



Rosie's Creek

Excursion Day Handbook

A wetlands story experience about Mundy Creek in Townsville that uses the Storythread approach developed and trademarked by Pullenvale Environmental Education Centre (Education Queensland)

This technical report has been previously published by the Queensland Government. The technical information in this publication is still current, however it may contain references to former departmental names. Please refer to the Department of Education, Training and Employment's website at www.deta.qld.gov.au for up-to-date contact details.



Australian Government

Queensland
Wetlands Program



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Chapter two

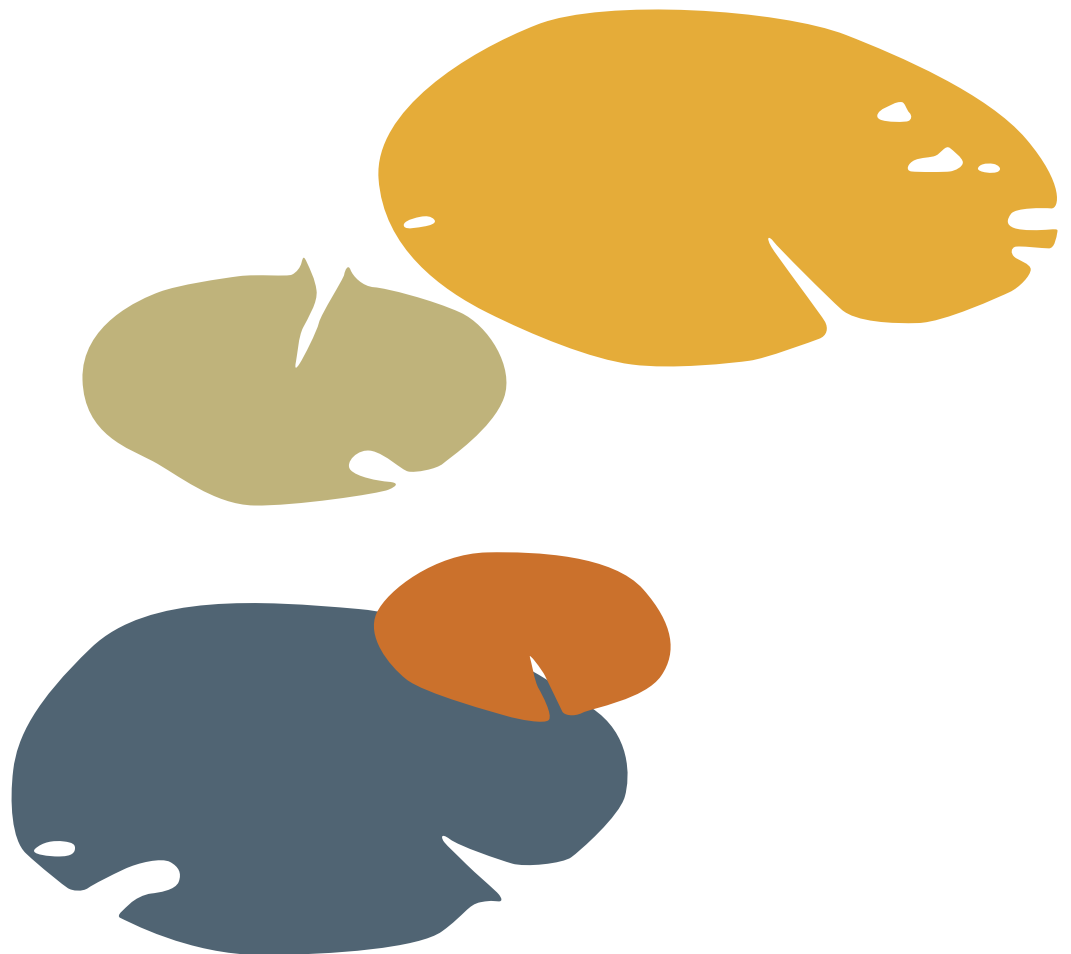
Students connect to people and places
by stepping into the story





Contents

Transport times and arrangements	6
Overview of the excursion day	7
Teacher checklist	9
Detailed outline of activities for the excursion day	10
Information about Mundy Creek	17
Mundy Creek past	18
Mundy Creek present	19
Values	22
Caring for Mundy Creek	23
Species lists	24
Additional resources	32



Transport times and arrangements

Program start time: 9.15am at Harold Phillips Park, Hugh Street, Garbutt

Program finish time: 1.45pm at Soroptimist Park, Heatleys Parade, Belgian Gardens

Transport details: Transport required to stay until _____
(Dependent on your toileting arrangements – see next page)

Please confirm the above details with your bus company.

Photocopy the map below and bring it for your driver.



Overview of the excursion day

For the teacher's eyes only!

9.30 am Arrive at the PCYC bridge, Harold Phillips Park

The students share their first impressions of the modern Mundy Creek. As they are preparing to walk along the creek to find Rosie's tree, a discovery is made: Rosie's *Mundy Map* and the *Mundy Moments* list!

10.15am Gather under Rosie's tree, Grandpa Ficus

After walking along the Mundy Creek Natureway to Airport Bridge and playing Rosie and Archie's *Ten New Discoveries Game*, the students find Grandpa Ficus! After a quick explore, they have morning tea.

10.30am Morning tea

11.00am Activities along Mundy Creek

The students sit in the shade of Grandpa Ficus and follow Rosie and Archie's guide to deep listening. They complete a series of activities along the creek and then attempt to experience another *Mundy Moment* by following the string of lagoons to Rowes Bay. The lagoons are no longer there! What is? The students walk through to Soroptimist Park.

12.30pm Lunch at Soroptimist Park

1.00pm Search for the remnants of the last lagoon

After lunch, the students embark on a treasure hunt to find the remnants of the last lagoon. They celebrate their day through the creation of a group art piece in the park and by pledging the *Mundy Mates'* oath.

Toilets

There are no toilets along the walk until Soroptimist Park. Possibilities for earlier include:

- using the toilets at the Belgian Gardens Scout Den. The den is at 46 Evans Street, Belgian Gardens and backs onto the Hooper Street section of the creek where students will be between 10.30am and 12pm. Justine Wilkinson, the group leader, is happy to be contacted on 0408 938 471.
- hiring a bus with a toilet and asking the driver to meet the class at 10.30am at Rosie's tree, at the corner of Hooper and Paramatta Streets, Belgian Gardens.
- using the Townsville City Council public toilets in Cutheringa Park which is in Harold Street, West End. This would entail getting back on the bus after the PCYC, driving to Cutheringa Park and then getting the bus driver to drop you and the students back at Rosie's tree, missing out on the walk from Harold Phillips Park to the tree.



