





5.0

GREENWAYS AROUND THE WORLD

5.1 GreenWays around the world

Linear recreation open space corridors have existed for a long time in urban areas around the world - the majority of them located along physical assets such as waterways, harbours and coastlines. There is now an increasing trend in deliberate creation of linear open space corridors, often associated with and placed along disused infrastructure corridors (such as the High Line in New York).

The GreenWay Benchmark Report (Appendix B) presents built “benchmark” projects selected from relatively dense urban environments, similar to the Inner West. All of the examples have been selected based on the ways in which multiple key elements are integrated into a design, being Active Transport, Multi-purpose recreation, an Ecological corridor, in support of Arts and culture, and/or Sustainability education.

Common success factors which serve as useful lessons for the development of the Cooks to Cove GreenWay include:

High-performing public open space

As cities around the world face greater densities and increased pressures on open space, the concept of “high-performing” public spaces has emerged to describe spaces which generate multiple social, environmental and economic benefits to local communities.

International precedents from around the world, particularly in the United States, are promoting the integration of multiple objectives within a GreenWay.

Linear park as a destination in itself

A key message from international examples is that linear parks are seen as not just movement corridors but as open space which, done well, are significant attractions in their own right. The most popular recreational activities in urban areas are walking and riding, and attractive destinations that target these activities can encourage participation. Destination trails can also deliver strong economic benefits.

The Highline in New York is a clear example of this. The success of the implementation of the Highline has resulted in becoming a recognised international tourism destination and one of the key things to experience when visiting New York. The Highline in peak periods can attract 20,000 visitors a day.

The Atlanta BeltLine is another example of this with a stated objective to be “not simply a means of getting somewhere, but a destination unto itself it offers a chance to be a community, to be a region, and to share all that it has to offer.”

Similar to the BeltLine the aim of the Indianapolis Cultural Trail is “not just about the destination; it is about the journey” emphasising the linked nature of the movement corridor and the linear open space as a place to visit in its own right.

Staged Implementation

Linear open space infrastructure is typically large-scale with relatively long lengths of the corridor. They also cross other transport and infrastructure corridors (necessitating consideration of connectivity and accessibility) and a diverse range of adjacent land uses.

Development in multiple stages with a clear vision and objectives ensures a desired quality of the infrastructure, despite this complexity and scale.

High-quality outcomes have been achieved by projects delivered in multiple stages, where each stage, while being a short section of a longer trail, is a complete piece of infrastructure in itself integrating all the elements of the project. A short section delivered well can also attract further funding and publicity for the next section.

For example:

- the High Line in New York has been constructed over three stages to date, starting in 2009 and completed in 2016. The success of the initial stage of the High Line supported the continuing investment, development and extension of the High Line.
- the Indianapolis Cultural Trail has a clear commitment to “quality over quantity”. The trail was split into eight sections and construction of the sections was staged and completed over a six year timeframe.
- the 30-kilometre Atlanta BeltLine has a 20-year strategic implementation plan and has been broken down into ten sub-areas. To date, four sections of the corridor have been constructed and two more are under construction

Community, culture and placemaking

Strong community involvement, cultural activity and placemaking helps to create an outcome which works in the local context and delivers strongly on social benefits. Cultural activity and placemaking also encourage ongoing community participation, as seen at the Atlanta BeltLine, the Chicago 606 and the High Line.

Environmental sustainability principles

Public spaces have a role in both creating habitat in which urban ecosystems can flourish and in creating opportunities for people to connect with nature close to where they live. Where environmental sustainability principles underpin design, projects deliver strongly on environmental benefits, such as at the High Line, Singapore's Bishan Park and Sydney Park wetlands.

Indianapolis Cultural Trail



Atlanta BeltLine



Atlanta BeltLine



Case study: Atlanta BeltLine

First conceived as a 1999 Master's thesis by Georgia Tech student Ryan Gravel, the Atlanta BeltLine evolved from an idea to a grassroots campaign of local citizens and civic leaders. It is now a linear trail with similar urban context, development time frame, and conception, and incorporating many of the same concepts and elements as the GreenWay.

Guided by a Master Plan and Implementation Plan, it will open in phases through to anticipated completion in 2030. As of 2016, the Atlanta BeltLine has four open trails, with two trails under construction.

LOCATION

ATLANTA

YEAR

1999 - 2030

SIZE

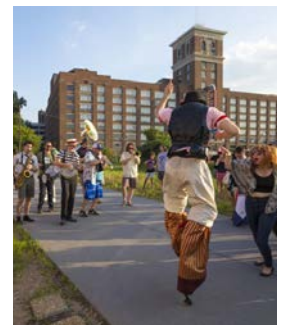
35.4 KM

BUDGET

\$246 MILLION USD

Lessons for the GreenWay

- It meets multiple objectives and is described as an “integrated approach to transportation, land use, greenspace, and sustainable growth.”
- Being a “living, breathing part of our community”, it is not simply a means of getting somewhere, but a “destination unto itself”.
- Although there was a strong grassroots campaign and ongoing community involvement, as the project has scaled up, community voices have diminished, and the focus has shifted towards economic development. The project's founder Ryan Gravel is concerned that it's not doing enough to deliver its intended social outcomes
- Its completed stages and Master Plan and Implementation Plan, which sets out plans for phased completion through to 2030, establish strong precedents.



Active & Sustainable
Transport

The Atlanta BeltLine is both an active transport and transit corridor, including 33 miles of multi-use trails and 22 miles of “modern streetcar” in a loop around the city. Like the GreenWay, it uses old rail corridors.



Ecological Corridor

The project includes a linear arboretum, envisaged as “an elaborately curated, city-scale mix of existing and cultivated tree species that is at once an urban forest, an ecological connector, a corridor for scientific research, and a collection of remarkable public spaces.”



Arts & Culture

A strong sense of art and culture is present throughout the BeltLine, contributed to by its street art. It boasts the largest temporary public art exhibition in the American south.

The arboretum has a focus on education for a range of ages, with a program run by Trees Atlanta.



Multi-Purpose
Recreation

Part of the role of the Atlanta BeltLine project is to increase the area of parks and green space in Atlanta. Seven new parks are open so far including a range of recreational facilities.

Case study: Chicago 606

Similar in urban context and concepts as the GreenWay, the Chicago 606 trail is a former rail corridor which “brings together arts, history, design, trails for bikers, runners, and walkers, event spaces, alternative transportation avenues, and green, open space”. One of the key drivers for its implementation was a lack of open space in this part of Chicago.

Community involvement has been strong, with the “Friends of the Bloomingdale Trail” championing the project over a decade. Ongoing input from the community has also led to a strong art program of installations both temporary and permanent, which define the visitor experience and make it a dynamic destination for all.

LOCATION

CHICAGO

YEAR

2003 - 2015

SIZE

4.3 KM

BUDGET

\$95 MILLION USD

Lessons for the GreenWay

- The vision for The 606 balances local community needs with attracting visitors. The 606, while busy, achieves this. However, there are community concerns about gentrification in the vicinity of the trail.



Arts & Culture

Described as a “living work of art”, the 606 also includes embedded artworks, event facilities, temporary artworks, and programs. The 606 has a strong theme of community-building using events designed to connect people to the trail, the parks along it and their neighbours. The strong arts program defines the trail as a destination.



