will deliver four key objectives:

- Enrich natural systems
- Support healthy communities
- Protect and enhance local identity and character
- Increase collaboration and co-design

Actions and Implementation

Our Region's green infrastructure is already valued so we aren't starting from scratch - but there is so much more potential to unlock. To continue to improve and become a leader in green infrastructure, we acknowledge that change needs to occur on-ground but also in our plans and actions. Council will be taking a comprehensive approach to green infrastructure planning and delivery across four focus areas for change:

1. **Policy and delivery tools** - to set direction and drive decisions
2. **Demonstration projects** - to trial new ideas in different locations and build confidence
3. **Advocacy and education** - to show leadership, raise awareness and empower others
4. **Skills and knowledge** - to build further capability in delivery of green infrastructure



Contents

Message from the Mayor 3

Executive summary 4

The role of this document 6

Its purpose 7

How to use it 7

How it sits within Council's policy framework 8

Who will be responsible for it 8

1.0 Toowoomba's Green.IS 10

Defining green infrastructure 11

Sowing the seeds for better landscapes 12

Green infrastructure for the Toowoomba Region 14

Treasuring what we have, embracing what we need 15

2.0 What we want to achieve 19

Our vision 19

Objectives 20

3.0 How we will achieve it 23

4.0 Action plan 27

Quick wins and laying long-term foundations 28

Action plan 30

Where to from here? 38

How to stay informed? 38

The role of this document

Its purpose

Toowoomba's Green Infrastructure Strategy (Green.IS) sets the direction and initial actions to support a step change in how green infrastructure is valued, protected and enhanced across the Toowoomba Region so that it becomes business as usual in the near future.

The purpose is not to set measurable targets at this time, but to lay the foundation for the future development of meaningful objectives based on a strong understanding of Toowoomba's existing green infrastructure.

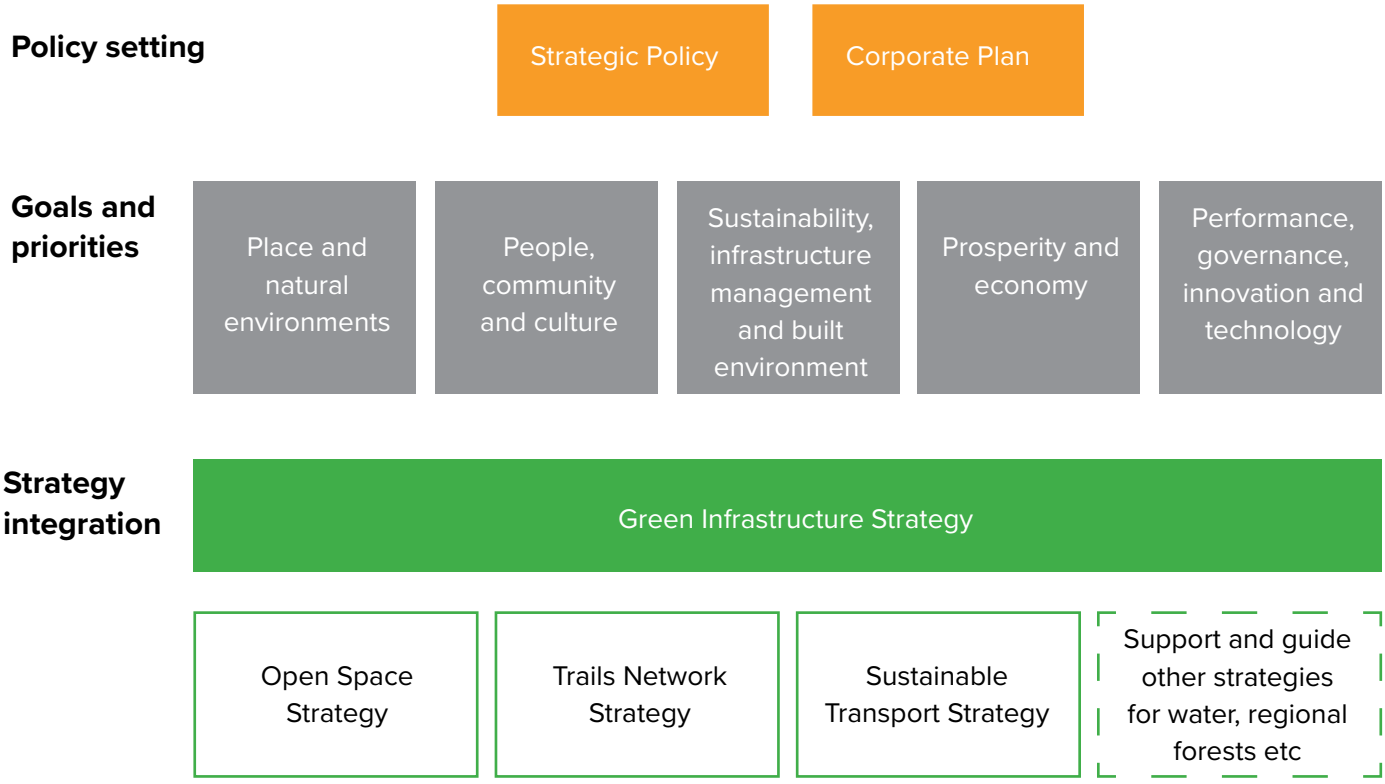
It recognises that the vast tapestry of living assets across Toowoomba's rural, urban and natural areas are a key element of the Region's character and identity. It also provides a framework for working together, because green infrastructure occurs on both private and public land and is part of other infrastructure networks. Achieving the outcomes of the strategy will require collaboration across Council, industry and the community.