Teacher checklist

Please ensure that children wear:

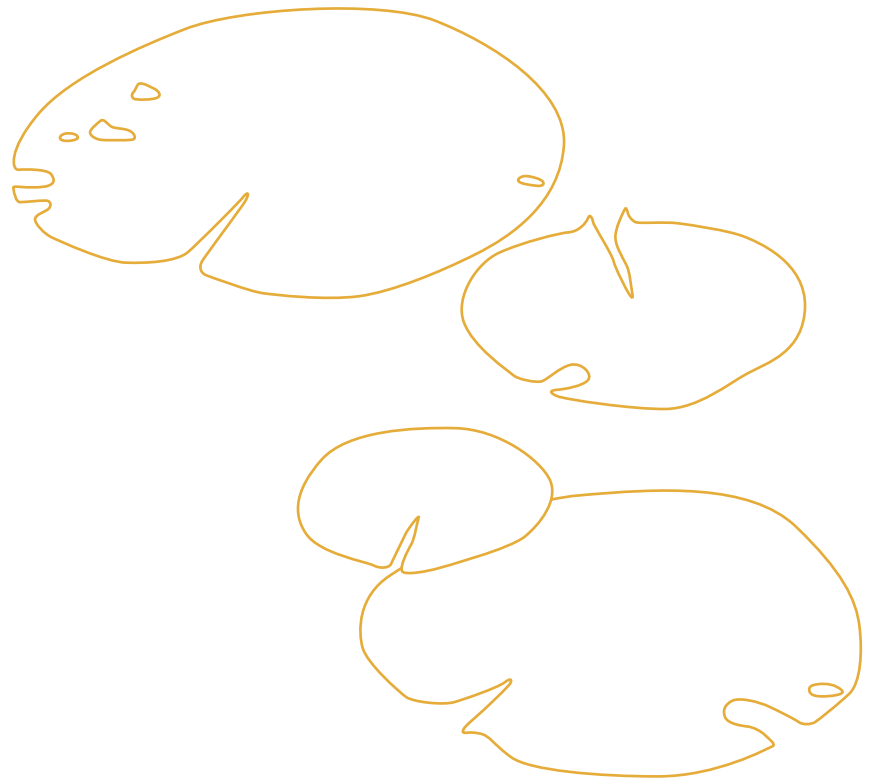
- Hat
- Sunscreen and insect repellent applied at home/school
- Closed in walking shoes
- Suitable walking clothes—long pants are strongly recommended
- Weather appropriate clothing if necessary e.g. jumper or raincoat

Please bring:

- Morning tea and lunch (please consider environmentally friendly packaging e.g. reusable containers and biodegradable wrappings)
- Plenty of water to drink
- A copy of your complete class list with details of any medical requirements
- First Aid Kit and student medication (if needed)
- A camera to record the day

Additional suggestions for the Mundy Creek excursion:

- For the day to run as smoothly as possible, we suggest that you bring three eager parent/adult helpers. This is important as a health and safety issue and also helpful with small group rotational activities on the day.
- Digital cameras are really useful tools for focusing the students' attention on detail, helping them to be attentive and collecting data. For this reason, we recommend that you encourage the students to bring as many cameras as possible. For younger students, it may be more feasible to provide four or five cameras to be used under adult supervision for the rotational activities only.



Detailed outline of activities for the excursion day

Aims for the day

For students to connect to Mundy Creek by:

- stepping into the story and seeing the place through Rosie's eyes
- having fun exploring
- engaging in deep, attentive listening that uses all the senses
- reflecting on the changes to Mundy Creek over time and the future of the creek.

Rose would like to discover:

1. What's still left of her Mundy Creek and what's different?
2. What hidden treasures and special spots the students love
3. How the creek is being cared for

Suggested teacher resources:

- Cameras
- Teacher clipboard with paper and pencils
- Rosie's Scrapbook
- Excursion Day Handbook
- Artifacts from the *I Wonder...* pack folded up together and tied with a ribbon:
 - Rosie's *Mundy Map*
 - The *Mundy Moments* list
 - The note from Archie
- The recent Mundy Creek aerial map included with Rose's letter to the students
- Any data collection materials the students have created including their nature scrapbooks
- Materials for sketching and writing (clipboards or the students' nature scrapbooks)
- Tarp to sit on for morning tea and lunch if required
- First Aid kit with ice pack and student medication
- Spare insect repellent and sunscreen
- Rubbish bags



9.30am
Arrive at the PCYC bridge,
Harold Phillips Park

Give students time to read the Mundy Creek information signs on the PCYC side of the bridge then gather them on either side across the bridge looking out. Key questions:

- What are your initial thoughts and reactions?
- How would you describe this place?

Rose spoke in her letter about ‘knowing how to look’. The students are really going to need their deep listening skills today to find hidden treasures and special spots. Sometimes they might be obvious, but sometimes they might be hidden!

Let’s try something. Close your eyes, listen and see if you can get an image in your mind of the creek as I am about to describe it:

Mundy Creek was originally a string of freshwater swamps, deep-water pools and lagoons full of water lilies, brogas and barramundi. Children learnt to swim in the chain of lagoons and local residents fished in the creek. There were so many beautiful blue water lilies that at some times of the year, you couldn’t see the water. There were trees along the creek and many, many birds.

When you have that image in your mind, open your eyes but don’t speak yet. I want you to spend one minute just looking out at the creek and seeing what you can notice about this place.

Students continue to stand silently on the bridge for one minute of deep listening. Then note the students’ responses to the following key questions:

- What’s still here?
- What’s different?
- What else did you notice?

If needed, give the students time to record anything they have noticed or wish to remember.

Recap the students’ role: today they are Rose’s research assistants. Remind them of Rose’s three questions and give them the opportunity to share with a partner what they are hoping to discover. While getting organised, find in amongst your things a carefully folded package of papers tied with a ribbon! (**Rosie’s Mundy Map and the Mundy Moments list with a note from Archie!**)

It is important that the map is tied with a piece of the same ribbon that was found in Rose’s box of treasures so that the students will immediately know it belongs to her.) Sit the children down and ask: *Does this belong to anybody? What could it be? It must have fallen out of Rose’s treasure box. Let’s take a look!*

Examine the Mundy Map with the students and identify where you are on the map (where the waterholes once were and about to journey along *Discovery Walk*) and where Rosie and Archie’s special spots were along your proposed route (continue referring to the map throughout the day). Read the *Mundy Moments* list. The students could become Mundy Mates like Rosie, Archie and Tippy by having each of the *Mundy Moments*!

Mundy Moment 1: Let’s walk along *Discovery Walk* and play the *Ten New Discoveries Game*!

Walk along the Mundy Creek Natureway towards Rowes Bay

The students use Rosie and Archie's **Ten News Discoveries Game** to continue to look for hidden treasures, special spots and anything from the scrapbook that they identified they wish to search for.

Crossing Old Common Road

Crossing Old Common Road involves **moderate risk** and will require clear safety instructions and precautions. While it would mean missing out on part of the walk, an alternative would be to arrange for your bus to wait while you and the students are at the PCYC bridge, and then get back on the bus to drive around to Rosie's tree.

Cross over to the other side (the Hooper Street side) of Old Common Rd

This next section of Mundy Creek used to be open freshwater creek with lots of birds. It is now closed mangrove creek, but the only part of the existing Mundy Creek even vaguely reminiscent of Rosie's Mundy Creek from 1950. Next to the bridge, on this side of the creek, is a **weed choke**.

Weed choke

The term "weed choke" is used to describe a barrier across a waterway that is made by weeds.

Implications:

- A weed choke is a barrier to normal flows in the waterway as well as the movement of fish and other animals like crocodiles etc.
- The weed choke traps litter (not really a bad thing because it stops it going out to sea - except that no one comes to take the litter away) and sediments carried along the storm water drain, which then act like a filter to trap finer sediments which in turn makes the weed choke operate like a dam wall and completely block the waterway. The wall causes upstream flooding.
- However, before it reaches this stage, the weed choke acts like a high point in the bed of the river and water tries to get around the sides of the weed choke which can also cause flooding. In this case, the weed choke is also blocking the storm water drain!
- In a really bad case the weed choke could separate the upper part of a waterway into a pond that can only flow into the lower part in a flood.
- The weeds stop the wind blowing over the surface of the water and replenishing the dissolved oxygen that is needed for animals in the water below the weeds. Therefore, the diversity of life under a weed choke drops dramatically.