Active & Sustainable Transport

The 606 includes a shared path which accommodates bicycle riders, walkers, runners and dogwalkers. “Sure, the trail can be busy — Bicycle riders, runners, dog walkers and others mostly coexist peacefully. There are no stop signs or traffic lights.” (The Chicago Tribune)



Multi-Purpose Recreation

As part of the 606, a series of new parks are being developed. Park 567 is one of these.

Case study: Indianapolis Cultural Trail

In car-dominated Indianapolis, the city-wide cycle and pedestrian Cultural Trail is a strong move in a new direction. The trail connects emerging cultural districts to downtown and the Indianapolis Canal, featuring strong signage, pavement markings and furniture to give it the look and feel of a high-quality and safe space. Like the GreenWay and others, the project had a long incubation time before being fully funded, and the project was realised over a 14-year period.

Increasing numbers of apartment dwellers in the local area have created greater need for multi-use outdoor space and opportunities for walking and cycling.

The trail reflects Indianapolis' reputation as a leader in the arts, with public art an important feature of the trail. Approximately \$4 million was invested in public art as part of the trail's construction, and there is an ongoing public art program. The canal also features strongly and was the subject of a separate \$61 million investment.

LOCATION
INDIANAPOLIS

YEAR
1999 - 2013

SIZE
12.9 KM

BUDGET
\$63 MILLION USD

Lessons for the GreenWay

- Indianapolis exemplifies the benefits of defining a clear civic vision and sticking to it across election cycles.
- Defining the trail as a clear destination and programming events along its length have been reported by the city to be challenges.



Active & Sustainable Transport

The trail is designed to accommodate a range of different active modes and features generously wide road crossings. Pavement markings indicate where to ride/walk and provide a unifying theme.



Ecological Corridor

Stormwater treatment is integrated into the design. Rain gardens along the trail create greener streets and improve water quality.



Arts & Culture

Art and culture are a central theme, with the trail connecting six cultural districts around the city. There are artworks integrated into the design.

Case study: The High Line

An elevated freight rail line transformed into a public park on Manhattan's West Side, the High Line is owned by the City of New York, and maintained and operated by the non-profit and grassroots conservancy Friends of the High Line along with the New York City Department of Parks & Recreation. Founded in 1999 by community residents, Friends of the High Line fought for the High Line's preservation and transformation at a time when the historic structure was under the threat of demolition and saw it through a long incubation time.

After the trains stopped running, plants self-seeded on the High Line. Varied conditions of light, shade, exposure, wind, and soil depth on the High Line led to a variety of growing conditions - a landscape that became inspiration for plant selection in the design.

The High Line has become a prime example of a trail as destination, so much so that it has become a victim of its own success and its use as a thoroughfare and as a local community space might be diminished by the high number of tourists.

LOCATION
NEW YORK CITY

YEAR
2006 - 2014

SIZE
2.3 KM

BUDGET
\$152 MILLION USD

Lessons for the GreenWay

- Nearby public housing tenants have been squeezed out of the neighbourhood financially and socially, by gentrification and the lack of welcoming spaces. Solutions include more meaningful input from local residents during planning and design and smarter financial models to capture and redistribute the value generated by similar projects.
- Its staged implementation has meant that latter stages benefit from increased publicity and increased funding.



Ecological Corridor

Whenever possible, plants have been sourced from within a 100-mile radius. Almost half of the High Line's plants are native species.

The High Line's ecosystem provides food and shelter for a variety of wildlife species, including native pollinators.



Arts & Culture

High Line Art presents a wide array of artwork including site-specific commissions, exhibitions, performances, video programs, and a series of billboard interventions. Artists have been encouraged to think of creative ways to engage with the uniqueness of the architecture, history, wildlife and design of the High Line.



Multi-Purpose Recreation

Friends of the High Line run education programs serving 10,000 students annually through guided field trips, after-school programs, teaching artist residencies and school partnerships.

The highline offers multipurpose space for community and cultural use. Pictured, a meditation group.

Case study: Highbury Aqueduct Reserve

Highbury Aqueduct Reserve is located on the eastern outskirts of Adelaide, along the River Torrens. It is a linear reserve approximately 14 km long. The land was formerly used by SA Water to accommodate an open channel that transferred water from the River Torrens to the Hope Valley Reservoir. When the land was no longer required for this purpose, the South Australian government purchased the land from SA Water in order to create a public reserve.

The project was launched in 2012 and public access has been opened progressively, guided by a Master Plan prepared in 2013.

LOCATION
ADELAIDE, SA

YEAR
2012 - 2033

SIZE
14KM

BUDGET
\$12 MILLION AUD

Lessons for the GreenWay

- Accommodating a range of different recreational users on shared paths and in open spaces, including walkers, cyclists, people walking dogs on leads and people on scooters and skateboards
- Potential impacts of dogs on native fauna – the Master Plan recommends that dogs are permitted on leads
- Balancing access and biodiversity, including whether or not to include low-key paths through remnant vegetation, with seating for reflection to provide a “bush” experience in an otherwise urban environment



Ecological corridor

While much of the corridor has been planted with introduced Aleppo pines, it also includes small remnants of SA Blue Gum woodland and Red Gum woodland, as well as scattered patches of native grasslands. Fauna is dominated by species common in Adelaide's urban environments (e.g. Australian Magpie, Magpie Lark, Noisy Miner) but also includes Ringtail Possums, Brush-tailed Possums and Yellow-tailed Black Cockatoos (which feed on the Aleppo pines).



































































Multi-purpose recreation

The Master Plan for Highbury Aqueduct Reserve proposes a main shared path as well as fine grain walking trails, BMX and mountain bike tracks.

Spaces are also proposed for nature play and community gardening, and vegetation conservation is an important recreational activity in the reserve.

Case study comparison table

Example	Elements	Why is it a good example for the GreenWay?
Atlanta Beltline	   	Three classic examples of linear trails in similar urban contexts and incorporating many of the same concepts as proposed in the GreenWay
Chicago 606	   	
Indianapolis cultural trail	   	
The High Line	   	A high quality outcome integrating locally native ecology and strong public art and education programs
Superkilen	   	Creative integration of multiple recreational uses into a relatively small space
Bishan Park	   	The naturalised stream is a good precedent for the Hawthorne Canal precinct
Rose Fitzgerald Kennedy Greenway	   	An example where a strong public art program has played a key activation role
LA River Revitalization	   	A fledgling example attempting to create an ecological corridor around a restored waterway
Playa Vista parks	   	A high quality example of a series of parks which integrate a variety of uses into relatively small areas
Prince Alfred Park	   	A local example of a highly active park with a busy shared path running through it
Plan del Verde de la Biodiversidad de Barcelona	   	An high quality example of an urban biodiversity strategy which is driving the redesign of city streets
Glenorchy Art and Sculpture Park (GASPI)	   	A high quality example of a linear park with a strong arts and cultural theme
La Promenade Plantée	   	La Promenade Plantée features high quality design, which creates a varied, interesting experience
City of Adelaide bike art trail	   	An example of public art which highlights and celebrates bicycle facilities as well as local culture
Windsor Street linear reserve	   	A small-scale example of urban habitat restoration in a streetscape context
Highbury Aqueduct Reserve	   	Highbury Aqueduct Reserve is located on the eastern outskirts of Adelaide, along the River Torrens. It is a linear reserve approximately 14 km long, along a former open channel.





