

Lesson 8 Fieldwork activities

Research question: How have local authorities improved the river environment in Horsham?

Fieldwork Site 1: Petrie Lane



In this part of the river, the CMA and local residents have worked to improve the environment through limiting vehicle access to certain areas and providing facilities to encourage people to use the riverbank for recreation. The Horsham Rural City Council (HRCC) is then responsible for maintaining the sites: for example, grading the road, repairing damage, etc.

The fieldwork begins at sub-site A in the above image. Students then walk along the path to sub-site B. The following activities are completed during the visit to both sites and while walking.

Task 1

Using Epicollect5 or paper maps, record the exact location of each of the following. You should also photograph each example that you list:

- Examples of human impacts on the riverbanks, for example: compacted soils from vehicles and people walking, litter, broken vegetation.
- Examples of strategies put into place by local authorities to minimize human impact and protect the natural environment. For example: traffic bollards (posts), cable fencing, signs restricting access, rubbish bins, bird nesting boxes, tree planting.
- Examples of strategies to encourage people to use the river banks for recreation for example: picnic tables and road access.

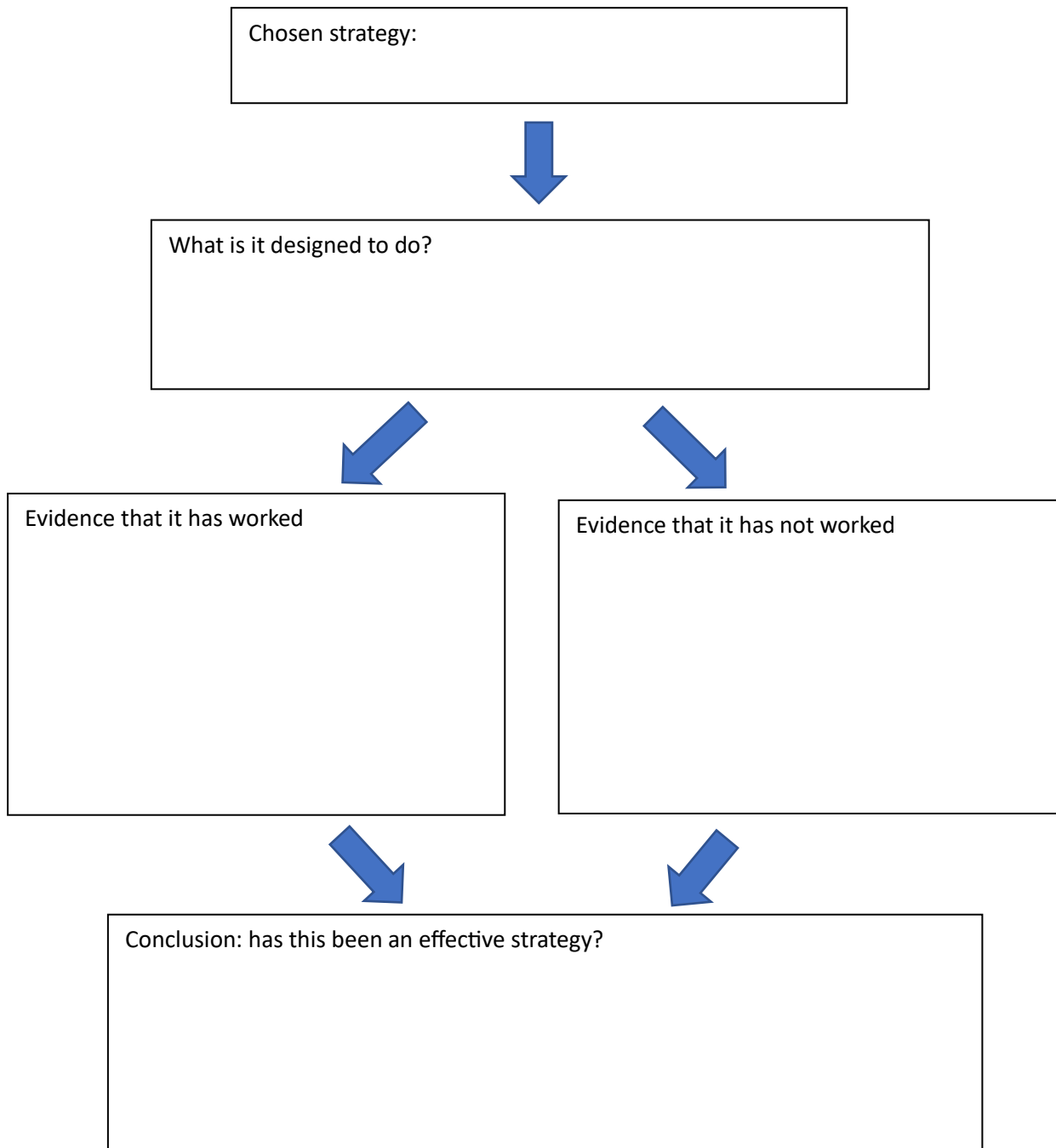
Task 2

The following photographs show this area before improvements were made that were designed to protect the environment by changing people's behaviour. Look closely at each of these photographs, find the place they were taken and then take your own photo of the same place. You now have 'before' and 'after' photos.



