

Factors That Shape Places

The Blacktown Fishing Bat

As urban Sydney sprawls in all directions, the Blacktown Local Government Area is changing dramatically. This Geographical Inquiry will focus on the connections between people and nature at Blacktown Showground and its surrounds. Could the Fishing Bats return?

Inquiry Questions:

- **How do people and environments influence one another at Blacktown Showground?**
- **How do people manage local places and the spaces within them?**



Health and Safety Issues

As you are working out in the field you need to be aware that:

- Ground material is often covered in moss and can be very slippery.
- Vines and dense undergrowth can trip.
- Fallen trees can be rotten and weak.
- Some animals can deliver painful or venomous bites.
- On slopes, rocks can be easily dislodged.

Outcomes

- GE3-1:** Describes the diverse features and characteristics of places and environments
- GE3-2:** Explains interactions and connections between people, places and environments
- GE3-3:** Compares and contrasts influences on the management of places and environments
- GE3-4:** Acquires, processes and communicates geographical information using geographical tools for inquiry

Student Name: _____

Inquiry Aim:

The aim of this Geographical Inquiry is to investigate the factors that shape places, with a focus on the connections between people and nature at Blacktown Showground. You will be researching the changes at the site, with a particular focus on its potential to support a healthy population of Fishing Bats.

Pre-Visit Lesson One: The Study Site

SIX Maps has been developed by the NSW Department of Land and Property. It provides access to cadastral (land and property boundaries) and topographic (hills and valleys) information, satellite data and aerial photography. Use [SIX Maps](#) to complete the following tasks.

1. On SIX Maps, type in Blacktown Showground.
2. Click on Basemaps (top right of page) and drag the tab down until you can see the Street and Suburb names.
3. Zoom out and fly around until you find your local Suburb.
4. Click on Basemaps and move the tab back up until you can see the satellite image.
5. Zoom out to a scale around 1:1200 (you can see this in the bottom left of screen). By holding a piece of string to your computer screen, estimate the length of the wetland from where the water enters the Showground (North of the railway track) to where it leaves (under Richmond Road).

Pre~Visit Lesson Two: Geographical Questions

Geographical questions are questions which help you identify the information you need to answer the inquiry questions. Your inquiry questions are written on Page 1.

Brainstorm: What are some geographical questions you might ask for this Inquiry?

Example: Why might people choose to live in a specific area or suburb?

Geographical Question 1: _____

Geographical Question 2: _____

Geographical Question 3: _____

Geographical Question 4: _____

Geographical Question 5: _____

Pre~Visit Lesson Three: Planning Your Inquiry

Answer the following questions for each of the Geographical Questions you came up with last lesson:

1. What information is needed to answer this geographical question and where can you find that information?

2. What are the geographical tools you need to access the information?

3. Develop a system for recording the information you get.

Fieldwork Activity One: Rain & Water Sensitive Urban Design

1. What is the average annual rainfall at Blacktown? _____

Use the iBook “What happens to the rain” to take a tour of the site and answer the following questions:

2. Compare stormwater and Sewage. What is the difference?

3. Describe one of the main problems with stormwater in urban areas.

4. What is the aim of Water Sensitive Urban Design?

5. *How does rain influence people and places at Blacktown Showground?*

Fieldwork Activity Two: Habitat Assessment

Sound Map:



KEY

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Habitat Assessment:

Tick the boxes that describe the area you are looking at.

Area	Habitat								
Bushland	 Trees	 Shrubs	 Ground Cover	 Leaf Litter or Mulch	 Rocks	 Logs or Fallen Branches	 Tree Hollows or Nest Boxes	 Flowering Plants	 Water
	<input type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots	<input type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots	<input type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots	<input type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots	<input type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots	<input type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots	<input type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots	<input type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots	<input type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots

None = 0 Some = 1 Lots = 2

Add up the score you gave the habitat and use the Rating Chart to rate the habitat: _____

<p>Rating Chart 0 - 3 = Poor 4 - 6 = Fair 7 - 9 = Average 10 - 14 = Good 15 - 18 = Excellent</p>

Bird Survey:

Conduct a sound survey focusing on bird species at the site. How many different bird species calls did you hear? _____