6.0

MASTER PLAN STRATEGIES

6.0 Strategies

Based on the objectives, site and precinct analysis, stakeholder consultation and review of benchmark examples, many ideas have emerged about what the Cooks to Cove GreenWay should be, what it should include and how it should be delivered. These ideas have been distilled into a set of Master Plan strategies, design and program elements, which should guide the Master Plan as well as future design and implementation.

These strategies, and design and program elements, are shown in the diagram on the right and are organised into the four main functions of the GreenWay—ecology, active transport, recreation and culture. The objectives relating to local people and places and to integration float above these four functions and inform all of the strategies and elements.

Each of the Master Plan strategies are described in detail on the following pages in Section 6. Design strategies are described in detail in Section 9. Key program elements show options for future use or program for the GreenWay.

2018 Master Plan Objectives

Ecology



- Protect and enhance the role of the GreenWay as an important urban biodiversity corridor linking two of Sydney's most significant urban waterways

Active Transport



- Create a safe and permeable active transport corridor linking the Cooks River to Iron Cove, which suits a wide range of users
- Create easy and safe connections into the surrounding street network and open spaces to maximise access, permeability and circulation

Recreation



- Deliver a series of interconnected, high quality, open spaces
- Integrate a range of passive and active recreation opportunities

Culture



- Establish the GreenWay as a locale for quality public art
- Protect, enhance and interpret the unique environmental, aboriginal, industrial and cultural heritage of the corridor
- Use the GreenWay for education purposes and to share local stories and information

Master Plan Strategies (S. 6)	Design Strategies (S. 9.1)	Key Program Elements*
Protect existing habitat	- Complete flora and fauna study - Plan for staged revegetation - Protect ecological restoration sites	Provide ongoing support for bushcare program, co-ordination with environmental groups
Connect habitat in the corridor	- Design fauna friendly infrastructure - Include targeted local habitat interventions	Encourage private domain habitat improvement
Complete the spine	- Design a connected, well-lit path that suits pedestrians and bicycle riders - Design GreenWay streets	Monitor use and respond to change, in consultation with bike and other community groups
Create GreenWay Streets	- Develop wayfinding and signage strategy	Spread GreenWay street concepts into the trellis
Connect to surrounding routes		Encourage people to use active transport
Establish new and diverse recreation opportunities	- Design high performing landscapes - Design to minimise conflict	Activate hubs and gateways
Accommodate all users		Consult with user groups
Establish quality public art	- Integrate art and interpretation within design	Continue to program exhibitions and other ephemeral installations
Interpret GreenWay stories		Encourage participation in active learning (e.g. citizen science), tours, workshops, etc
Create places for local community		Curate cultural events and involve local audiences
<div> <div> Local people + places <ul style="list-style-type: none"> – Create and enhance community infrastructure along the GreenWay – Enhance amenity value, design quality, identity and a sense of place. Ensure that outcomes are authentic and sustainable </div> <div> Integration <ul style="list-style-type: none"> – Create a high quality example of multifunctional “green grid” infrastructure, weaving together physical, natural and cultural elements into a coherent and integrated whole – Enhance the role of the corridor as a vital component of Sydney’s Green Grid which can help manage and mitigate the impacts of climate change on urban ecology and people </div> </div>		

*for consideration in future Operational Management Plan

6.1 Ecology

Two strategies have guided the Master Plan in terms of how it should protect and enhance the role of the GreenWay as an important urban biodiversity corridor:

1. Protect existing habitat, including ecological restoration sites and other areas with habitat value
2. Connect habitat in the corridor, including canopy, understorey and waterways

During design development, it is also recommended that targeted local habitat interventions should be considered to suit particular species at specific sites. These could include features such as nest boxes, perch poles, or bat roosts.

Protect existing habitat

During stakeholder consultation, stakeholders mentioned the existing bushcare sites as places they valued along the GreenWay. They also mentioned important habitat patches beyond these bushcare sites – for example good small bird habitat in the light rail corridor adjacent to Weston Street.



Bushcare sites and other sites with habitat value were indicated on the plan in Section 2.2. The Master Plan proposes to protect these areas by:

- Locating built infrastructure to minimise impacts
- Where built infrastructure is located in areas with habitat value, employing ecologically sensitive design strategies
- Offsetting any impacts
- Where revegetation is proposed, a staged approach is recommended so that at any point in time the total disturbed area is minimised

Connect habitat in the corridor

The existing GreenWay Biodiversity Strategy (2012) included objectives to create a flora and fauna corridor, improve connectivity between areas with high biodiversity value, and enhance habitat and migration opportunities.



The GreenWay Master Plan will support these objectives with three main moves to improve habitat connectivity:

- Connecting the canopy
- Connecting the understorey (shrub and grassland)
- Connecting waterways with their riparian zones

This strategy is also supported by community and stakeholder input – along the whole GreenWay, comments called for more “green”, more trees, bushcare sites, and locally native vegetation. Many of these comments had an ecological perspective and some

specifically called for canopy and understorey vegetation. There were also comments calling for improved water quality, particularly in Hawthorne Canal, and either restoration or naturalisation of the canal banks.

Connecting the canopy and understorey

All fauna would benefit from a better-connected vegetation corridor. A better-connected canopy would benefit species which forage in the canopy, such as Eastern Bentwing Bats, Powerful Owls, and Tawny Frogmouths. A better-connected understorey would benefit small birds such as fairy wrens, finches, fantails and some species of honeyeaters. It may also assist the endangered population of Long Nosed Bandicoots, who use the cover of dense vegetation to move between nesting and foraging sites.

To work towards a continuous corridor of linked canopy and linked understorey vegetation, plantings could be in the rail corridor, parks, streetscapes and private gardens. New development along the GreenWay is already encouraged to provide a ten-metre vegetated buffer between buildings and the light rail corridor. All of these areas can contribute to the habitat value of the corridor.

The diagram on the following page identifies areas to target to improve both canopy and understorey layer connectivity, focusing on areas where vegetation is absent or patchy.

Connecting the waterways

Currently most of the waterways along the GreenWay are piped or channelised. The only exception is a drainage line within the light rail corridor between Hercules Street and Jack Shanahan Reserve. This has been modified but has little habitat value.