Task 3

Select one of the strategies you listed in your table and comment on its effectiveness: in other words, has it done what it was designed to do? Use this flow chart as a guide:



You should take additional photographs of this strategy to illustrate its effectiveness or ineffectiveness.

Task 4

Your teacher will collect a sample of water at this location and you will test this water using the kit provided. Later, you will complete the same tests at a different site to see if the water quality has improved or worsened as the river passes through the city of Horsham. Fill in the data for Fieldwork site 1 in the following table:

Water quality tests	Fieldwork site 1	Fieldwork site 3
Debris and smell		
Turbidity or clarity		
Temperature		
Dissolved oxygen level		
pH level		
Salinity		

Task 5

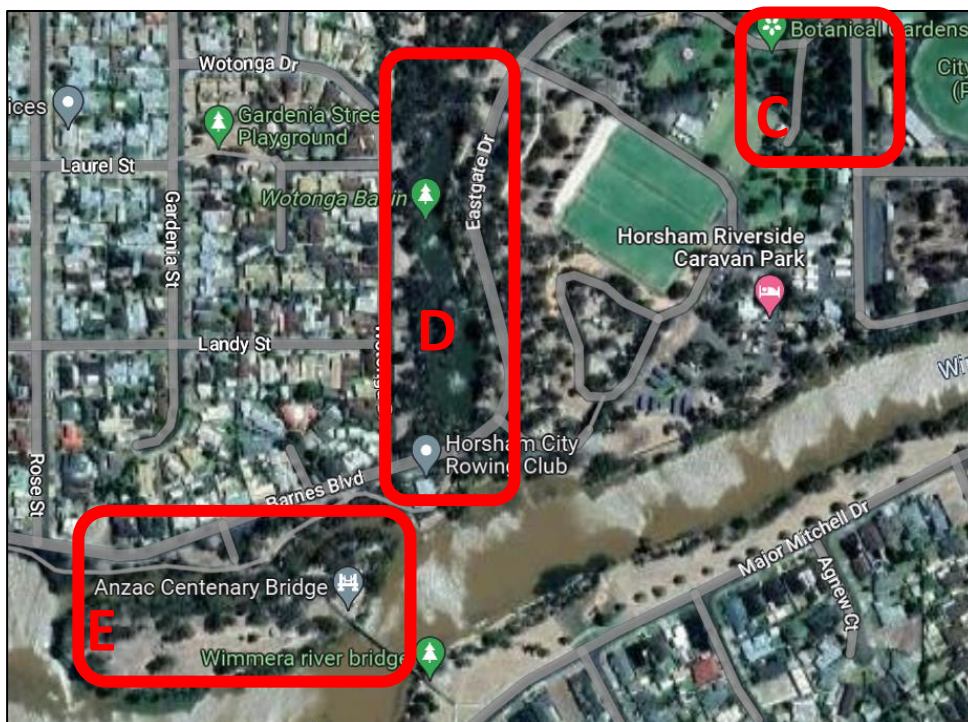
The presence or absence of birds and animals can be a guide to the health of a river system. Over a period of 5 minutes stay quiet in one location at the fieldwork site. Listen for the sounds of animals, such as frogs and birds. Look for larger animals such as possums and kangaroos. Attempt to identify which species you saw and heard during these five minutes. There are several ways to do this:

- Use the Field Guide to Victoria Fauna app. This includes the sounds of bird calls so you can compare these with what you heard.
- If you can photograph a bird or animal, you can use Google Lens to search the internet.
- Use field guides such as *The Glovebox Guide to Wimmera Wetland Birds* and *The Glovebox Guide to Wimmera Frogs*.

Record the birds and animals you observed here:

Fieldwork site 2: Apex Adventure Island

While driving to this site (shown as E in the following image) you will pass Wotonga Basin (D). This is an old creek bed that was excavated in the early 1980s to collect storm water. It can hold 10 megalitres of water which is used to water the Horsham Botanic Gardens (C).



The Horsham Rural City Council (HRCC) describes Apex Adventure Island as ‘a great family friendly play space, set amongst the banks of the beautiful Wimmera River. The island includes a large play space, huge slide, swings, sandpit, and climbing frames for hours of fun. The area has picnic tables, seating areas, a drinking fountain, timber shade shelters, and two barbecues. There is also plenty of natural shade. Toilets are located 150m east along the river but not on the island itself.

The newly built Apex modular pump track is located amongst informal walking trails, structured and natural shade, and large logs and boulders for informal seating.’

<https://www.hrcc.vic.gov.au/Our-Services/Events-arts-and-recreation/Parks-Gardens-and-Reserves/Parks-Gardens-and-Reserves/Adventure-Island-and-Apex-Pump-track>

Task 1

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- Examples of human impacts on the river banks, for example: compacted soils from people walking, litter, broken vegetation.
- Examples of strategies put into place by local authorities to minimize human impact and protect the natural environment. For example: signs restricting access, rubbish bins, bird nesting boxes, tree planting.
- Examples of strategies to encourage people to use the river banks for recreation for example: picnic tables, pedestrian bridges, playgrounds, etc.