Abiotic Parameters:

Parameter	Result	Units
Air Temperature		Degrees Celsius
Air Humidity		%
Aspect		Degrees (or NSEW)

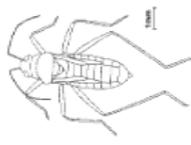
Activity Two Summary: Habitat Assessment

Use the information you've just collected as well as the historical photographs. How have people changed the site around Blacktown Showground? Describe features of the site for the following years:

1700 (Darug)	
1915 (Early Settlement)	
1960 (Slow urban development)	
2000 (Darug)	
Today	

Fieldwork Activity Three: Fishing Bat Food Sources

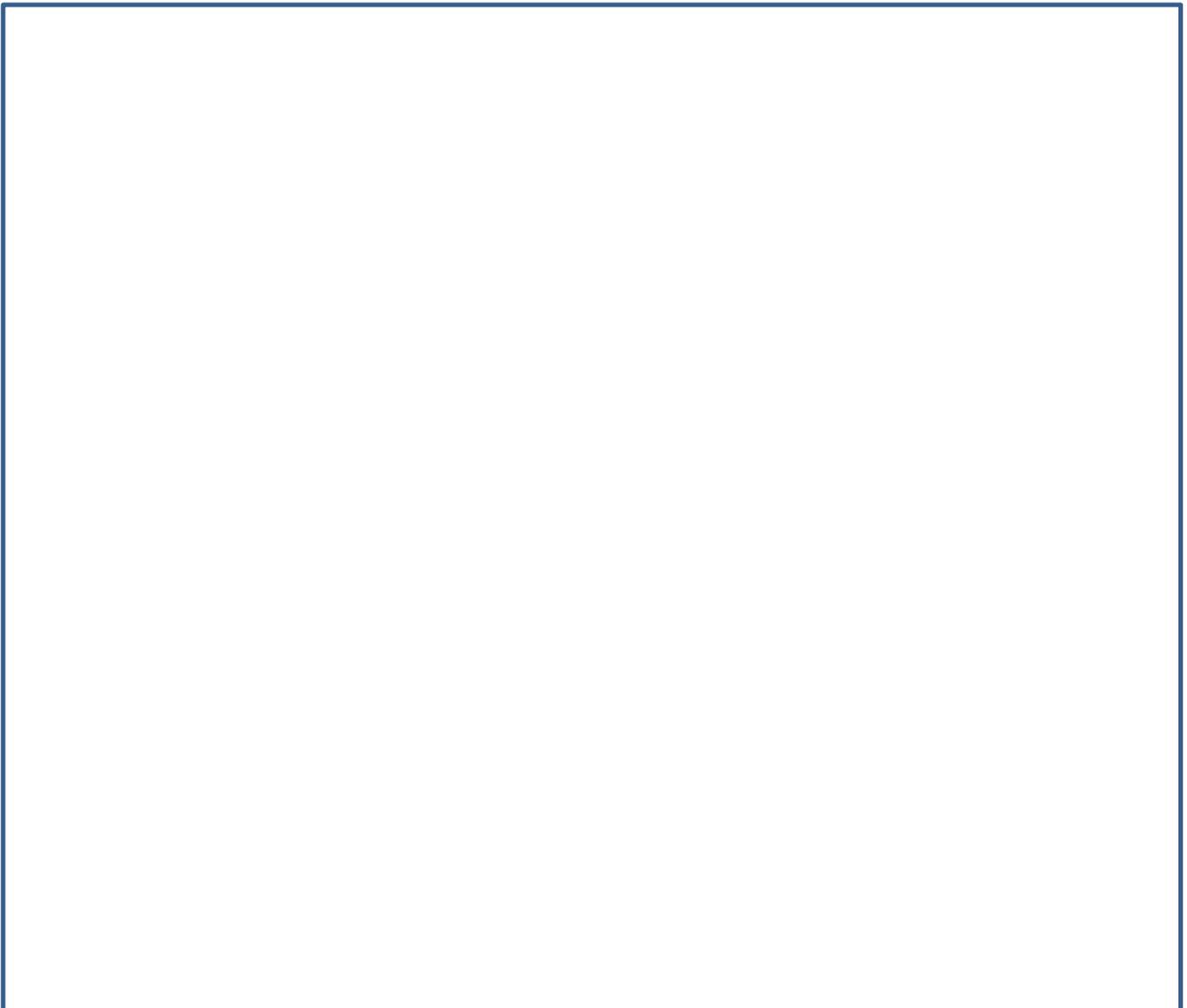
In the past, Fishing Bats inhabited the local area, feeding from the creeks. Are there any fish in the wetland which could provide food for the Fishing Bat? Are there any food sources for fish in the wetland?