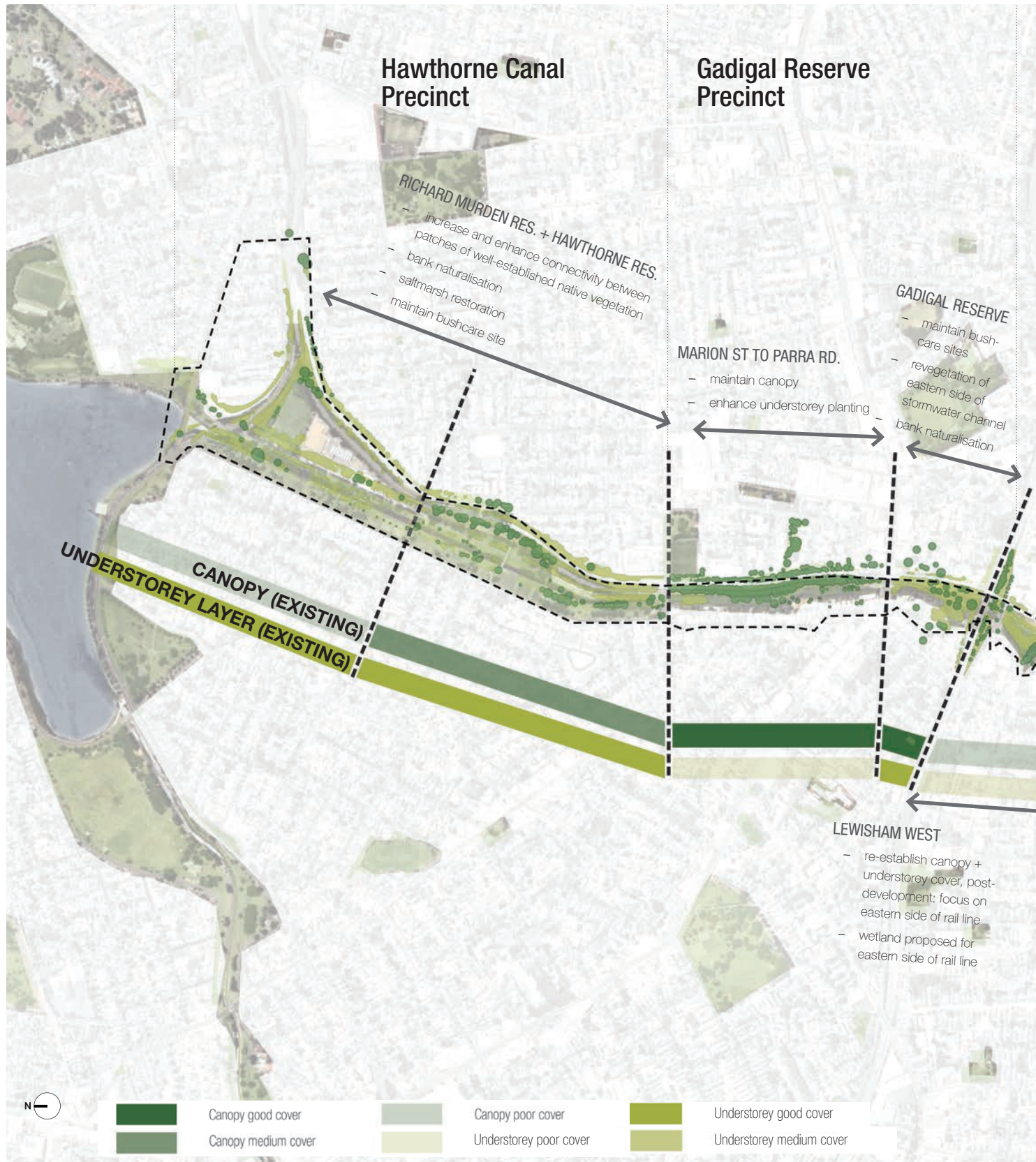
Connecting waterways with their riparian zones would benefit any species which needs sheltered access to water. Species which normally inhabit waterways and riparian zones, such as Eastern Water Dragons and various frogs, could particularly benefit. Connected waterways would also be more accessible to species which might use pipes and culverts to move up and down the GreenWay corridor.

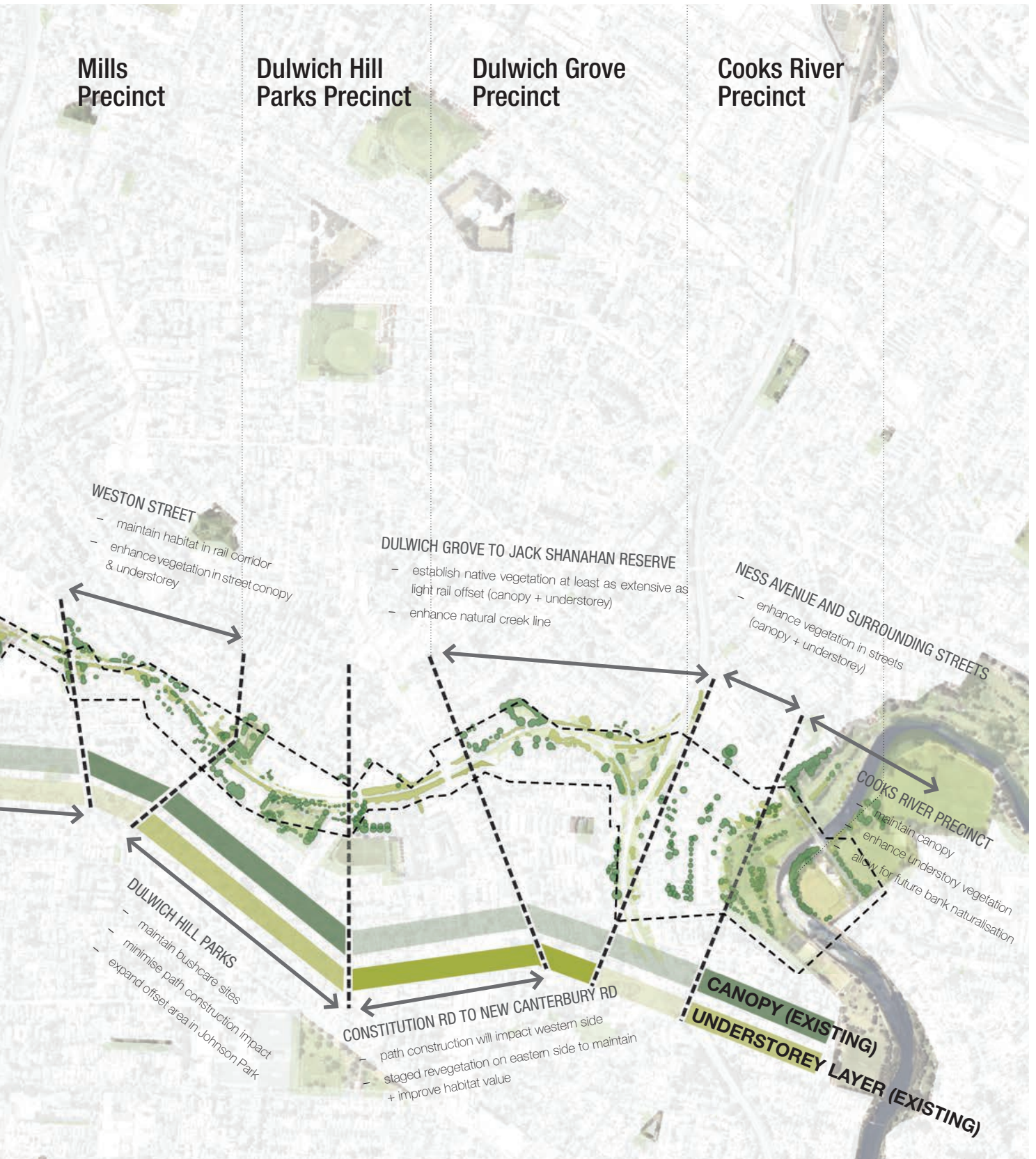
The waterways could be reconnected with their riparian zone by:

- Naturalising drainage systems to create riparian habitat and better fauna linkages between water and land
- Creating offline wetlands and ponds for both habitat (sheltered water sources) and water treatment (clean water sources)



Key actions ecology





6.2 Active transport

The 2009 GreenWay Master Plan and Co-ordination Strategy articulated the concept of a “spine” and a “trellis”, and the GreenWay Active Transport Strategy and Action Plan (AECOM 2012) also discusses the ideas of trellis streets and “green safe streets”.