How to use it

1.0 Toowoomba's Green.IS	Defines green infrastructure and its importance across the Toowoomba Region.
2.0 What we want to achieve	Sets the vision and objectives that will be achieved with the delivery of this strategy.
3.0 How we will achieve it	Identifies the types of actions which are required to achieve effective step-change.
4.0 Action plan	Details the actions required across the Toowoomba Region to achieve the vision and objectives of this strategy.

How it sits within Council's policy framework

Green.IS will help to deliver the priority goals of Council's Corporate Plan and Strategic Policy for the Toowoomba Region. It will also guide and support integration with other infrastructure networks such as parks and open space, roads, pathways and stormwater to ensure that the objectives of this strategy are delivered across Council.



Who will be responsible for it

Implementation of this strategy will require strong leadership by Council and on-going collaboration to ensure the protection and delivery of green infrastructure becomes business as usual across the Toowoomba Region in the future. The action plan in this document identifies a mix of 'quick wins' and 'change projects' that lay the foundation for longer term outcomes. The key responsible parties for each of these actions are outlined. While Council will lead the delivery of this strategy and ongoing monitoring of its success, the broader community will play an important role as custodians of many of the green infrastructure elements across the Toowoomba Region.

1.0

Toowoomba's Green.IS

1.0 Toowoomba's Green.IS

Just as the past has shaped today's landscape, our strategy for green infrastructure in the Toowoomba Region will help us to create a better future in which our actions protect our natural assets and enrich our built environment by creating a vibrant network of connected green infrastructure.

The opportunities are many and exist at all scales, from the home garden, to a tree-lined street, to parks and open spaces, and through to farms and bushlands.

By planning and managing green infrastructure together as a whole, we can deliver much more for our communities and our environment.

Defining Green Infrastructure

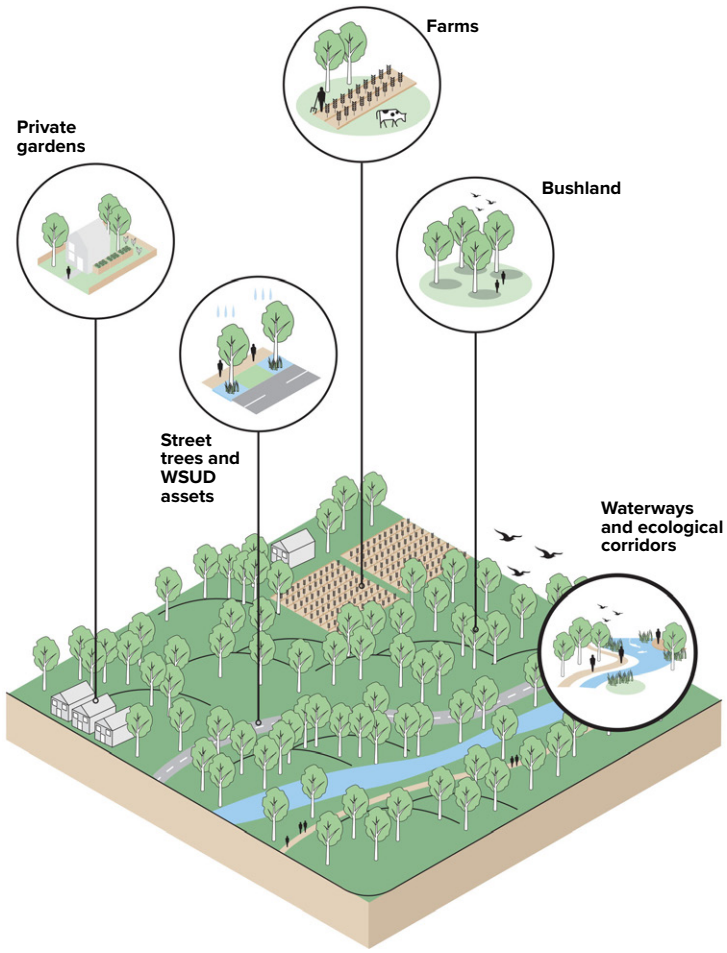
Green infrastructure is defined as:

"A network of naturally occurring or built living assets that, through natural processes, deliver important benefits to people and places in both urban and rural environments."

These living networks play an important role in our urban and rural areas by letting natural processes clean air and water and provide habitat, while also creating beauty and providing opportunities for communities to connect with nature.

Green infrastructure can be found throughout all parts of the Toowoomba Region, ranging from individual living assets such as private gardens, street trees, green roofs and walls, community gardens, Water Sensitive Urban Design (WSUD) elements, parks, farms and bushland, as well as living networks such as waterways and ecological corridors.

The natural processes provided by green infrastructure also enhance other networks such as roads, recreation and waterway corridors by providing shade, improving air quality, slowing and filtering stormwater flows, creating habitat and adding to the character, amenity and health of these areas. This provides Council with opportunities to plan these together to achieve multiple outcomes from infrastructure investments.