- The weeds drop matter like old leaves that decompose and this process uses up even more of the dissolved oxygen.
- The mat of weeds shades the water and prevents light getting in to submerged plants like algae that would photosynthesise and give off oxygen that would raise the dissolved oxygen levels.

Possible causes

- An animal or bird dropping seeds or plant parts.
- Humans growing unsuitable garden plants that escape in heavy rain.
- Garden cuttings that are dumped .
- Plants and plant parts that are washed into the waterway from other areas during floods.

What can be done about it?

Get rid of the weed! Pull it out and replant the edge of the river so that this weed can't get the amount of sun it needs to grow and take over. However, you can't use chemicals to kill the weed, since you will harm other good plants and animals. You can't use fire since the area is wet and will not burn and you can't dig it out with a large excavator because you will stir up too much mud and in some cases perhaps unearth acid sulphate soils. These soils would generate sulphuric acid as they dry out which would then run into the creek and cause a really big problem. **Hand removal and replanting is about the gentlest solution in this case.**

Find Grandpa Ficus

Let's find Rosie's tree, Grandpa Ficus!

Clues:

- The tree is marked on Rosie's *Mundy Map* and on the aerial map in her scrapbook, and it is noticeable on the recent aerial map that accompanied Rose's letter.
- It is a Ficus Benjamina.
- The sketch in the scrapbook is based on the actual tree. (It is the big tree at the corner of Hooper and Paramatta streets.)

10.15am
Gather under Grandpa Ficus

Give the students time to explore the tree and its surroundings. Note, by comparing the aerial maps, that the area immediately around Grandpa Ficus used to contain a few other trees and the edge of Town Common. There are now a lot of houses.

10.30am
Stop for morning tea
in the shade of Grandpa Ficus

11.00am
Activities along Mundy Creek

As noted above, this section of the creek along Hooper Street between Old Common Road (Airport Road) and the scout den used to be very different. Take a moment to have another look at Rosie's *Mundy Map*. *What was special about this part of the creek for Rosie and Archie?* **Mundy Moment 2:** try deep listening in the shade of Grandpa Ficus. If the students are to become Mundy Mates, that is what they need to experience next!

- **Deep listening and reflection.**

Set up the deep listening session as explained in the teacher's resource booklet. After 10 minutes or so, allow the students time to reflect through discussion (note their responses to Rosie's place and what they noticed), writing or drawing in their nature scrapbooks, or using the data collection materials they created for the excursion.

- **Rotational activities:** This is the perfect place to conduct more detailed research for Rose! In groups, the students participate in three rotational research activities (3 x 15mins) with an adult helper working with each group:

1. **Sketching Grandpa Ficus** – Rose would want to know how her tree looks now!
2. **Nature photography** – this is the perfect opportunity to really search for hidden treasures and traces of the past! Consider:
 - *Taking the time to stop and notice what is actually there.* The more you look, the more you see! The students' deep listening skills could help them find the most incredible big and little things to photograph. Using a camera will help them to extend their senses and focus on specifics.
 - *Taking the time to stop and think.* Encourage the students to look through the lens of their cameras and focus on details, deciding what they want to include in their photographs before they shoot.
 - *Taking the time to look at things from a different angle.* Where could the students sit their cameras to take photos? They might point their camera up a tree, or even shoot on the ground through a hole in a leaf!
3. **Writing** – start a message to Rose about what has been discovered so far. (This message can be finished back at school after the excursion.)

12.00pm
Walk along the creek
to Soroptimist Park

Gather the students back together. Check the Mundy Moments list. **Mundy Moment 3:** follow the string of lagoons to Rowes Bay. Check the maps with the students. At one time Mundy Creek became a string of lagoons before it emptied out into Rowes Bay. Today, however, this next section of Mundy Creek is a straight, open mangrove channel flowing straight out to Rowes Bay. Key question:

Where was the original path of the creek?

(Originally it ran along the line of Primrose Street – see the street map at the beginning of this booklet.)

The students will not be able to have the third Mundy Moment exactly, but they can walk to the mouth of the creek at Rowes Bay, continuing to search for traces of the past and noticing changes, hidden treasures and special spots along the way.

Stop at the flood gates

The flood gates are where the string of lagoons used to be. How do they work? These gates come down for very high tides to prevent potential tidal flooding upstream of the gates in Belgian Gardens, West End and Garbutt. This reduces saltwater intrusion and pooling during very high tide events, while allowing natural fish and wildlife movements at other times. *Why do you think they are needed now, but weren't needed in Rosie's day?*

12.30pm
Stop for lunch at Soroptimist Park

1.00pm
Search for the remnants
of the last lagoon

This area was once lagoons and mangroves. This is what is left:

Only one small natural landform remains on the whole Rowes Bay foreshore: remnants of a lagoon that was once part of the Mundy Creek mudflats. This can be seen today as a shallow depression behind the Soroptimist Park beach, and it is still lined with a few of its original mangrove trees. The feature is obvious on the 1938 aerial photographs, and is probably considerably older than this (Environmental History of Rowes Bay p. 18).

Work with the students to find the remnants of this lagoon. A hidden treasure!

The students' day walking along Mundy Creek and researching for Rose is almost over. They have experienced almost all of the Mundy Moments and will soon be Mundy Mates! Take a moment to share some of the discoveries that have been made during the day.

Key questions could include:

- What has been your most important discovery of the day?
- What has surprised you about Mundy Creek?
- What hidden treasure or special spot are you most excited about sharing with Rose?
- How do you think the creek is being cared for?
- How do you feel now that we are at the end of our day?

Celebrate and finish the day by creating an Environmental Art Piece

- Establish boundary markers with the students and then send them off with the adult helpers to spend five minutes searching for leaves. They are to find no more than three leaves, no bigger than their hands, which are all different. Ask them to be attentive and look for those leaves that really catch their eye, but that they might not have noticed if they didn't know how to really look. They may find more than three and have to decide which leaves to keep.
- While they are searching, use natural materials such as leaves, rocks and sticks to create a circle on the ground in a clear area.

- When the students return with their leaves, ask them to gather around the circle - those at the front can squat while those behind stand. The students are to take it in turns to place their leaves in the circle, being mindful that as a group they are gradually creating some sort of pattern (see examples below). This is your class's symbol of their day! It is ephemeral art that will soon return to nature with the help of the wind, the rain and the creatures that live in the park. Take a photograph that will serve as a reminder to you and can be sent to Rose.

- **Mundy Moment 4:** The students pledge an oath to never forget this place. They are now Mundy Mates!



*Pebbles
Broken &
Scraped*



*Iris Leaves
with
Rowan
Berries*



Rowan Leaves & Hole



Goosefeathers

Photographs by Andy Goldsworthy from the 'Morning Earth' website (see Additional Resources)

Notes:

Lined area for taking notes, consisting of approximately 24 horizontal lines.



Information about Mundy Creek



Mundy Creek past

Mundy Creek was once part of an extensive network of swamps, waterholes and waterways. Children learnt to swim in the chain of lagoons and residents fished for barramundi and mangrove jack. When the tide was high it was possible to pull a dinghy from the creek mouth through a swampy area at the Showgrounds and on to the Causeway. Market gardens, dairies and a brickworks were found near the creek and hundreds of cows used the surrounding lands for pasture.

(From the Mundy Creek Natureway information sign next to the PCYC bridge.)