There was extensive stakeholder input on active transport, including many comments about specific problem spots for bike riders. Beyond this site-specific input, the major broad themes which emerged were:

- Improving connectivity, including connectivity to other routes, as well as to local destinations such as schools
- Improving accessibility along the GreenWay itself, e.g. taking out tight corners, adding tunnels or bridges to avoid problematic road crossings

Among the ten key needs identified from Recreation Needs Research (Cred Consulting, 2018) two needs relevant to active transport on the GreenWay were:

- Improved footpath and active street network for walking
- Connected cycling networks and facilities, and safer shared paths for pedestrians

The GreenWay Master Plan has picked up these ideas in three key strategies related to active transport:

1. Complete the spine – a safe, accessible and enjoyable route for walking and cycling between the Cooks River and Iron Cove, located off-road as much as possible
2. Create GreenWay streets – where the main GreenWay route needs to follow the street network (e.g. on Weston Street and between Jack Shanahan Reserve and the Cooks River), create streets which function as part of the GreenWay
3. Connect to surrounding routes – considering both existing and proposed routes

These strategies are described further below.

Complete the spine

As a spine, the key strategies recommended in this Master Plan to complete the spine are:

- Where possible (e.g. where there is space within the light rail corridor or through parks), creating an off-road shared path as the main GreenWay route
- At road crossings, aim for grade separation along the GreenWay, this will generally mean underpasses or tunnels. Grade-separated road crossings will provide a more pleasant experience, reduce stress, and also have the potential to reduce speeds and aggressive behaviour. Prioritise grade separation based on safety and accessibility issues
- Where there are existing paths in poor condition, upgrade them to accommodate higher use



The diagram on the following page summarises where off-road links can be achieved and where on-road routes are recommended. The following tables outline the preferred route proposed in each section. More information is available in the Route Options Assessment (Appendix C), including the full range of options which were investigated and their evaluation. The Traffic Analysis Report (Appendix D) also contains design recommendations for on-road sections and road crossings.

A 3.5m shared path is recommended as a minimum width for the GreenWay, to accommodate expected user numbers of different types.

Guidance on path widths is available in AustRoads guidelines (2017), which recommend that “regional” shared paths should be 2.5-4.0 m wide with a desirable minimum width of 3.0 m; while “recreational” shared paths should be 3.0-4.0 m wide with a desirable minimum width of 3.5 m.

A wider GreenWay path would provide a high level of service to users, particularly those who want to travel faster. However open space is constrained along the GreenWay corridor and if more space is dedicated to the path, there will be less available for parks, green space, bushland and biodiversity. It has already been established that the GreenWay is multi-purpose and needs to accommodate more than just a high quality path.

3.5 m width is recommended as a minimum width for the GreenWay. Where possible, it is recommended that a wider path should be considered, particularly where there are few alternative routes and likely to be significant GreenWay traffic. Where the Greenway path travels through active parks, specifically Johnson Park and Richard Murden Reserve, consideration needs to be given to higher pedestrian volumes, and wider shared paths and/or parallel routes provided accordingly. A minimum 4.0m wide shared path is recommended through parks, which allows pairs of pedestrians/bike riders travelling two abreast to pass each other comfortably.

Create GreenWay streets

Where an off-road route is not possible (e.g. between Old Canterbury Road and Davis Street, and between Jack Shanahan Reserve and the Marrickville Golf Course), the Master Plan proposes using quiet streets wherever possible, and further calming traffic to create bike-friendly streets. The intention is that these streets will be shared by bikes and vehicles, in an environment that feels safe even to less confident riders. Streets like this are sometimes called "bike boulevards", or in the Netherlands the term "woonerf" is used, meaning "living street".



The proposed interventions include:

- Restrictions to vehicle movements to reduce through traffic
- Threshold treatments to signal the entry into a different type of street
- Coloured pavement with symbols to highlight the special character of the street
- A lower speed limit (30 km/hr is suggested in the Traffic Report)
- Increased vegetation, in keeping with the other facets of the GreenWay

Connect to surrounding routes

The GreenWay needs connectivity to a range of destinations and routes, from the regional scale down to local connections to stations, parks, shops, schools and community facilities. Planning the GreenWay trellis is beyond the scope of this Master Plan, but consideration has been given to the locations of key east-west connections, and these are shown on the detailed precinct plans.



InnerWest Council plans to develop the trellis around the GreenWay as opportunities arise associated with new development and/or infrastructure renewals. This way it can be developed at low marginal cost.

Table 6. Summary of road crossing recommendations

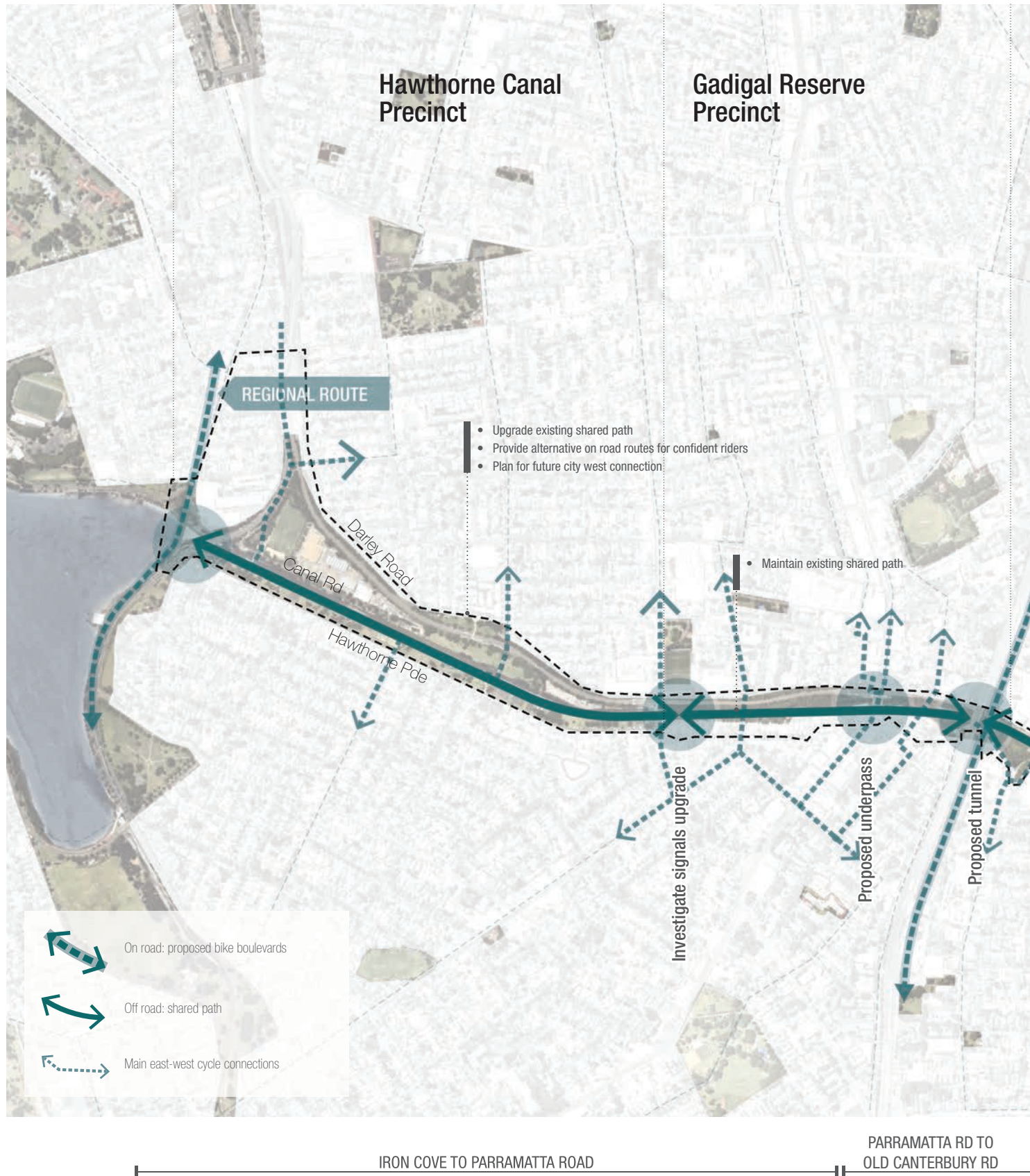
Street	Proposed crossing (when funding available)	Interim option (if needed)
Marion St	Modified signals	Existing signals
Parramatta Rd	Underpass	NA
Longport St	Jacked tunnel	NA
Old Canterbury Rd	Jacked tunnel	Proposed signals to be installed 2019
Davis St	Jacked tunnel	Existing pedestrian crossing
Constitution Rd	Jacked tunnel	Use proposed pedestrian refuge
New Canterbury Rd	Underpass	Use existing signals
Hercules St	Jacked tunnel	Upgraded pedestrian crossing
Ewart St	Traffic signals	Upgrade pedestrian refuge for bike use