Task 2

The eastern end of the Adventure island has recently been revitalized with a new pump track built, new shelters and new plantings of small trees. However, the western end of the island has yet to be improved. Your task is to assess the facilities provided at the eastern end and to develop a proposal that could be sent to the HRCC that contains suggestions about future improvements and helps to improve the liveability of this area.

The council has set the following goal for the island: ‘to create a place for people of different ages, interests and abilities that celebrates our natural environment.’

The first step is to ask people visiting the island what they think of the current facilities at the eastern end of the island and how they would like to see this area improved.

In pairs, complete the following survey by asking three people the following questions:

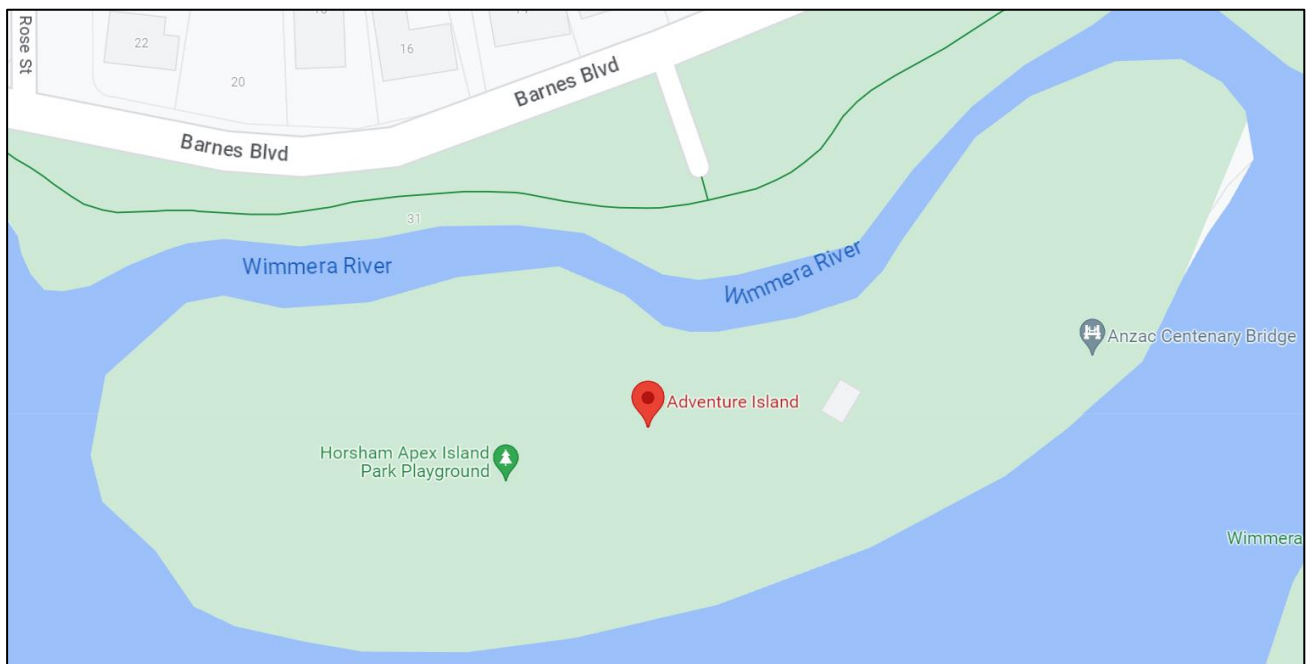
1. What are some of the best things about the eastern end of the island that you would like retained as part of a redevelopment?

2. What would you like to be included as part of a redevelopment of this part of the island?

3. If these things you suggested were included in a redevelopment, do you think Horsham residents would use the island more often?

Task 3

While you are here, think about what **you** would like to see as part of a redevelopment of the eastern end of the island. This proposal will form an important part of your fieldwork report that you will write in class so take the opportunity now to take lots of photographs, jot down some of your ideas and perhaps sketch them on the following outline map of the island:



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- Examples of strategies to encourage people to use the river banks for recreation for example: picnic tables, pedestrian bridges, playgrounds, toilets, playgrounds, off-leash dog parks, barbecues etc.

Task 2

Weir Park has recently been redeveloped to encourage people to visit the area and to use this park as a starting point for walks and rides beside the river. As you look around this area, consider whether some of the improvements here could also be applied to your redevelopment plans for the eastern end of Adventure Island. Another way of thinking about this is to consider this question: in what ways is Weir Park a more liveable place than Adventure Island?

You should also take photographs of any of the facilities at Weir Park that you would like to include at Adventure Island.

Task 3

Repeat the water quality tests that you completed at Site 1 and enter the results on the table you started at this first location.

Are there any differences in the results? Is one site healthier and cleaner than the other? Why might this be?

Task 4

How has the liveability of Horsham been changed by improvements to the Wimmera River, Apex Adventure Island and Weir Park?