Bridge history out of kilter

RON AITKEN,
Wulguru

writes:

Sir, 1/3/00 Sun
Yesterday I went looking for the new Mundy Creek Bridge, as recently reported in the media. As an old Belgian Gardens boy, it was of interest to me, so I went to have a look. After half an hour searching I could only view it from a distance.

Situated behind the PCYC grounds off Hugh Street, it appears to be isolated, with no public access from either side. Here's hoping there is more of the project still to come.

But can we get our local history right? Mundy Creek disappeared off the map in 1968. The original creek enters the bay where the Soroptimists Park is today, and ran parallel to the beach in a northerly direction with its headwaters in the area of the Rowes Bay Golf Club.

When the man-made drain, that now enters Rowes Bay near the caravan park was formed the same year, Mundy

letters to the editor



Creek was filled in using gravel from "Jimmys Lookout".

Today people living in Primrose Street are in the middle of Mundy Creek.

The watercourse that this new bridge spans, is a part of what was known as "the string of waterholes". They stretched from the ocean side of the cemetery, then headed west across the Common Road Causeway, through to the lower end of Hugh Street that exists today. (Hugh street wasn't formed until after WWII).

After the Town Common drainage scheme was completed in 1968, the "string of waterholes" was reformed into the drainage channels that exist today. In the wet season

the waterholes finally meet up with the Pimlico tidal flats, by crossing Ingham Road near Henry Street.

As boys, with a combination of a big wet and a king tide, we could put our canoes into Mundy Creek, and battle our way to the Kings Road reaches of Ross Creek. But that's another story.

Another snippet of local history is behind the string of waterholes where the remand centre is today, was Townsville first Brick Works, established in 1870.

A little later a second brickworks was built, very close to where this new bridge has been built. The clay from the town common was used to make our first building blocks.

Good luck to the bridge access project but please Mr Mayor, don't let the council stuff up Belgian Gardens history. How about calling it the "Brickworks Bridge"?

Captain's Creek?

At one stage the creek was renamed Captain's Creek by accident. There is a story that a local resident hung the sign 'Captain's Creek' on a bridge to give her husband, nicknamed Captain, a laugh on his way to work. The sign was later assumed to be the official name and it was some time before it was renamed Mundy Creek. We cannot confirm whether or not this story is true, but the creek is, in fact, still called Captain's Creek in some current street maps.

This letter is from "The Mathew Index to Townsville History" compiled by John Mathew and was kindly supplied to us by the Townsville City Council CityLibraries Local History Collection.

Mundy Creek present

Due to flooding, a drainage scheme was put in place post World War II. The resulting changes caused much of the wetlands to disappear. The Mundy Creek Natureway project was implemented as part of the Garbutt Renewal Program. Trees have been planted and a bridge now connects Garbutt to the Castle Hill PCYC. As in times past, the banks of Mundy Creek continue to provide a thoroughfare for local people, who walk and cycle its length between suburb and sea.

(From the Mundy Creek Natureway information sign next to the PCYC bridge.)

In the 1960s, Mundy Creek was straightened to improve flood discharge and protect nearby low-lying houses in Rowes Bay. As the letter on the previous page suggests, Mundy Creek as it is today is not the natural creek.

Changes due to this channelisation include the following:

- the velocity of the water, and therefore its erosive power, has increased
- saltwater and mangroves have spread further up the creek. This was once a freshwater system.
- a fish declared fish habitat on the Rowes Bay side of the creek mouth is dry until floods come
- when Mundy Creek breaks its banks during a very high tide or storm, the majority of the water flows to the north, across an estuarine wetland (mapped as saltwater couch grassland). This wetland is now only connected to the Town Common wetlands system in really heavy flooding.

In places, Mundy Creek... *is connected by continuous strips of vegetation to the Townville Town Common Conservation Park, which is registered on the National Estate. The area is also identified on the Australian Heritage Database as a roosting and foraging habitat for 26 migratory birds protected by international migratory bird agreements and over 300 species of birds found on the east coast of Queensland* (Belgian Gardens Substation Project, Environmental Information Sheet – Ergon Energy).

The Queensland Wetlands Program

The Queensland Wetlands Program, in partnership with the Great Barrier Reef Marine Park Authority, has produced a range of interactive education and awareness-raising products dedicated to building community understanding of the importance of wetland catchments, particularly the Great Barrier Reef ecosystem. These can be found at: <http://www.epa.qld.gov.au/wetlandinfo>

For example, **Wetlands Interactive Online** is an informative and interactive software program that helps the user understand why wetlands are important, particularly for the Great Barrier Reef, and how they function. Information is broken into five sections: what is a wetland; what wetlands mean to us; wetland connectivity to the reef, threats to wetlands; and local wetlands. Each section has information or games.

Mundy Creek Natureway

Following invasion by para-grass and Tilapia fish, the environment is being rehabilitated through weed control and revegetation with indigenous plants.

Mundy Creek Natureway provides a natural scenic route connecting Garbutt and Rowes Bay and offers panoramic views encompassing Many Peaks Range, Castle Hills, Mt. Louisa, Mt. Stuart, and Magnetic Island.

Vegetation you'll see includes open space grasslands, sedgeland, mangroves and eucalyptus woodlands. Over 120 bird species (see bird list) have been recorded along the Natureway, from majestic brolgas and eagles to tiny finches and bowerbirds.

- See Species List (plants, fauna, revegetation) (.pdf)
- Mundy Creek remains an Aboriginal environment spiritually and socially important to Traditional Owners and continues to be important to local people of Garbutt, Belgian Gardens and Rowes Bay for recreation and spiritual regeneration.
 - CJP Natural Area Trainees at work
 - Mundy Creek Aboriginal Bush Tucker Plants and uses

The main aerial photograph, taken in 1941 highlights in light blue the original path of Mundy Creek, as it was then. The dark curved line in foreground shows the Mundy Creek's new 'channelised' course with its 'new' environmental values of mangrove and sedgeland.

Mundy Creek was originally a string of freshwater swamps full of waterlilies, brolgas, and barramundi. The environment is now being rehabilitated through weed control, revegetation with indigenous plants (see Town Common Aboriginal Food Trail brochure) and community awareness (Mundy Creekwatch with Conservation Volunteers Australia and TCC), Mundy creek nature walk - Aboriginal Environments.

Today Mundy Creek Natureway provides a natural scenic route connecting Garbutt and Rowes Bay. The area has been modified over the years by drainage and reclamation works and now has established new environmental values through its saltwater grassland and mangrove wetlands.



Early Garbutt residents regularly fished in Mundy Creek, Louisa Creek, Geaney's Creek and nearby lagoons on the Town Common, for species such as barramundi and mangrove jack. Waterholes without crocodiles were also popular swimming holes!

Melrose Park, situated on Mundy Creek between Hugh, Dearness, Douglas and Chandler streets, was the first parkland gazetted in the Garbutt area, in 1931. Other parks along the Creek include Harold Phillips Park (Hugh and Lower William Street), the Evans Street park (Evans and Hooper Street) and Fantome Street parkland.

Locals have used Mundy Creek as a scenic pedestrian and bicycle thoroughfare from Garbutt to Rowes Bay for many years, with numerous tracks on both banks of the creek. Unfortunately, drainage works, channel excavation and other earthworks have degraded the natural and scenic qualities of the creek. Local residents have planted a variety of native and exotic plants, particularly in the lower reaches of the creek. Numerous organisations, including Townsville City Council, Rotary, Garbutt State School, Greening the Capital, and the Police Youth Club have also planted trees in Harold Phillips Park and Melrose Park.