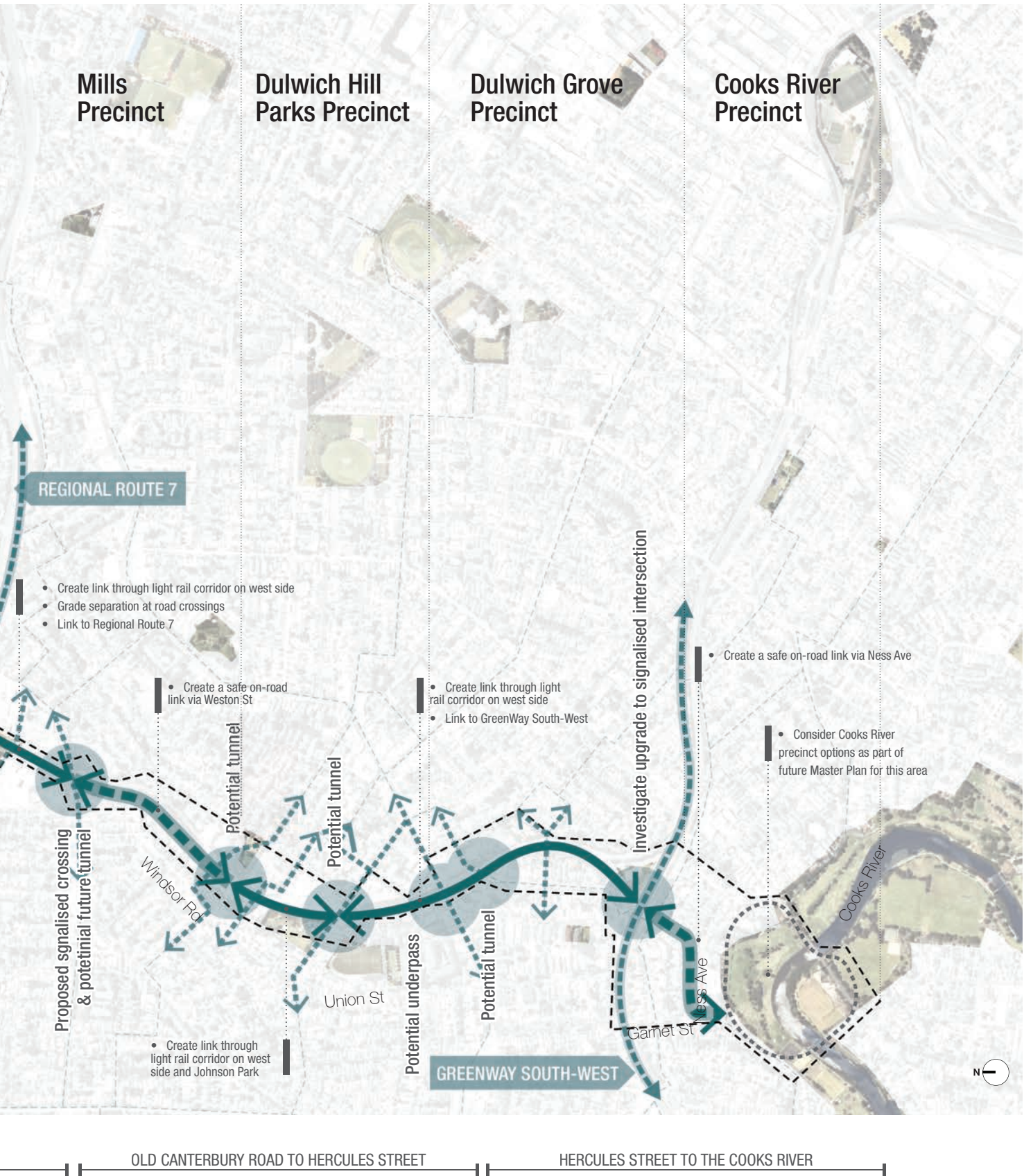
Table 7. Summary of recommended main spine route

Section	Master Plan recommendations
Iron Cove to Marion Street	Upgrade existing routes. A quiet, meandering route through Richard Murden Reserve could largely follow the existing shared path alignment, while an on-road route along Hawthorne Parade could provide for faster utilitarian rides. An upgrade of the link through Blackmore Park is proposed, and there is the potential for a second commuter route along Darley Road, which links to various routes to the east.
Marion St to Parramatta Rd	Retain existing path (upgraded 2016)
Parramatta Rd to Old Canterbury	Construct new shared path generally along existing alignment through Gadigal Reserve and along the western side of the light rail corridor through Lewisham West.
Old Canterbury Rd to David St	There is insufficient space in the light rail corridor for a shared path. The main route should follow Weston St.
Davis St to Constitution Rd	<p>In this section, an alignment on the western side of the light rail corridor, past Waratah Mills and through Johnson Park, is an important recommendation of the Master Plan. This route:</p> <ul style="list-style-type: none"> – Will have an impact on the bushcare site at Waratah Mills (but avoids impact on Pigott Street bush-care site). An additional offset revegetation area is proposed in Johnson Park – Will have an impact on residents in Waratah Mills apartments (however similar impacts would also occur with an eastern alignment and residents in Arlington Grove) – Links more effectively with preferred options on the western side of the light rail corridor to the north and south, making it possible to achieve grade separation at each of the road crossings – Focuses activity in Johnson Park, which is already a busy hub (rather than impacting on the quieter Hoskins Park) – Avoids a particularly tight spot at the south-western corner of the Arlington Grove apartments
Constitution Rd to New Canterbury Rd	Construct an elevated path on the western embankment above the level of light rail tracks but below street level.
New Canterbury Rd to Hercules St	Construct an elevated path on the western embankment above the level of light rail tracks but below street level (below existing pedestrian path).
Hercules St to Ewart St	Construct a new path through the light rail corridor on the western side of the tracks (within proposed new public open space), then along the southern end of Hercules Street. Upgrade the pedestrian path along eastern side of Terrace Road, under the rail bridges, to a shared path. Provide a secondary link along the “disused fork” between Jack Shanahan Reserve and The Parade.
Ewart St to Cooks River	<p>In this section, there are multiple route options, important issues to discuss with other stakeholders, and decisions to be made based on:</p> <ul style="list-style-type: none"> – How to make effective links with the Cooks River shared path – Where to cross the Cooks River (Inner West Council and Canterbury-Bankstown Council) – Getting across the golf course while minimising impacts – Creating effective links along local streets between the Cooks River and Jack Shanahan Reserve. – Connecting to the proposed GreenWay south-west <p>Ness Avenue is proposed as the main GreenWay route, with a short section on Garnet Street at its southern end. A secondary route is also proposed along The Parade and Garnet Street, which will provide a faster option more suitable to experienced riders.</p>



Key actions active transport





6.3 Recreation

Strategies for recreation involve catering to different users with minimal conflict, and providing high quality spaces that accommodate a diverse range of recreational activities.