Sowing the seeds for better landscapes

The way that we interact with the natural environment is changing. More and more, we are realising the benefits of connecting natural assets together to form living networks that are useful, more resilient and more sustainable than assets planned and managed in isolation. For example, connecting bushland areas with habitat corridors improves natural processes and the habitat value for native animals and plants by supporting natural processes. In our urban areas, connecting parks and other public spaces with avenues of street trees and vegetated creek corridors creates cool and pleasant walking and cycling routes. We are also becoming better at integrating living assets into our built environment to create landscapes that serve multiple purposes. For example, some green spaces are being designed to offer great recreational opportunities while also helping to manage flooding.

Natural processes are often clever, efficient and responsive to local conditions. By integrating green infrastructure into the design of the places that we live and work in, we can enhance the health and well-being of our local communities and make our environment more resilient to the effects of a variable climate. For example, using a practice called water sensitive urban design (WSUD), we are finding ways to use trees and gardens in our streets to absorb and filter stormwater run-off from our roads before it enters our waterways. Similarly, vegetated roofs and walls can be used to absorb air pollution while creating a welcome green area within an urban setting.

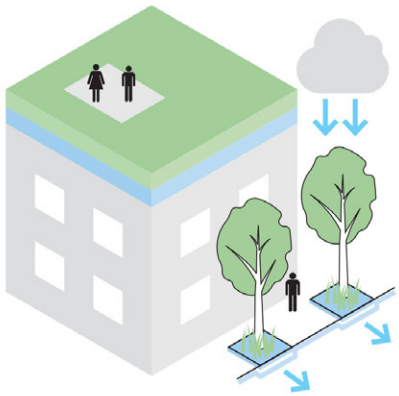
In the same way that we plan, improve and maintain other infrastructure like roads and utilities, green infrastructure needs to be actively managed. This strategy outlines a plan for green infrastructure in the Toowoomba Region.

Infographic references:

- Economy.id.com.au. (2019). Agricultural industry statistics | Toowoomba | economy.id. [online] Available at: https://economy.id.com.au/toowoomba/value-of-agriculture?BMID=20
- Tsbe.com.au. (2016). Agriculture Profile 2016. [online] Available at: https://www.tsbe.com.au/sites/default/files/uploaded-content/field_f_content_file/7001235agricultureindustryprofile2016.pdf
- Pandit, R, Polyakov, M, Tapsuwan, S & Moran, T 2013, 'The effect of street trees on property value in Perth, Western Australia' Landscape and Urban Planning, vol. 110, pp. 134-142. https://doi.org/10.1016/j.landurbplan.2012.11.001
- Nieuwenhuijsen, M and Khreis, H 2017, 'Green space is important for health', The Lancet Journal, vol. 389, issue no 10070, pp. 700. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)30340-9/fulltext
- Pope, A. (2019). News - Urban parks could make you happier. [online] UAB News. Available at: https://www.uab.edu/news/research/item/10222-urban-parks-could-make-you-happier?T=AU
- Toowoomba Regional Council and Oxigen (2017) 'Toowoomba Green Infrastructure Strategy – Stage 1'
- Hunter MR, Gillespie BW and Chen SY-P (2019) 'Urban Nature Experiences Reduce Stress in the Context of Daily Life Based on Salivary Biomarkers'. Front. Psychol. 10:722. Available at: https://www.frontiersin.org/articles/10.3389/fpsyg.2019.00722/full
- Nowak DJ, Hoehn R, and Crane DE (2007) 'Oxygen Production by Urban Trees in the United States' - U.S. Forest Service and International Society of Arboriculture joint publication, vol. 33(3):220-226, pp. 222. Available at: https://www.nrs.fs.fed.us/pubs/jrnl/2007/nrs_2007_nowak_001.pdf

WHY GREEN INFRASTRUCTURE?

GREEN INFRASTRUCTURE BENEFITS



65% REDUCTION
OF STORMWATER RUN-OFF THROUGH GREEN ROOFS

80% REDUCTION
OF POLLUTANTS ENTERING OUR CREEKS, RIVERS AND DAMS THROUGH WSUD

1 HECTARE OF HEALTHY SOIL =
15 TONNES
OF ORGANISMS

250,000 TOURISTS
VISIT TOOWOOMBA DURING THE CARNIVAL OF FLOWERS

20 MINUTES
OF CONTACT WITH NATURE LOWERS STRESS

476ha NATIVE VEGETATION + **258ha** STATE FORESTS IN TOOWOOMBA PROVIDE OXYGEN FOR **32,647 PEOPLE** ANNUALLY OR **20%** OF THE POPULATION

LARGE TREES RESULT IN:
$$ 5-15% INCREASE
IN PROPERTY VALUES

10-25°C DECREASE
IN SURFACE TEMPERATURE

96.4%
OF TOOWOOMBA IS USED FOR AGRICULTURE GENERATING
$276M
ANNUALLY

RESIDENTS LIVING NEAR GREEN SPACE ARE
24% MORE LIKELY TO MEET RECOMMENDED EXERCISE LEVELS

250M 250M

Green infrastructure for the Toowoomba Region

A diverse region

Spreading east from the Great Dividing Range into the Darling Downs, the Toowoomba Region is a verdant tapestry of living assets. Benefitting from rich volcanic soils and a cooler highland climate, a range of plants thrive in the Region and contribute to its character. From the famous gardens in the city, and the iconic trees that line suburban streets, to the fertile agricultural plains and bushland parks, green infrastructure is already threaded throughout the Region and embedded in the local identity.

As we embrace a new approach that is sensitive to the value of nature in shaping who we are, the varied urban and rural landscapes across the Region offer a range of opportunities to integrate new green infrastructure.