(Above extract from the "Mundy Creek (Melrose Park) Natureway Proposal" p. 6)

Extracts from the Mundy (Melrose) Creek Natureway Proposal

Melrose Creek is a small coastal drainage system running from Melrose Park in Garbutt, to the coast at Rowes Bay. Although substantially modified by human activities over the past century, this creek retains many natural and scenic values. It plays an important role in the drainage and flood mitigation system of Townsville, and flows through numerous well-used parks and open spaces. The creek also provides a popular thoroughfare for people of all ages.

Melrose Creek flows through a range of vegetation types, determined by factors including soil type, topography and past and present land use. Areas of open woodland are scattered along the length of the creek, in solodic and alluvial soils with better drainage and lower salt levels. The upper canopy is dominated by eucalypts [mostly *Corymbia* (formerly *Eucalyptus*) *tessellaris*], and the understorey contains various grasses and ephemeral herbs.

Extensive areas of grassland occur along the creek. Some of these areas are artificially maintained by a regular Council mowing program, and would naturally support open woodland vegetation. A wide variety of native and exotic grasses have been recorded, along with numerous ephemeral herbs and seedling trees. Some low-lying areas with high salinity are covered with native saltwater couch (*Sporobolus virginicus*).

Some small patches of open forest are found on sand ridges and riparian (creek side) areas. Dominant canopy trees include *Corymbia tessellaris*, *Melaleuca dealbata* and *Alphitonia excelsa*. Midstorey plants include developing trees, sandpaper fig (*Ficus opposita*) and wattles (*Acacia crassicarpa*, *Acacia holosericea*).

Mangrove forest is found along much of the lower edges of Melrose Creek, particularly below the tidal gate. These forests are mostly regrowth after previous clearing, and are probably still expanding. The dominant species are grey mangrove (*Avicennia marina*), yellow mangrove (*Ceriops tagal*) and spider mangrove (*Rhizophora stylosa*).

Brolgas are often seen grazing in the grasslands of the upper reaches of Melrose Creek. Other commonly observed birds include kites, ibises, cormorants, doves and magpie larks. Numerous fish inhabit the creek, including barramundi, mangrove jack, mullet, rainbow fish, and the exotic tilapia. Native mammals include water rats, brushtail possums, bandicoots and bats. Sand goannas, carpet pythons and common tree snakes have been recorded from this site.

(Dr Con Lokkers for the Greening Garbutt Group, 1997)

(Above extract from "Renewing Garbutt: People, Partnerships and Planning" p. 79)

Values

The life of Mundy Creek changes with the dry tropics seasons. In the dry season (May to November) the creek is dry, the land is brown and waterbirds have left to search for food. From November thunderstorms build up and the waterfowl begin to return. When the wet arrives around December the creek fills, the land is green and food is plentiful. Rain may fall until April but by June the land is drying, the birds leave and the cycle begins again.

(From the Mundy Creek Natureway information sign next to the PCYC bridge.)

Environmental values

- Mundy Creek contains a range of natural habitats similar to those found on the Town Common Environmental Park. The many forms of wildlife found in and around the creek include a range of waterbirds that may be seen at certain times of year, and it is also a declared fish habitat area.
- Mundy Creek flows into the Great Barrier Reef, therefore, its health and water quality are very important.
- What remains of the creek serves as a historical record of what has been lost.

Practical value

- Flood mitigation

Recreational value

- Mundy Creek provides a natural scenic route connecting Garbutt and Belgian Gardens to Rowes Bay. This route is often used for walking, cycling, bird watching and other recreational activities.

Cultural values

There has been a long Indigenous association with the Mundy Creek area. Mundy Creek's banks support many plants known to Aboriginal people and the area is spiritually and environmentally important.

We strongly suggest that you contact *The Cultural Centre – Townsville* for more information. The centre offers education programs and interactive cultural workshops that can be designed specifically to your requirements. Topics include cultural talks, story telling, and native food and bush medicine.

Contact details for the Cultural Centre: 2-68 Flinders Street East, (ph) 07 4772 7679, www.cctownsville.com.au.

We also recommend that you contact the Aboriginal and Torres Strait Islander Community Development Officer at Townsville City Council on 07 4727 9000.

Lastly, there is a ***Mundy Creek Bush Tucker Poster*** available to download at www.soe-townsville.org/mundy/mundy_poster/index.html.

Caring for Mundy Creek

How You Can Help Mundy Creek (www.soe-townsville.org/mundycreek/index.html)

There are many very simple ways that we can all help to improve the water quality in Mundy Creek. As we all live in the catchment, we all need to take responsibility for our environment. Here are a few tips that will make a difference:

- Watch where those plastic bags end up—the fish don't need rubbish in their homes.
- If you catch tilapia in the creek, make sure you dispose of them responsibly.
- Drive along the roads, not the bike paths. They are for walkers and cyclists.
- Properly dispose of your plastic containers. Place them in the recycling bin.
- Dispose of your garden clippings, plants and kitchen scraps in a covered compost bin.
- Minimise the threat of exotic plants escaping from the garden by putting them in the bin.
- Never hose grass down the drains or dump garden waste on creek banks.
- Always clean up after your dog; wrap the droppings and put them in the bin.
- Sweep up dirt and place it in the garden rather than hosing it down the drain.
- Wash your car on the lawn. This allows the grass to filter nutrients from the soapy water.
- Reduce the use of fertilisers (start a compost bin), herbicides and pesticides and only use these in dry conditions.
- Properly dispose of used oils, paint and other chemicals at your local waste disposal site.

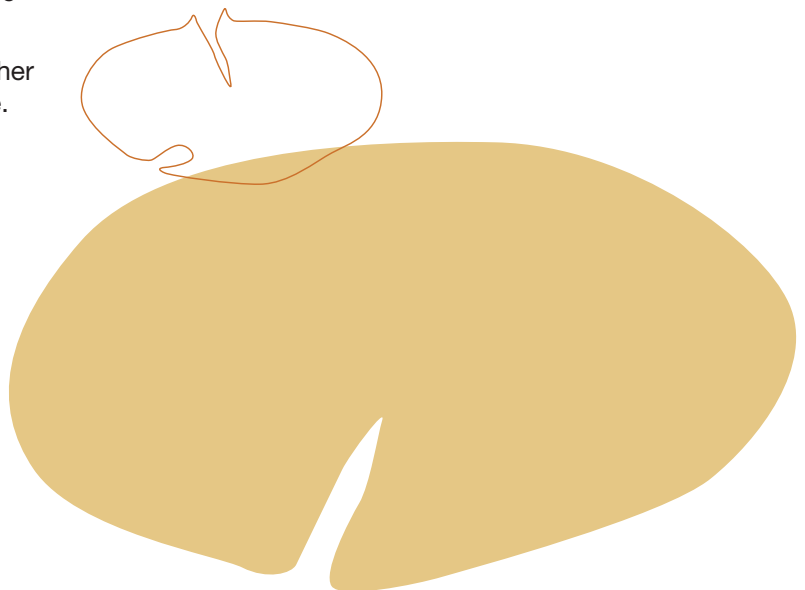
Mundy Creekwatch

Volunteers from Mundy Creekwatch, assisted by Conservation Volunteers Australia, help to care for the creek through water quality monitoring, creek bank revegetation, weed control and the surveying of flora and fauna. There is concern, however, that a great deal of restoration to the creek might encourage larger water birds to the area which would cause a serious problem with bird strike at the nearby airport. Unfortunately, the airport was established in a flood prone area that is right in the middle of a wetland!

