West End Peninsula

Building Biodiversity A Case Study

The community of West End, Highgate Hill and South Brisbane has shown long-term passion for protecting local natural places. Many locals see untapped potential including opportunities to improve the health of the environment and community by restoring some of its natural places.

The Green Space Plan provides a framework to transform the peninsula into a neighbourhood that embraces biodiversity and connects people with the local natural environment. This case study explores options to re-establish lost natural habitat, encourage wildlife and improve access. Taking advantage of our proximity to the river, we can improve neglected parks, and create pathways to provide better access to natural green spaces.

While the case study looks at tangible options to protect the natural environment, it is critical that the process is community inspired and led. Building connected natural green spaces has the potential to transform the neighbourhood; improve our lifestyle and provide for better access to natural open space.

Question: Why inner city biodiversity?

On the peninsula large natural areas do not exist. Managing the area's scarce and scattered natural values is critical to protecting the local natural environment. Equally important are the social benefits of maintaining and replanting natural green space. Even relatively small natural areas have an amazing capacity to galvanise public interest, connect people with nature, and provide peace in a busy world.

Natural green spaces are an ideal form of green infrastructure for achieving multiple environmental and social objectives. However, there are some conflicts between designing corridors for human use and appreciation, and achieving ecological outcomes. It is important to consider what we want natural spaces to do, and carefully weigh-up the trade-offs between ecological function, management costs and human uses.

The natural environment

The West End Peninsula occupies a broad meander of the tidal reaches of the Brisbane River. It is one of the earliest areas settled by Europeans in Queensland, and is one of the most densely populated regions of the State.

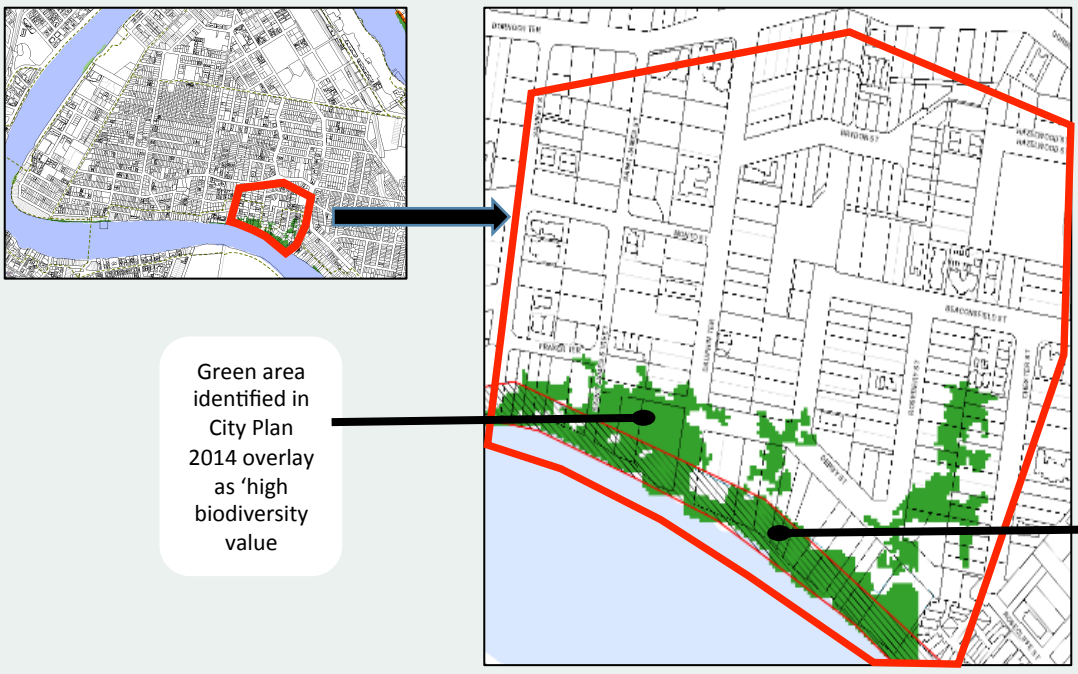
The landscape is dominated by a ridge with its highest point in Highgate Hill. The ridge country was originally open forest dominated by spotted gum, *Corymbia citriodora*. To the south of the main ridge the land slopes steeply to the river - intersected by deep lush gullies. The river along West End and South Brisbane is bordered by relatively flat alluvial plains, previously occupied by rainforest and freshwater wetlands.