Treasuring what we have, embracing what we need

As the Toowoomba Region grows and changes, we can protect and further enhance the health and well-being of communities and of our natural areas by treasuring the living assets and networks we have, while also creating and embedding new green infrastructure to deliver the benefits we need.

Our urban areas can often feel disconnected from nature, but as we grow and change there are opportunities to enhance green infrastructure in streets, private gardens, public plazas and on and in buildings. By designing built environments that also live and breathe, we can create beautiful, shaded, and ecologically rich spaces to enjoy. Here, green infrastructure isn't a "nice to have", it's an essential part of the kind of place we all want to live and work in.

Our rural townships benefit from a much closer connection to surrounding landscapes already but there are still many opportunities to weave together the built and the natural environment and enhance the identity and beauty of our towns.

Our rural and natural areas are underpinned by natural processes which need to be protected and enhanced so these areas continue to benefit the community, environment and the economy in a changing climate. The rich indigenous history and culture of our Region and neighbouring landscapes provides an important insight into how these natural processes can be managed long term successfully. Home to treasured waterways, grasslands, eucalypt forests and dry rainforests, our natural setting is unique and a strong part of our identity and needs to be both protected and celebrated.

Our agricultural plains are also a stunning backdrop and a vital food bowl, and by supporting diverse and productive land, we can deliver both economic and environmental benefits for the Region.

Regional landscape profile

The Toowoomba Region is a verdant tapestry of natural assets, made up of bushland, agricultural, rural and urban landscapes. These all present different opportunities to protect and integrate new green infrastructure.

This transect visually illustrates the diversity of landscapes in the Toowoomba Region, their typical characteristics and the way they often connect together.

The order of the landscapes is indicative of the landforms associated with the Toowoomba Region topography and is not in any order of priority for this strategy, nor is it to scale.

	AGRICULTURAL PLAINS	TOWNSHIPS	AGRICULTURAL HILLS
Description	Agricultural Plains are highly fertile open and flat landscapes.	Rural Townships are distinct towns with a connection to the agricultural lands around them, and vary in size and scale.	Agricultural Hills are areas of steeper topography and rolling hills where agriculture (grazing) is the dominant form of land use, although trees and remnant vegetation have a strong presence.
Typical green infrastructure elements	• Farmland • Rows and stands of trees • Creek corridors	• Parks • Street trees and gardens • Open spaces • Farmland • Creek corridors	• Farmland • Natural areas • Creek corridors
Green infrastructure opportunities	• Promotion of food production • Work with landholders to encourage enhanced quality and connectivity of natural areas • Connect and enhance green corridors • Work with landholders to promote and encourage sustainable land use practices	• Work with local community to identify high value areas • Protect and enhance living assets on private land • Expand street tree planting • Improve access to open space areas and natural areas • Enhance green creek corridors	• Work with local community to identify high value areas • Work with landholders to encourage protection and enhancement of natural areas and their connectivity • Work with landholders to promote and encourage sustainable land use practices

LIFESTYLE ACREAGES	SPECIAL PURPOSE	SUBURBAN	URBAN	NATURAL AREAS
Rural Residential areas are characterised by low density residential development on acreages and hobby farms.	Special Purpose Areas are large scale land use areas with vast paved surfaces such as shopping centres, light industry, airport etc.	Suburban Areas are characterised by residential development and other recreation and community uses (e.g. parks and schools).	The Urban Core is a vibrant mixture of commercial businesses, some residential (of varying scales and densities), with some light industrial and recreation land uses.	Natural Areas are relatively undisturbed large areas of tree cover either as naturalistic remnant vegetation areas or managed forestry parcels.
• Gardens • Farmland • Natural areas • Creek corridors	• Street trees • Landscaped areas (e.g. carparks) • Creek corridors	• Urban gardens • Street trees • Parks and other open spaces • Creek and recreational corridors	• Gardens • Street trees and gardens • Creek and recreational corridors	• Natural areas • Creek and ecological corridors
• Work with local community to identify high value areas • Work with landholders to encourage protection and enhancement of natural areas and their connectivity • Enhance creek corridors and protect water quality	• Encourage incorporation of green infrastructure (e.g. green walls, green roofs, WSUD) in new developments • Plant more trees in streets and carparks • Enhance creek corridors	• Encourage green infrastructure to be part of new developments and private gardens • Plant more street trees • Provide green corridors to connect community to green public spaces • Develop community gardens	• Encourage green infrastructure to be included on and alongside buildings • Plant more street trees • Provide stepping stones of vegetation to connect green public spaces	• Protect and enhance native vegetation • Incorporate values and cultural practices of Aboriginal custodians • Encourage passive recreation opportunities for the community

2.0
What we want to achieve

2.0 What we want to achieve

Our vision

A rich tapestry of green and healthy landscapes that support thriving communities and a vibrant economy, where nature is valued, embedded and enriched at every opportunity.

In achieving our vision, we will:

Lead by example: We will establish the Toowoomba Region as a leader in green infrastructure planning and delivery, where living assets are connected throughout urban and rural landscapes for the well-being of communities and the environment.

Celebrate our identity: We will protect, promote and enhance our living assets that have shaped our Region, including our iconic garden city character in Toowoomba, our beautiful natural landscapes and our rich agricultural history as a food bowl for Australia.