Conservation Volunteers Australia (CVA)

Suite 1, 65 Palmer Street, South Townsville, 07 4721 4077

CVA runs an education program that includes catchment tours and practical activities such as water quality monitoring. Contact them at the above number for details.



Appendices

from the Mundy Creek (Melrose Park) Natureway Proposal

4.1 Plant species list:

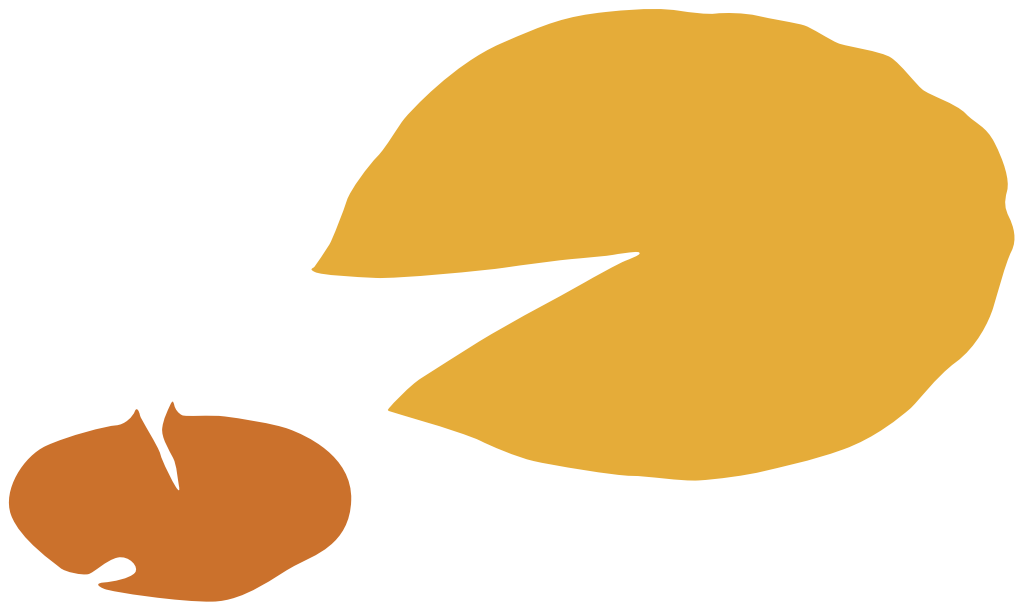
PI	Planted	Mf	Mangrove forest	Sf	Salt flat shrubland
Of	Open forest	Gl	Grassland	*	Introduced (non-local species)
WI	Woodland				

Scientific name	Common name	Family	Habitat					
			PI	WI	Gl	Of	Mf	Sf
<i>Sesuvium portulacastrum</i>	Sea purslane	Aizoaceae						p
<i>Alternanthera pungens</i> *	khaki weed	Amaranthaceae		p	p			p
<i>Amaranthus viridis</i> *	green amaranth	Amaranthaceae		p	p			
<i>Gomphrena celosioides</i> *	gomphrena weed	Amaranthaceae		p	p			
<i>Mangifera indica</i> *	mango	Anacardiaceae	p					
<i>Pleiogynium timorense</i>	Burdekin plum	Anacardiaceae				p		
<i>Schinus terebinthifolia</i> *	Brazilian pepper tree	Anacardiaceae	p					
<i>Catharanthus roseus</i> *	periwinkle	Apocynaceae	p					
<i>Thevetia peruviana</i> *	yellow oleander	Apocynaceae	p					
<i>Schefflera actinophylla</i>	umbrella tree	Araliaceae	p					
<i>Cryptostegia grandiflora</i> *	rubber vine	Asclepidaceae				p		
<i>Pterocaulon serrulatum</i>	rag weed	Asteraceae		p	p	p		
<i>Tridax procumbens</i> *	tridax daisy	Asteraceae		p	p	p		
<i>Tabebuia sp.</i> *	trumpet tree	Bignoniaceae	p					
<i>Tecoma stans</i> *	tecoma	Bignoniaceae	p					
<i>Trichodesma zeylanicum</i>	camel bush	Boraginaceae		p				
<i>Canarium australianum</i>	mango bark	Burseraceae				p		
<i>Chaemacrista mimosoides</i>		Caesalpinaceae		p	p			
<i>Delonix regia</i> *	poinciana	Caesalpinaceae	p					
<i>Parkinsonia aculeata</i> *	Jerusalum thorn	Caesalpinaceae		p	p			
<i>Peltophorum pterocarpum</i> *	yellow flame tree	Caesalpinaceae	p					
<i>Tamarindus indica</i> *	tamarind	Caesalpinaceae	p					
<i>Cleome viscosa</i>	tick weed	Capparaceae		p				
<i>Casuarina cunninghamiana</i>	river she oak	Casuarinaceae	p					

Scientific name	Common name	Family	Habitat					
			PI	WI	GI	Of	Mf	Sf
<i>Halosarcia halocnemoides</i>		Chenopodiaceae						p
<i>Halosarcia indica</i>		Chenopodiaceae					p	p
<i>Suaeda arbusculoides</i>	seablite	Chenopodiaceae						p
<i>Terminalia catappa</i>	beach almond	Combretaceae	p					
<i>Lumnitzera racemosa</i>	black mangrove	Combretaceae					p	
<i>Ipomea pes-caprae</i>	beach morning glory	Convolvulaceae					p	
<i>Merremia sp.</i>		Convolvulaceae				p		
<i>Euphorbia hirta</i> *	asthma plant	Euphorbiaceae			p			
<i>Flueggia virosa</i>	white currant bush	Euphorbiaceae				p		
<i>Mallotus philippensis</i>	red kamala	Euphorbiaceae				p		
<i>Phyllanthus virgatus</i>		Euphorbiaceae			p			
<i>Clitoria ternatea</i> *	butterfly pea	Fabaceae		p	p			
<i>Crotalaria goreensis</i> *	gambia pea	Fabaceae		p	p	p		
<i>Indigofera hirsuta</i>	hairy indigo	Fabaceae				p		
<i>Macroptilium atropurpureum</i> *	siratro	Fabaceae		p	p	p	p	
<i>Macroptilium lathyroides</i> *		Fabaceae				p		
<i>Sesbania cannabina</i>		Fabaceae		p	p	p		
<i>Stylosanthes humilis</i> *	Townsville stylo	Fabaceae		p	p			
<i>Cassytha pubescens</i>	dodder laurel	Lauraceae				p		
<i>Hyptis suaveolens</i> *	hyptis	Lamiaceae		p		p		
<i>Sida acuta</i> *	flannel weed	Malvaceae			p			
<i>Sida cordifolia</i>	flannel weed	Malvaceae			p			
<i>Melia azedarach</i>	white cedar	Meliaceae	p					
<i>Acacia crassicarpa</i>	beach wattle	Mimosaceae				p	p	
<i>Acacia holosericea</i>	silver leaf wattle	Mimosaceae				p	p	
<i>Acacia mangium</i>	brown salwood	Mimosaceae	p					
<i>Albizia lebbek</i> *	Indian sirus	Mimosaceae	p	p				
<i>Leucaena leucocephala</i> *	leucaena	Mimosaceae		p	p			
<i>Neptunia gracilis</i>		Mimosaceae		p	p			