The pre-European landscape of lush rainforest, open forest and wetland vegetation was largely cleared for farming and settlement more than 100 years ago. Almost all the original vegetation is now gone, except for a band of riparian forest along the river at Highgate Hill, pockets of vegetation in gullies running into the St Lucia Reach of the Brisbane River, and fringing mangroves at the river's edge.

This case study explores activities that can potentially re-establish inner city forests and refuges for wildlife.

The case study area

The Brisbane City Plan (2014) identifies a small area on the West End peninsula at Highgate Hill as an area of high biodiversity value. Further, City Plan has zoned an important wildlife corridor along the river as a riparian zone. This case study uses this area as a starting point to explore ways to extend biodiversity into the West End Peninsula. The 'public realm' within the study area includes parks, undeveloped roads and traffic islands. Private back gardens also play an important role in supporting wildlife habitat in this inner city location.



Connecting nature

Protect the Brisbane River corridor

Remnant vegetation along the riparian corridor of the Brisbane river from Dutton Park to Hill End represents the most important wildlife corridor on the Peninsula.

Rehabilitate Council parks

For many years the West End Greening Group have focused efforts on remnant Open Forest vegetation at the Dauphin Tce Park. At the Derby St Park there are opportunities to establish rainforest in the deep gully and encourage small birds.

Establish habitat gardens

Habitat gardens are recommended for unused road areas and private land. Rather than re-creating complex vegetation communities, habitat gardens take cues from the surrounding landscape and enhance existing plantings, views and amenity. Mass plantings selecting native plants would provide swathes of foliage. Shrubs should be planted in groups and maintain views for safety.

Protect the Brisbane River biodiversity corridor

Forests along the Brisbane River, while weedy, provide habitat for native fauna such as small birds due to their multi-layer structure and inaccessibility to people. These are the **most** important biodiversity asset in the peninsula.

Brisbane City Council's 2014 City Plan includes an approximately 20 metre corridor along the river as Riparian zone… providing protection from development and tree clearing.

However, satellite images of the state of the river's riparian zone indicate that more is needed to be done by Brisbane City Council to better protect this important corridor. For example council could establish stronger laws to protect the rivers vegetation. Land holders within this zone could be offered rate relief for the ecosystem services provided and be offered direct land management assistance to rehabilitate this critically important zone.

Rehabilitating council parks

Dauphin Tce Park

Rivers edge open forest

The Dauphin Tce Park provides a glimpse of the forest that once dominated the ridge country on the peninsula. For many years the West End Greening Group have been managing and restoring this remnant forest.

Replanting and management is a long term commitment. The Group have enhanced the park's biodiversity by establishing midstorey vegetation, providing shelter for smaller birds from aggressive Noisy Miners.

Derby Street Park

Inner city rainforest

The Derby Street Park is an inaccessible gully, cutting deeply into the hill-side and leading directly to the Brisbane River. An ephemeral waterway traverses the gully, which was once likely dominated by lush rainforest. Over the past 100 years the gully has transformed into a weed dominated reserve.

The site's deep gully lends itself to establishing rainforest vegetation. Planting layers of vegetation will create valuable habitat structure for other wildlife.

Removal of highly aggressive weeds from this park is a priority, including Cat's claw creeper, madeira vine, Cocos palms and Chinese elms.

Brydon St Park

Open parkland

The Brydon Street Park is a small landscaped park with grassy open spaces. It forms the start of an ephemeral waterway traversing the gully leading to the River. Prior to 2002 'The Gully' was the focus of strong community action to save the last significant natural area in the case study area. The Gully was developed into a residential estate – with a small, active park within a landscaped forest.

The park's natural setting provides habitat linkages for wildlife into adjoining areas.

Establish habitat gardens: wildlife stepping stones

Nature Strip Gardens

Nature Strip planting is another way to develop bio-linkages, create habitat and improve the naturalness of the streetscape. In Highgate Hill, neighbours came together to replant a wide road-verge, establishing 'Craig's Garden' using largely native shrubs and ground covers. The planted area slows storm water and filters pollutants and sediment to the River.