Design for climate and character: We will design better urban and rural places to incorporate green infrastructure that is complimentary and appropriate to our local climate conditions, resilient to change, respectful of heritage, and enriching of local character, to make the Region a better place to live in, work in and visit.

Objectives

Objective 1: Enrich natural systems

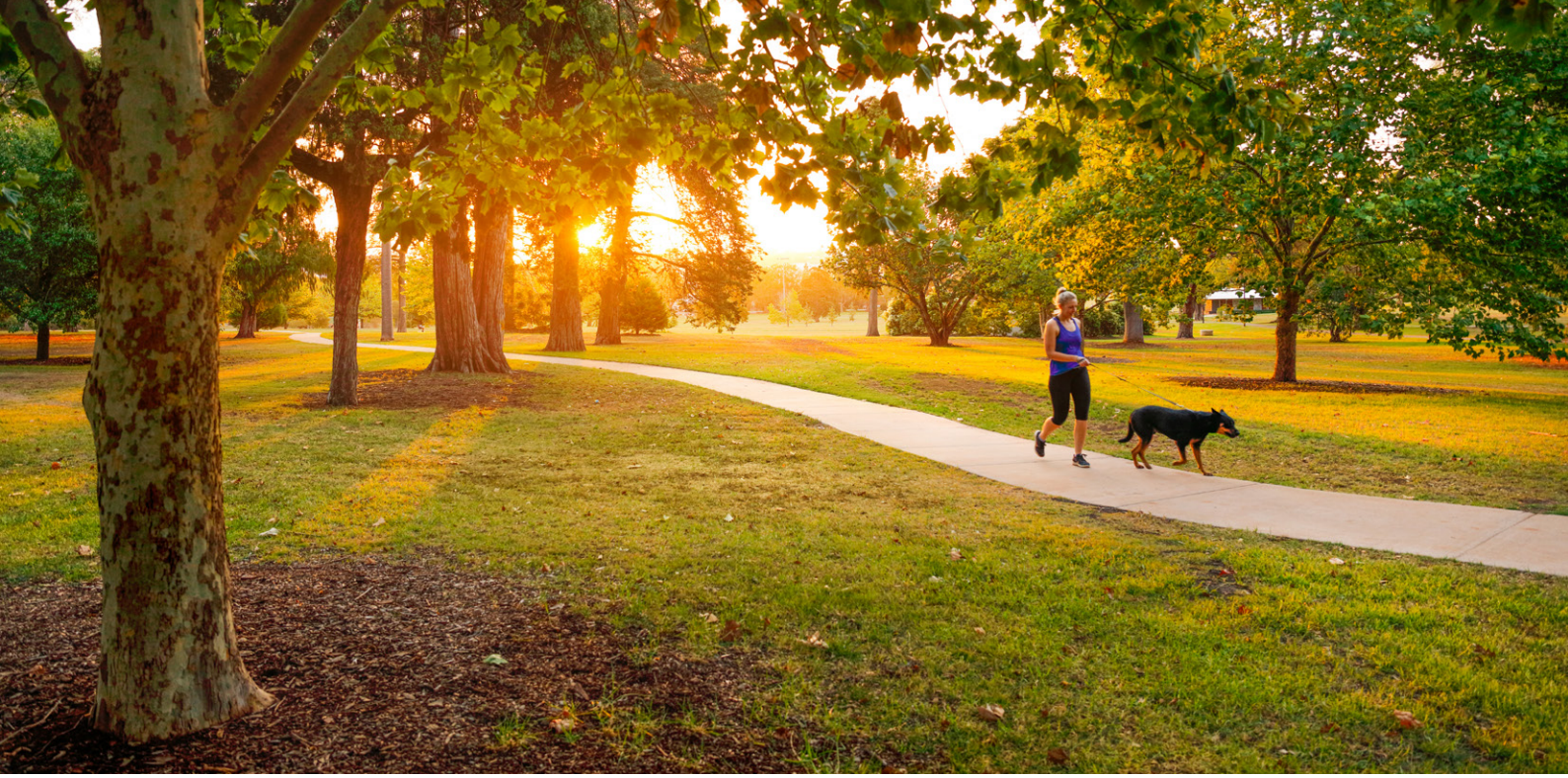
Protect and improve biodiversity, provide habitat and enhance natural processes by:

- Protecting natural assets and ecosystems
- Providing habitat and connecting biodiversity corridors for native animals
- Supporting use of native plants to create diverse habitats which are resilient to change
- Providing opportunities to reduce pollutants entering natural areas
- Protecting and enhancing waterway corridors and natural areas to address degradation and fragmentation.

Objective 2: Protect and enhance local identity and character

Promote landscapes that underpin or stimulate tourism, job creation and local economic activity, by:

- Growing food and other produce in both urban and rural areas in a sustainable manner
- Designing amenity and greener character in public spaces and key destinations
- Linking and clustering natural landscapes and businesses to make visitor experiences unique and memorable
- Improving resilience of built areas to the impacts of climate challenges including extreme temperatures, drought and flood risk.



Objective 3: Support healthy communities

Enhance and link landscapes to increase health and well-being by:

- Improving local climate to reduce urban heat impacts
- Connecting communities to nature and improving mental well-being
- Providing open space and green corridors which encourage active and passive recreation to improve physical health
- Integrating natural systems into our built environments to filter water and air.