Scientific name	Common name	Family	Habitat					
			PI	WI	GI	Of	Mf	Sf
<i>Samanea saman</i> *	rain tree	Mimosaceae	p					
<i>Ficus benjamina</i> *	weeping fig	Moraceae	p					
<i>Ficus opposita</i>	sandpaper fig	Moraceae		p		p		
<i>Corymbia ptychocarpa</i> *	swamp bloodwood	Myrtaceae	p					
<i>Corymbia tessellaris</i>	Moreton Bay ash	Myrtaceae		p		p		
<i>Eucalyptus platyphylla</i>	poplar gum	Myrtaceae		p				
<i>Eucalyptus miniata</i> *	woolybutt	Myrtaceae	p					
<i>Lophostemon grandiflorus</i>	northern swamp box	Myrtaceae		p				
<i>Melaleuca dealbata</i>		Myrtaceae		p			p	
<i>Melaleuca leucadendra</i>	weeping paperbark	Myrtaceae	p					
<i>Bougainvillea sp.</i> *	bougainvillea	Nyctaginaceae	p					
<i>Jasminium didymum</i>	native jasmine	Oleaceae				p	p	
<i>Pandanus whitei</i>	pandanus	Pandanaceae		p				
<i>Passiflora foetida</i> *	stinking passionfruit	Passifloraceae		p	p	p		
<i>Bothriochloa decipiens</i>	pitted bluegrass	Poaceae			p			
<i>Brachiara mutica</i> *	para grass	Poaceae		p	p			
<i>Cenchrus echinatus</i>	Mossman River grass	Poaceae			p	p		
<i>Cenchrus ciliata</i> *	buffel grass	Poaceae			p			
<i>Chloris barbata</i> *	purple top chloris	Poaceae			p			
<i>Heteropogon contortus</i>	black spear grass	Poaceae			p			
<i>Melinis repens</i> *	red Natal grass	Poaceae			p	p		
<i>Panicum maximum</i> *	guinea grass	Poaceae		p	p	p		
<i>Sporobolus australasicus</i>		Poaceae			p			
<i>Sporobolus virginicus</i>	saltwater couch	Poaceae			p		p	p
<i>Portulaca oleracea</i>	pigweed	Portulacaceae			p			p
<i>Alphitonia excelsa</i>	red ash	Rhamnaceae				p		
<i>Zizyphus mauritiana</i> *	chinee apple	Rhamnaceae		p	p	p		
<i>Bruguiera axaristata</i>	orange mangrove	Rhizophoraceae					p	

Scientific name	Common name	Family	Habitat					
			PI	WI	GI	Of	Mf	Sf
<i>Ceriops tagal</i>	yellow mangrove	Rhizophoraceae					p	
<i>Rhizophora stylosa</i>	spider mangrove	Rhizophoraceae					p	
<i>Nauclea orientalis</i>	Leichardt tree	Rubiaceae	p					
<i>Geijera salicifolia</i>	scrub wilga	Rutaceae				p		
<i>Murraya paniculata</i>	mock orange	Rutaceae	p					
<i>Cupaniopsis anacardioides</i>	tuckeroo	Sapindaceae				p		
<i>Sterculia quadrifida</i>	peanut tree	Sterculiaceae	p					
<i>Grewia retusifolia</i>	dog balls	Tiliaceae				p		
<i>Avicennia marina</i>	grey mangrove	Verbenaceae					p	
<i>Clerodendrum floribundum</i>	lolly bush	Verbenaceae		p			p	
<i>Lantana camara</i> *	lantana	Verbenaceae				p		
<i>Stachytarpheta jamaicensis</i> *	snakeweed	Verbenaceae			p	p		
<i>Tribulus cistoides</i>	caltrop	Zygophyllaceae			p			



4.2 Faunal species list:

(a) Reptiles:

Scientific name	Common name	Family
<i>Diporiphora australis</i>	tommy roundhead	Agamidae
<i>Carlia pectoralis</i>	garden skink	Scincidae
<i>Ctenotus robustus</i>	striped skink	Scincidae
<i>Morelia spilota</i>	carpet python	Boidae
<i>Dendrelaphis punctulata</i>	tree snake	Colubridae
<i>Varanus gouldii</i>	sand goanna	Varanidae

(b) Birds:

Scientific name	Common name	Family
<i>Dacelo novaeguineae</i>	laughing kookaburra	Alcedinidae
<i>Haliastur indus</i>	brahminy kite	Accipitridae
<i>Haliastur sphenurus</i>	whistling kite	Accipitridae
<i>Milvus migrans</i>	black kite	Accipitridae
<i>Geopelia striata</i>	peaceful dove	Columbidae
<i>Eudynamys scolopacea</i>	common koel	Cuculidae
<i>Dicaeum hirundinaceum</i>	mistletoe bird	Dicaeidae
<i>Dicrurus bracteatus</i>	spangled drongo	Dicruridae
<i>Grallina cyanoleuca</i>	magpie lark	Grallinidae
<i>Grus rubicundus</i>	brolga	Gruidae
<i>Entomyzon cyanotis</i>	blue-faced honeyeater	Meliphagidae
<i>Philemon buceroides</i>	helmeted friarbird	Meliphagidae
<i>Merops ornatus</i>	rainbow bee-eater	Meropidae
<i>Nectarinia jugularis</i>	yellow sunbird	Nectariniidae
<i>Specothes viridis</i>	figbird	Oriolidae
<i>Passer domesticus</i> *	house sparrow	Passeridae
<i>Phalacrocorax sulcirostris</i>	little black cormorant	Phalacrocoracidae
<i>Threskiornis molucca</i>	sacred ibis	Plateleidae
<i>Threskiornis spinicollis</i>	straw-necked ibis	Plateleidae
<i>Trichoglossus haematodus</i>	rainbow lorikeet	Psittacidae
<i>Acridotheres tristis</i> *	common myna	Sturnidae

(c) Mammals:

Scientific name	Common name	Family
<i>Canis familiaris</i> *	dog	Canidae
<i>Felis catus</i> *	cat	Felidae
<i>Equus equus</i> *	horse	Equidae
<i>Hydromys chrysogaster</i>	water rat	Muridae
<i>Mus musculus</i> *	house mouse	Muridae
<i>Isodon macrourus</i>	brown bandicoot	Peramelidae
<i>Trichosurus vulpecula</i>	brushtail possum	Phalangeridae
<i>Pteropus alecto</i>	black flying fox	Pteropodidae