Along the GreenWay there are two major opportunities to create new open spaces, at Lewisham West and north of Jack Shanahan Reserve. The Master Plan also proposes park upgrades to improve the performance of existing open spaces.

Accommodate all users

In the stakeholder consultation, many of the comments related to recreation were about managing conflict between different users of shared paths. People called for:

- Making the GreenWay friendly to walkers, children, prams, and bike riders of all ages and abilities
- Managing conflict between different GreenWay users, particularly pedestrians and bike riders

In some places along the GreenWay, there is scope to create multiple routes for different users (e.g. Richard Murden Reserve and Hawthorne Parade). However along much of the GreenWay, there is limited space to create separate pedestrian and bike paths. Therefore, these concerns will be addressed by designing a shared path which minimises bike speeds and encourages shared use. Design strategies are further discussed in Section 9.

Establish new and diverse recreation opportunities

Another goal for the GreenWay is to provide for both active and passive uses within a relatively narrow open space corridor. A shared path will naturally attract uses such as walking, running and riding. There are also some more active destinations along the GreenWay today, such as sports courts at Richard Murden Reserve, popular dog off leash area at Hawthorne Reserve, a busy playground and picnic area at Johnson Park, and the skate park at Jack Shanahan Reserve.

However, there is also the potential for the GreenWay to provide a unique opportunity to escape into nature within the Inner West. Recreational activities such as bushcare and bird watching are already important along the GreenWay. Gadigal Reserve was frequently nominated as a favourite place along the GreenWay.

At the same time as the consultation was underway for the GreenWay, Inner West Council was also consulting about recreation needs in the community. The Recreation Needs

Study (2018) has identified that there is a need to improve the diversity of recreational opportunities on offer in the Inner West, with the following specific needs identified that are relevant to the GreenWay:

- Places for passive recreation including relaxing, reading, studying and socialising
- Play spaces for older children
- Nature play or wild play
- Connection to nature
- Improved spaces for recreation with dogs

One of the most important ways the Master Plan can accommodate these needs and minimise conflict between them is to identify those areas where different activities should be focused. The idea of 'hubs' has been suggested for the GreenWay before (GreenWay Active Transport Strategy 2012). This plan shows where hubs are proposed along the GreenWay:

- The Iron Cove gateway, where the GreenWay meets the Bay Run. The cultural focus of this hub is discussed further in Section 6.4
- The central part of the Hawthorne Canal precinct has an active recreation focus. This area currently hosts activity in its green open space along the Hawthorne Canal. With its playground, tennis and netball courts and fitness equipment on the western side of the canal, as well as the dog off leash area and café on the eastern side of the canal, this area already attracts visitors for a leisure and recreation purpose.
- Gadigal Reserve has an ecology/biodiversity focus. Minimal intervention is suggested to enhance a space which already serves as an escape into nature
- Lewisham West has a community focus, with a proposed community art space, market square and an existing community room
- Johnson Park, with its kickabout area, playground, location next to Arlington light rail stop as well as picnic and BBQ facilities, is currently a well-maintained and popular community/social hub
- Jack Shanahan Reserve takes its character from the skate park and basketball court in the Reserve. It already functions as a recreation hub with a youth focus.
- The Cooks River gateway, where the GreenWay meets the Cooks River shared path

This strategy is about enhancing and adding to existing recreation opportunities, rather than removing or displacing established activities. Stakeholder consultation included many comments about maintaining well-used assets such as playgrounds, barbeque facilities and dog off leash areas. The Hawthorne Reserve dog off leash area was the most frequently nominated favourite place along the GreenWay.

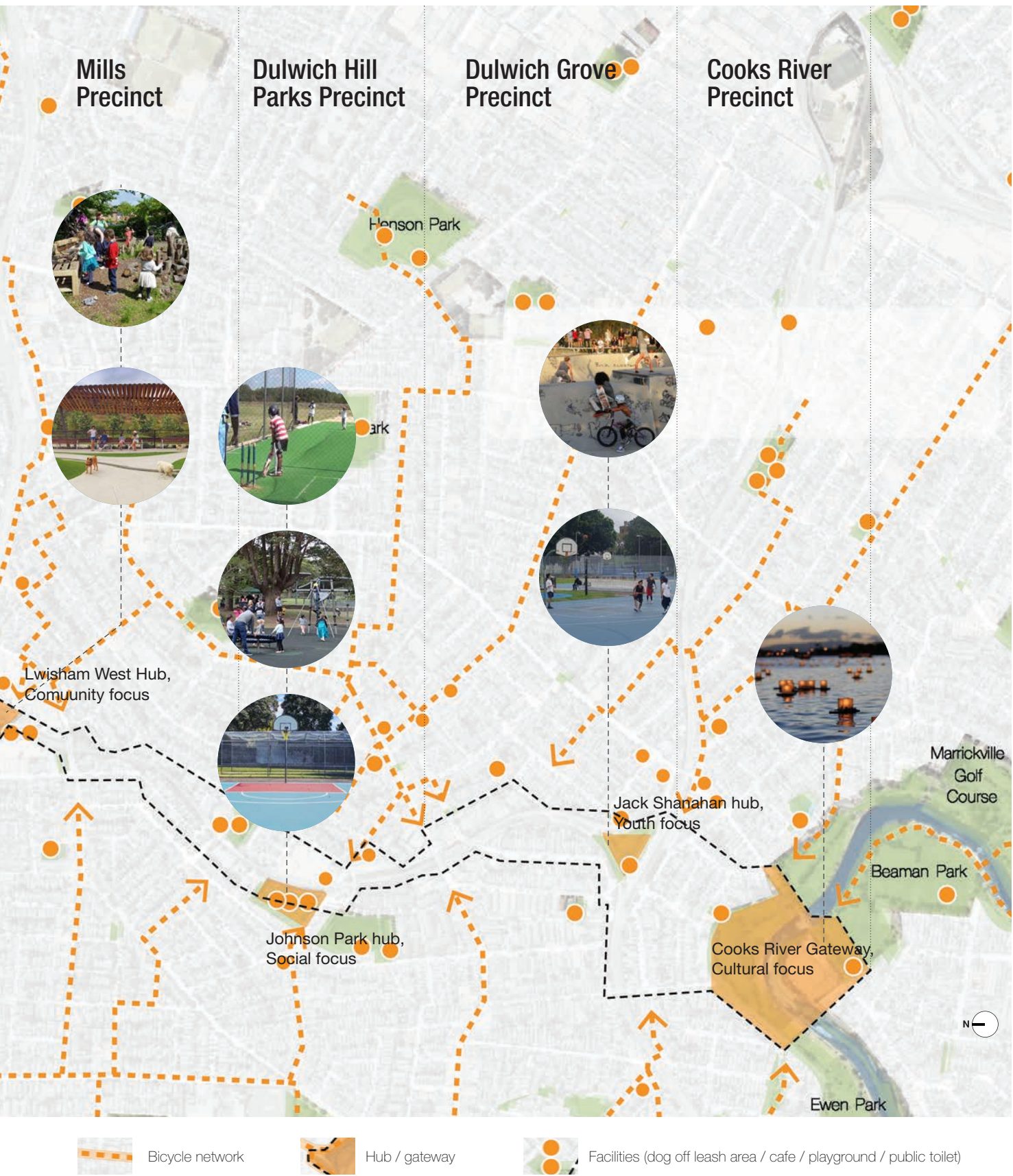
Separate Master Plans currently being prepared for the Dulwich Hill Parks, the Marrickville Golf Course and Ewen Park (Canterbury Bankstown Council) will also contribute to this strategy along the GreenWay corridor.