Traffic Island habitat

Many of the catchment's broad streets contain traffic island because of the steep terrain. These can be converted into habitat islands with native shrubs and grasses– providing habitat, food and refuge for urban-dwelling fauna such as silvereyes and fairy wrens. The street can be transformed - providing better connection between the Brisbane River corridor and urban areas.

Revegetate unused roads

There are a several unmade roads, either leading to the river or too steep to develop that contribute to habitat links. 'Boobook Reserve' on Fraser Tce is an undeveloped road that local residents have rehabilitated to become a 'nature parklet'. On Beaconsfield St, BCC have recently removed large Rubber trees from part of a road reserve. Replacing the lost trees with native rainforest trees and scrubs creates an ideal 'hub' for other road planting activities.

Encourage backyard biodiversity

Many private gardens in the area have lush vegetation – ideal habitat for a wide variety of species. There is a tradition of planting native (often Rainforest) species - providing habitat, food and refuge for urban dwelling fauna … but residents need support to better manage these habitat areas. Options include:

- free plants
- weed management by council
- volunteer helpers

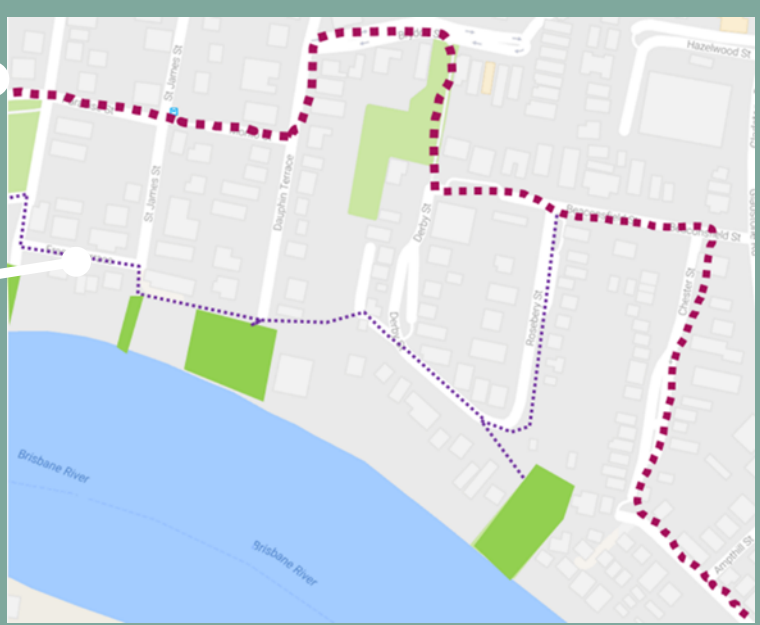
Trailfinders Australian Garden, Chelsea

Connecting with Nature

As well as connecting our green spaces to each other we must connect the community to these spaces. Brisbane City Council prepared a River's Edge Strategy to encourage greater connection to the River. Many streets within the case study area are broad or not developed - creating opportunities for walking paths and improved access to natural areas. Several unmade roads have the potential to establish new trail networks.

RiverConnect BCC Pedestrian walkway from Rivers Edge

Alternative pedestrian walkway –better connection to natural green space – but requires signage, small pedestrian bridge and basic infrastructure to provide a safe and enjoyable experience.



Experience inner city nature

Pathways

As the planting on unused roads matures, existing footpaths provide opportunities to better connect people with nature. Directional signage will help walkers locate and follow access pathways which may be disjointed and difficult to find. Such routes include the footpath through Brydon St Park, the War Gun path on the closed section of Monto St, the nature trail at Dauphin Tce Park, and ultimately access through to the river.

Pedestrian bridges

A deep gully on an unmade road at the western end of Derby St could be connected to Dauphin Tce Park with the construction of a simple footbridge (similar to the Rosecliffe St Bridge - left). This would improve access between the parks and greatly extend and enhance the nature experience for local and visiting walkers.

Safe vantage points

In residential areas, walkways could include lookouts with bush and river views, informative signage and safety handrails. Signs could feature information on the area's biodiversity values and reflect changes to the landscape. Signs should also encourage local residents to consider planting habitat gardens to encourage wildlife.

Any works need to maintain safety access for resident and pedestrian access.