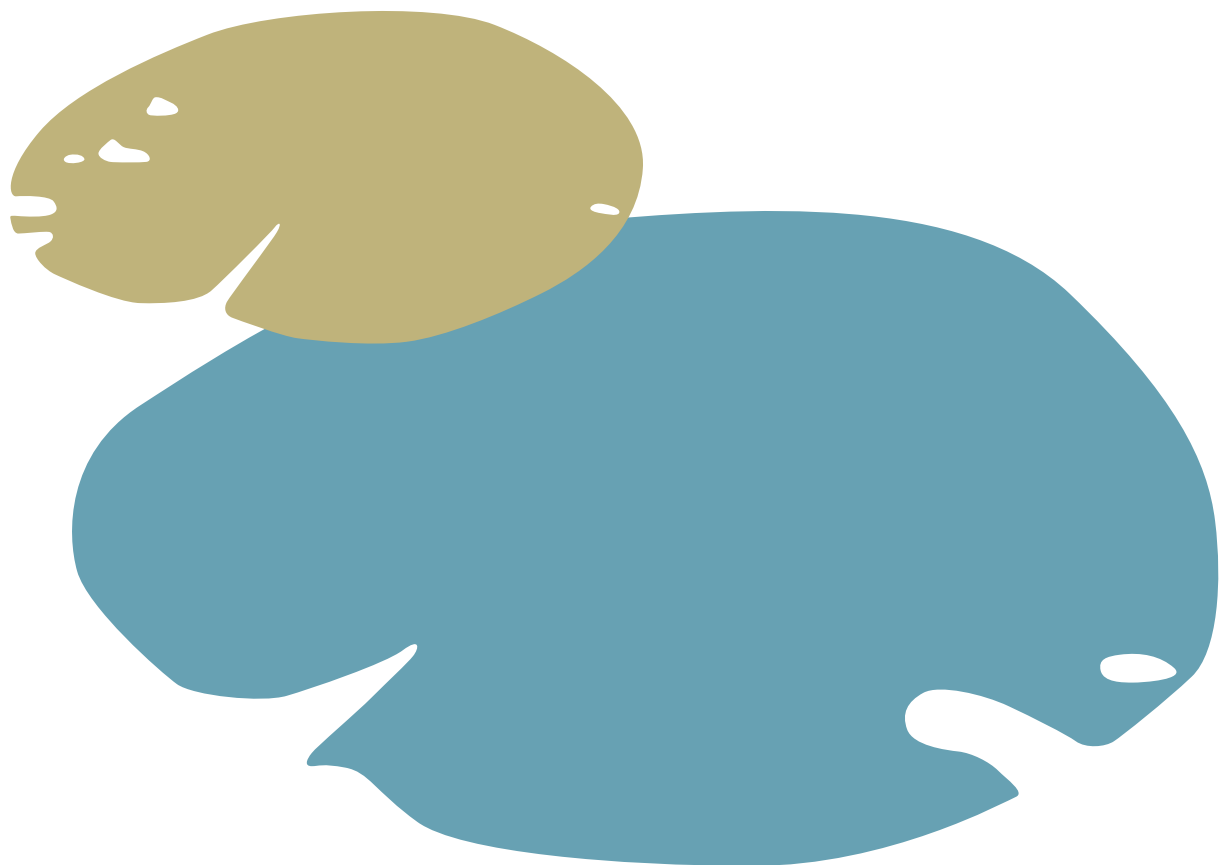
4.3 Plant species for revegetation work:

- F banks of freshwater stretch of creek
- S banks of saltwater stretch of creek
- W woodland

Scientific name	Common name	Family	Habitat(s) suitable for planting
<i>Pleiogynium timorense</i>	Burdekin plum	Anacardiaceae	F,W
<i>Polyalthia nitidissima</i>	canary beech	Annonaceae	F
<i>Livistona decipiens</i>	cabbage palm	Arecaceae	F,S
<i>Canarium australianum</i>	mango bark	Burseraceae	F,S
<i>Casuarina cunninghamiana</i>	river she oak	Casuarinaceae	F
<i>Halosarcia halocnemoides</i>		Chenopodiaceae	S
<i>Halosarcia indica</i>		Chenopodiaceae	S
<i>Suaeda arbusculoides</i>	seablite	Chenopodiaceae	S
<i>Calophyllum inophyllum</i>	beach laurel	Clusiaceae	S
<i>Terminalia catappa</i>	beach almond	Combretaceae	S
<i>Terminalia muelleri</i>	beach damson	Combretaceae	F,S
<i>Lumnitzera racemosa</i>	black mangrove	Combretaceae	S
<i>Ipomea pes-caprae</i>	beach morning glory	Convolvulaceae	S
<i>Macaranga tanarius</i>	cottonwood	Euphorbiaceae	F

Scientific name	Common name	Family	Habitat(s) suitable for planting
<i>Mallotus philippensis</i>	red kamala	Euphorbiaceae	F
<i>Pongamia pinnata</i>		Fabaceae	F
<i>Hibiscus tiliaceus</i>	beach hibiscus	Malvaceae	F,S
<i>Thespesia populnea</i>		Malvaceae	S
<i>Melia azedarach</i>	white cedar	Meliaceae	F
<i>Acacia crassicarpa</i>	beach wattle	Mimosaceae	F,S,W
<i>Acacia holosericea</i>	silver leaf wattle	Mimosaceae	F,S,W
<i>Acacia leptostachya</i>	Townsville wattle	Mimosaceae	F,W
<i>Ficus opposita</i>	sandpaper fig	Moraceae	F,S,W
<i>Ficus racemosa</i>	cluster fig	Moraceae	F
<i>Corymbia maritima</i>	bloodwood	Myrtaceae	W
<i>Corymbia tessellaris</i>	Moreton Bay ash	Myrtaceae	F,S,W
<i>Eucalyptus platyphylla</i>	poplar gum	Myrtaceae	W
<i>Eucalyptus tereticornis</i>	blue gum	Myrtaceae	F
<i>Lophostemon grandiflorus</i>	northern swamp box	Myrtaceae	F
<i>Melaleuca dealbata</i>		Myrtaceae	F,S,W
<i>Melaleuca leucadendra</i>	weeping paperbark	Myrtaceae	F
<i>Melaleuca viridiflora</i>	broad-leafed paperbark	Myrtaceae	S,W
<i>Jasminium didymum</i>	native jasmine	Oleaceae	F,S
<i>Pandanus whitei</i>	pandanus	Pandanaceae	F,S
<i>Sporobolus virginicus</i>	saltwater couch	Poaceae	S
<i>Alphitonia excelsa</i>	red ash	Rhamnaceae	F,W
<i>Bruguiera axaristata</i>	orange mangrove	Rhizophoraceae	S
<i>Ceriops tagal</i>	yellow mangrove	Rhizophoraceae	S
<i>Rhizophora stylosa</i>	spider mangrove	Rhizophoraceae	S
<i>Aidia racemosa</i>	native cherry	Rubiaceae	F,S
<i>Larsenaikia ochreatea</i>	native gardenia	Rubiaceae	F,W
<i>Nauclea orientalis</i>	Leichardt tree	Rubiaceae	F
<i>Timonius timon</i>	tim tam tree	Rubiaceae	F,W
<i>Geijera salicifolia</i>	scrub wilga	Rutaceae	F,S

Scientific name	Common name	Family	Habitat(s) suitable for planting
<i>Cupaniopsis anacardioides</i>	tuckeroo	Sapindaceae	F,S
<i>Dodonea lanceolata</i>	hop bush	Sapindaceae	F,S,W
<i>Mimusops elengi</i>	red coodoo	Sapotaceae	F,S
<i>Sterculia quadrifida</i>	peanut tree	Sterculiaceae	F,S
<i>Avicennia marina</i>	grey mangrove	Verbenaceae	S
<i>Clerodendrum floribundum</i>	lolly bush	Verbenaceae	F,S,W



Additional resources

Andy Goldsworthy. Online at http://www.morning-earth.org/ARTISTNATURALISTS/AN_Goldsworthy.html

Community and Cultural Services Consultancy Unit (2001) *Renewing Garbutt: People, partnerships and planning: A summary and review of the Garbutt Renewal Project 1993 – 2001*, Townsville: Townsville City Council.

Ergon Energy (2007) *Belgian Gardens Substation Proposal*. Online at http://www.ergon.com.au/network_info/Belgian_Gardens_Substation_Proposal/default.asp

Lokkers, C. (1997) *Mundy (Melrose Park) Creek Natureway Proposal*, Townsville: Greening Garbutt Committee, Garbutt Urban Renewal Program.

Mabin, M. C. G. (2002) *Environmental History of Rowes Bay*, Townsville: Townsville City Council.