Objective 4: Increase collaboration and co-design

Support local communities and practitioners in actively delivering green infrastructure by:

- Partnering with landholders to deliver green infrastructure on private land
- Improving community understanding of the value of green infrastructure and how to deliver it, including opportunities for co-design of public spaces
- Working with developers and local practitioners to integrate green infrastructure in new developments
- Work across governments, other organisations and the community to identify opportunities for investment in green infrastructure to deliver multiple benefits.

3.0

How we will achieve it

3.0 How we will achieve it

We aren't starting from scratch. Our Council and our communities already recognise value in our Region's green infrastructure, but there is so much more potential to unlock. A key focus of this strategy is to identify the quick-wins which can be delivered based on what we know now, as well as continuing to build a strong foundation to inform the long-term change to the way green infrastructure is delivered in the future.

Any kind of step-change in the way we do things requires more than just funding a few projects. It requires a shift in mindset, a change in expectations, commitment to collaborate and a long-term investment in building both the knowledge and the will to deliver better outcomes.

Council will lead a comprehensive approach to green infrastructure across early demonstration, development of policy and supporting on-going education and capacity building which is important to make sure the change is for good.

Our four focus areas for change are:

Demonstration projects	To trial new ideas in different locations and build confidence
Policy and delivery tools	To drive decisions that protect and enhance green assets
Skills and knowledge	To build further capability in delivery of green infrastructure
Advocacy and education	To show leadership, raise awareness and empower others

The following examples showcase how Council is already making progress across these focus areas, providing a good starting point for an integrated approach into the future.

Demonstration projects

To trial new ideas in different locations and build confidence

Trialling new green infrastructure ideas across Toowoomba's regional landscapes allows green infrastructure solutions to become tailored to suit the local conditions. Demonstration projects are also critical to build confidence in the community, development industry and across Council by providing proof that these types of projects can be delivered successfully and can become a template for others to use.

Example - Glenvale Creek pilot project

Council worked with developers, engineers, landscape architects and environmental consultants to co-design an open space corridor in a new residential development which incorporates multiple uses. Council used this process to test and develop different design requirements that allow these green spaces to manage stormwater runoff, protect natural habitat elements and provide parks at the same time. Following this pilot project, Council documented the process in its 'Multi-Function Open Space Framework'.

Policy and delivery tools

To set direction and drive decisions

Setting clear direction and requirements in policies, plans and standards is important to generate consistency and quality in delivery of green infrastructure from both Council and the broader industry.

Example - Toowoomba's Street Tree Masterplan

Council's Street Tree Masterplan has received industry awards for its vision to protect and enhance the diverse streetscape character of the Toowoomba Region. The Masterplan supports Council's Street and Park Tree Policy and provides:

- a long term consistent and living Street Tree Masterplan,
- guidance for urban tree selection and management requirements, and
- a species list and suite of standard technical drawings.

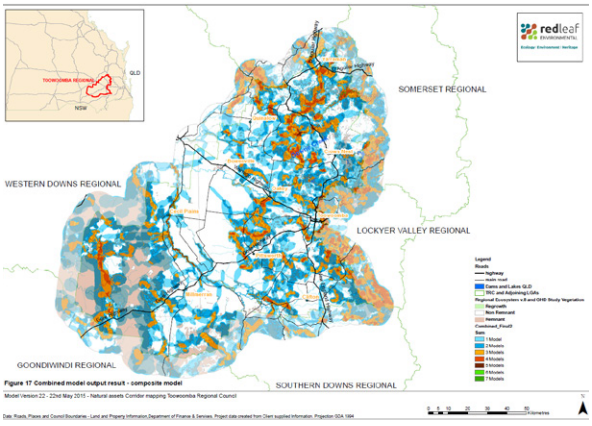
Skills and knowledge

To build further capability in the delivery of Green Infrastructure

Equipping our Council with the right skills and resources will allow us to act as a leader in green infrastructure planning and delivery.

Example - Natural Areas Corridor Model

This project involved the development of a software model that identifies and maps local biodiversity corridors for the Toowoomba Region. The methodology used in this project is replicable and provides an evidence-based approach to identifying and locating corridors and scientific justification for their preservation. The model can assist with the development of policy and conservation/management directions including local area planning, offsets, acquisition and natural resource management.



Advocacy and education

To show leadership, raise awareness and empower others

Building awareness and ability for the community to be involved strengthens partnerships, ensuring green infrastructure is valued, enriched and embedded in our varied landscapes.

Example - Toowoomba Region Urban Design Initiative (TRUDI) Design Seminar Series

As part of the TRUDI program, a design seminar series was developed which provided free events for the community who had an interest in urban design to hear from speakers and participate in debates and development of ideas.

4.0
Action plan

4.0 Action plan

The many conversations we have had with the Council, community and other organisations between 2017 and 2019 highlighted that:

Effective policy must be developed and applied across the Region, to ensure regional growth is balanced with the need to protect and preserve the natural assets of the Region.

To create a meaningful and effective green infrastructure strategy, the actions should include both quick-wins and long-term initiatives.

Partnerships and community ownership are important and should continue to be cultivated.

We need to understand the extent and value of existing green infrastructure assets.

Quick wins and laying long-term foundations

The purpose of this current strategy is not to set targets or measurable objectives, but to lay the foundation for the drafting of meaningful objectives based on a strong understanding of the Region's existing green infrastructure.

A number of key projects have been identified which, subject to funding, will help to build early confidence in the delivery of this strategy as well as lay the foundation for the long-term transitional change that takes more time.