Key actions recreation





6.4 Culture

The GreenWay is a significant cultural landscape and has the potential to reveal little known stories of Sydney's natural, indigenous, settlement and industrial history. The story of the GreenWay itself also reveals much about the Inner West area's recent history and grassroots initiatives.

Establish quality public art

Stakeholders called for more public art, including sculpture, along the GreenWay. Therefore, one of the strategies for this Master Plan is to identify locations for public art. The diagram here suggests specific locations for public art focused on different aspects of the GreenWay.



Locations have been selected to:

- Define different places along the GreenWay
- Highlight interesting features
- Celebrate the character of each place
- Make places feel safer – particularly proposed tunnels
- Encourage exploration

Table 8 and Table 9 summarise the major public artworks proposed for the GreenWay. These have been classified as “signature”, “modest” or “tunnel” artworks. For each of these, a specific location has been nominated and a theme has been suggested.

The Master Plan budget also makes allowance for “intimate” scale public artworks in every precinct. Locations have not been nominated for these pieces. Some suggested themes and ideas include:

- Art within dog off leash areas
- Heritage and environmental interpretation
- Creation of the GreenWay/Green Grid

Interpret GreenWay stories

Stakeholders also called for the GreenWay to do more to tell historical and local stories. Public art and interpretation panels (related to e.g. aboriginal, settlement, transport, utility infrastructure, industrial, ecological values and histories) can help highlight the GreenWay's history and express these stories in meaningful ways. The table at right suggests scales, themes and ideas for public art along the GreenWay, which are also illustrated in the figure on the next page. These suggestions will be refined as the public art program evolves.



The GreenWay has a history of fusing art and ecology with local art competitions calling for environmentally themed artworks for a decade making this a strong thematic for the GreenWay.

The GreenWay should continue as a locale for this particular curatorial framework, and location for environmental artists to assist in developing destinations that promote ecological features, and encourage discovery of micro environments, flora and fauna.

Stakeholders made some comments about recognising Aboriginal culture along the GreenWay, and the Gadigal Wayfinding Project is currently underway to help tell Aboriginal stories. Therefore this Master Plan suggests some locations for art celebrating Aboriginal culture, but these suggestions should ultimately be informed by the Gadigal Wayfinding Project.

Create places for local community (flexible gathering and event spaces)

Beyond permanent public art and interpretation, ephemeral exhibitions and cultural events (e.g. Art on the GreenWay, Open studio trails, Artcycle and sustainability tours) are also an important part of the GreenWay today. The Master Plan can facilitate these activities by providing appropriate spaces and places. Flexible event and gathering spaces are required, which are appropriately scaled and provisioned.



The following main spaces have been proposed in the Master Plan:

- Lilyfield Road bridge: it is aimed to give the northern end of the GreenWay a defined sense of “arrival and expansion” to align it with the opening out of the landscape – from the long linear pathway of the Hawthorne Canal to the wide open vista presented by the cove at this location. This aims to elevate the site as a destination zone, and flexible events space on, and around the Lilyfield Road Bridge
- Iron Cove: a small gathering place is proposed on the shore of Iron Cove
- Canal Road: a container frontage is proposed to activate the area between the film studios and the canal
- Lewisham West: a community room, market square, art space and community garden are existing or proposed
- Johnson Park already functions as a place for community events including outdoor cinema and carols in the park
- Dulwich Grove: a gathering place is proposed between Jack Shanahan Reserve and the new park
- Cooks River: an events space is also recommended at the Cooks River, which could facilitate community gatherings similar to the “Candles on the River” event usually held at Steel Park. Public art and place making can define this as the gateway to the GreenWay at an important location on the Cooks River cycleway

Table 8. Proposed locations for permanent public art of different scales

Signature works	Modest works	Tunnels
Iron Cove	City West Link underpass	Longport Street
Gadigal Reserve	Canal Road (Film Centre)	Old Canterbury Road
Johnson Park	Marion Street light rail stop	Davis Street
Cooks River	Southern side of Constitution Road	Constitution Road
	New open space between Jack Shanahan Park and Hercules Street	Hercules Street
	Jack Shanahan Park (near light rail stop)	

Table 9. Proposed locations and suggested themes for public art

Location	Scale	Suggested themes
Iron Cove Gateway	Signature	Water as natural element, how humans interface with and work with water
City West Link underpass	Modest	Working within the overly engineered structure
Canal Road (Film Centre)	Modest	Fence line – static showreel of its multiple histories
Marion Street light rail stop	Modest	Meeting point of urban infrastructure with natural systems
Gadigal Reserve below main western rail line	Signature	Lighting, soundscape or subtle hanging sculpture to highlight the heritage infrastructure
Longport Street tunnel	Tunnel	Contemporary work by Aboriginal artists.
Old Canterbury Road tunnel	Tunnel	Heritage
Constitution Road tunnel	Tunnel	Active transport, potential to use the rocket structure for art & play
Davis Street tunnel	Tunnel	Environmental technology
Johnson Park	Signature	Revealing underground watercourses
Constitution Road - entry to new open space area	Modest	Seed work for environmental art/nature trail – reveal hidden flora and fauna of the GreenWay
Hercules Street	Tunnel	New urban environments – geometry and repetition
Hercules Street new open space	Modest	Engage with Dulwich Hill Primary School – thematic to be developed in partnership with students
Hercules Street new open space	Modest	Seed work for environmental art/nature trail – reveal hidden flora and fauna of the GreenWay
Cooks River	Signature	Aboriginal culture. Reveal Aboriginal stories of place
Cooks River	Modest	Environmental – waterways, boating, fishing

Environmental artwork at Iron Cove gateway

Activating the area around Canal Road studios and the cluster of businesses and organisations around the area

Tunnel artwork

Light on Whipple Truss bridge

Gadigal visual projections
Gadigal soundscape
sensitive to resident fauna

Mills Precinct

Dulwich Hill Parks Precinct

Dulwich Grove Precinct

Cooks River Precinct



Waratah Mills heritage art

Hercules St
hidden habitat art

Cooks River boat art
Cooks River light over the water
Cooks River wayfinding/time art