It will be important that these quick win projects (and others which come up which are not covered in this strategy) are supported by strong Green.IS branding and ongoing monitoring to ensure they have successfully enabled the further progression of this strategy.

Quick wins

Early demonstration of Green.IS outcomes including:

- Greening the CBD
- Regional water quality system as a living asset
- Multiple use open space in a creek corridor
- Embedding Green.IS into structure plans

Branding, marketing and reporting to promote early projects to encourage further adoption of green infrastructure actions which are identified through ongoing collaboration across Council and the community.

Change projects (longer term)

Understand the condition, extent and value of existing green infrastructure to allow for benchmarking, target setting and ongoing monitoring of performance

Define governance framework to ensure ongoing roles and responsibilities are clear

Integrated network planning to align Council plans and strategies

Development of policy and guidelines to protect and enhance green infrastructure

Green infrastructure is valued, protected and enhanced as part of Council business

Action plan

This table shows the steps that must be taken to progress the strategy. These actions will be refined, added to and delivered through Council's existing processes and may shift in importance over time (for example, more on-ground projects are likely to be identified and delivered following the development of policy and network plans). Council will identify and prioritise key actions to take forward based on the number of different objectives met and the capacity to deliver through Council processes, plans and operations including budget availablility.

	Action	Description	Outcomes	Objectives met
Demonstration projects				
1	**Deliver a Greening the CBD demonstration project**	Undertake a Greening the CBD project to demonstrate how the Green.IS can be applied in the CBD and other hard, built landscapes to deliver multiple outcomes.	Potential outcomes include: urban heat mitigation, amenity improvements, reducing pollutants and stormwater runoff.	
2	**Deliver a Multi-Function Open Space (MFOS) demonstration project at Gowrie Creek**	Use Council's MFOS Framework to plan and design open space within the constrained open space corridor along Gowrie Creek (to the North of the CBD), considering the diverse values embedded in the space and using co-design principles to resolve potential conflicts in its use.	The design will demonstrate how collaborative planning for open space which considers environmental values, stormwater management and sport and recreation function in an integrated manner can result in a green infrastructure network that is affordable, efficient, and locally appropriate and does not allow compromise in standards to impact on its intended function.	
3	**Central Highfields Structure Plan demonstration project**	Embed the principles and objectives of the Green.IS into the Central Highfields Structure Plan.	The Structure Plan will demonstrate how upfront planning for green infrastructure can help set the direction for the delivery of cool, resilient and green towns across the Toowoomba Region.	
4	**Deliver a regional water quality improvement demonstration project**	Design and deliver a stormwater quality project using a green infrastructure approach to integrate the infrastructure into the landscape and deliver multiple outcomes.	The demonstration project will build internal confidence to deliver future projects which integrate stormwater management into open space areas, while setting an example and benchmark for expectations from the development industry.	

Potential location								Project type	Potential partnerships
						✓		Quick win	• Council (lead) • Local community and businesses
					✓			Quick win	• Council (lead) • Landholders • Developers • Local businesses
					✓			Quick win	• Council (lead) • Local community and businesses
					✓	✓		Quick win	• Council (lead) • Industry bodies • Developers • Community

	Action	Description	Outcomes	Objectives met
Policy and delivery tools				
5	**Investigate and scope changes to the Toowoomba Regional Planning Scheme required to reflect Green.IS.**	A review of all parts of the planning scheme to adequately incorporate Green.IS and ensure consistency across policy, strategy, development and implementation. This includes the existing strategic framework, codes, overlays, the local government infrastructure plan and planning scheme policies.	Key changes will address gaps in the current planning scheme and identify opportunities to strengthen the planning scheme to guide and protect green infrastructure. A new green infrastructure planning scheme policy and a new code or overlay will ensure that new developments incorporate the principles outlined in the Green.IS.	
6	**Develop and provide supporting guidance and assessment material for the delivery of green infrastructure in the Toowoomba Region**	Combine existing guides or new information into a new green infrastructure technical design guideline for the Toowoomba Region to assist developers, designers and Council in the delivery of appropriate green infrastructure for the Toowoomba Region.	An assessment tool such as a development checklist and scoring system would assist Council and developers in ensuring green infrastructure is designed and delivered to Council's expectations.	
7	**Develop a Toowoomba Region Forest Strategy**	Develop a forest strategy for trees in the Toowoomba Region that sets canopy targets and condition and connection goals for all natural, urban and rural areas.	A regional forest management approach to the protection and planting of trees will ensure locally appropriate responses to heat mitigation, land management, ecological services, lifestyle and recreation. Canopy targets will likely be developed to guide this strategy.	
8	**Develop a Green Infrastructure Network Plan**	Develop a network plan to layer the Toowoomba Region's current green, blue and grey infrastructure networks to identify key areas for future connection and focus.	This network plan will help provide strategic alignment between other existing (and future) Council plans and strategies (e.g. Toowoomba Region Trails Network Strategy, Toowoomba Open Space Strategy, Street Tree Masterplan and Urban Stormwater Management Plans). Specific objectives will help to inform this plan.	

Potential location								Project type	Potential partnerships
✓	✓	✓	✓	✓	✓	✓	✓	Quick win	• Council (lead) • State government • Development industry • Community
✓	✓	✓	✓	✓	✓	✓	✓	Quick win	• Council • Industry and community groups
✓	✓	✓	✓	✓	✓	✓	✓	Change project - longer term	• Council (lead) • Landholders • Community
✓	✓	✓	✓	✓	✓	✓	✓	Quick win	• Council (lead) • Landholders • Community • NRM bodies • State government

	Action	Description	Outcomes	Objectives met
9	**Develop detailed green corridor plans for priority locations**	Undertake holistic planning of priority green corridors that accommodates the different uses in these areas (e.g. open space, waterway health, flooding, movement, water infrastructure, habitat corridors etc.).	A holistic planning process will identify potential conflicts up-front to preserve opportunities to deliver multiple outcomes.	
Skills and knowledge				
10	**Undertake green infrastructure audit and mapping**	Undertake an audit and mapping of green infrastructure asset types to understand the extent and condition of existing assets across the Toowoomba Region.	This information will be used to inform development of measurable targets and other actions such as the development of policies, plans and appropriate local standards. It will also be used to benchmark condition and provide a baseline for measuring future improvement.	
11	**Assess the economic value of Toowoomba's green infrastructure**	Undertake an economic assessment that will monetise the significant environmental and social value that green infrastructure provides and calculates how these appreciate in value with time.	This economic framework will be used to inform budget allocations, valuations and develop business cases. It will also provide a baseline for benchmarking and for measuring future improvements.	
12	**Identify green infrastructure asset types, ownership and budget allocation requirements**	Ensure that there is adequate resourcing available for green infrastructure asset owners to identify and deliver the types of assets that make up the green infrastructure network by undertaking a review of internal networks and structures to identify asset function, level of operational service and life-cycle costs.	This will form the basis of an asset management framework for green infrastructure networks so that allocated budgets are appropriate to form, function and desired outcomes.	
13	**Initiate green infrastructure design capacity building program**	Develop new, or use existing capacity building programs to improve local knowledge and capacity.	This will improve the ability of Council, industry and the community to plan, design, deliver and manage green infrastructure projects.	

Potential location								Project type	Potential partnerships
✓	✓	✓	✓	✓	✓	✓	✓	Change project - longer term	• Council (lead) • State government • Landholders • Community • NRM bodies
✓	✓	✓	✓	✓	✓	✓	✓	Quick win	• Council (lead) • State government
✓	✓	✓	✓	✓	✓	✓	✓	Quick win	• Council (lead) • Researchers / economists
✓	✓	✓	✓	✓	✓	✓	✓	Quick win	• Council
✓	✓	✓	✓	✓	✓	✓	✓	Change project - longer term	• Council (lead) • Industry bodies • NRM bodies • Community • Researchers

	Action	Description	Outcomes	Objectives met
Advocacy and education				
14	**Private landholder Green.IS program**	Develop a program to encourage private landholders to voluntarily retain and plant vegetation, including native vegetation where appropriate, on private land across both the urban and rural landscapes. This may include partnering with other organisations on existing programs with the same outcomes.	This will promote best land management practices across the Toowoomba Region and enhance natural processes.	
15	**Delivery of community engagement program**	Develop a program to promote green infrastructure knowledge and benefits. This could be achieved in partnership with the established TRUDI program to ignite discussion regarding urban design and use of living assets in the Toowoomba Region and could also engage the youth across the Toowoomba Region through a school program or event.	This will engage a broad cross section of the community in discussing ideas around the shared benefits of green infrastructure.	
16	**Promote Green.IS projects and green infrastructure across the Toowoomba Region**	Use the Green.IS brand to promote work which achieves the Green.IS objectives on the TRC website, on Council projects and as part of on-ground outcomes.	This will increase awareness in the local community of the role green infrastructure plays in the Toowoomba Region's identity and reinforces Council's commitment to deliver the strategy.	
17	**Support the community to participate in green infrastructure projects**	Build community knowledge on green infrastructure and create accessible spaces where the community can access information about the Green.IS and be a part of its delivery. This should also support connection with existing environmental groups and programs.	This will encourage broader adoption of green infrastructure across the Toowoomba Region and support groups who are currently active in the maintenance and management of natural areas, community gardens or environmental education and advocacy.	

Potential location								Project type	Potential partnerships
✓	✓	✓	✓	✓	✓	✓	✓	Quick win	• Council • Landholders • State government • NRM bodies • AgForce, Growcom, Queensland Farmers Federation
✓	✓	✓	✓	✓	✓	✓	✓	Change project - longer term	• Council • Schools • Community
✓	✓	✓	✓	✓	✓	✓	✓	Quick win	• Council
✓	✓	✓	✓	✓	✓	✓	✓	Continued support	• Council • Community

Where to from here?

The Green.IS sets the direction and early initiatives required to help embed the protection and delivery of green infrastructure projects across Council's day to day processes. It will also encourage the broader community to become involved and improve their understanding of the value of green infrastructure across the Toowoomba Region.

The success of this strategy will be reviewed in four years. During this time the outcomes of actions undertaken will be monitored and reviewed to enable outputs and learnings to inform future actions.

Quick wins	• Is there data which can be used to inform other actions? • Has early demonstration helped to build confidence about an approach that can be delivered elsewhere? • What are the key lessons from early demonstration projects that can improve implementation of future projects?
Change projects (longer term)	• Can the project outcomes help to refine the scope of future actions?
Green.IS 4 year review	• Has the strategy been successful in helping to embed the delivery of green infrastructure across Councils day to day processes?