		SCORE			SCORE
Back Swimmer	10-15mm 	5	Water Boatman	 8-10mm	5
Damsel-fly Nymph	 15-25mm	6	Water Scorpion	 25-50mm	3
Dragon-fly Nymph	 25-50mm	5	Water Snail	 5-8mm	2
Tadpole	 10-20mm	10	Water Strider	 5-12mm	4
Diving Beetle	 5-45mm	6	Water Treader	 5mm	4
TOTAL SCORE				/50	

Activity Three Summary: Fishing Bat Food Sources

What do your results tell you about the health of the aquatic environment in the wetland?

In the space below, sketch a diagram of the local food chain.

A large, empty rectangular box with a thin blue border, intended for the student to sketch a diagram of the local food chain.

Fieldwork Activity Four: “Black’s Town” – Indigenous History

Blacktown has a strong Indigenous history. The creeks and waterways were important for Darug people for tens of thousands of years due to the resources they provided. Much of the history has been lost over time due partly to flooding, but also due to the impacts of early European settlement. Early settlers termed the area “Black’s Town” due to the numerous Aboriginal people living there. This term was later shortened to “Blacktown” and made more formal as the name of the suburb in 1906.

Plant or Animal	Use	Sketch

Post-Visit Lesson One: Population Growth

Use legitimate websites to source secondary data and other statistical information about population growth in Western Sydney and in particular, the Blacktown Local Government Area. Evaluate and summarise the data and information into 5 key points.

Secondary data is data collected by someone other than you or for a purpose other than your research. Legitimate websites include the Australian Bureau of Statistics and State and Local Government.

1.

2.

3.

4.

5.

Develop and conduct a survey of community members about their thoughts on the impact of population increase on our nature reserves (positive and negative).

- Include impacts on people, plants, animals and the Hawkesbury River.
- Write 5-10 well structured questions and practice doing the survey yourself.
- Your survey might use email or online networks, or in person (with an adult).
- You may survey people you know who live in the area or local businesses.
- Survey at least 3 people.

Post~Visit Lesson Two~Three: Processing the Data

Below is a list of Geographical Tools used to collate, review and evaluate data and information. Choose at least 5 of these tools to analyse and present your data in a Word Document.

The information you create here will be used in your documentary assessment task.

- Using a **topographic map** or **satellite image** as a base map, locate Blacktown Showground and identify surrounding natural and built environmental features.
- Collate data from your in-depth study into a **table** to summarise your findings.
- Create **flowcharts** to demonstrate your understanding of the ways the environment influences people and places.
- Assemble and annotate **photographs** to provide a visual representation of the site. Analyse and label interconnections.
- Develop **consequences charts** to explain human impacts (positive and negative) of the current land use at Blacktown Showground. Show the impacts on [Google Tour Builder](#). Use photos taken on the day to match parts of the tracks we walked.
- Use a **T-chart** to represent data on advantages and disadvantages of population increases in Western Sydney.
- Construct a **flow chart** or **concept map** to explain the role of government, and other major stakeholders in sustainably developing Western Sydney and protecting our nature reserves.
- Design an **infographic** to educate the public about Fishing Bats and the need to protect their habitat.

Assessment Task:

Communicating Geographical Information

Work in small groups to develop a 5-6 minute documentary on the possible effects of population increase on our nature reserves using Blacktown Showground as a case study. Your documentary should include:

- A clear description of the various land uses around Blacktown Showground and an evaluation of some of the consequences for the environment and community;
- Tools to support your information, such as maps, satellite images, graphs, statistics, flowcharts, labelled photographs, diagrams, illustrations/sketches and other labelled visual representations;
- Information on the traditional use of the place by Darug people;
- Information on the types of land use by early European settlers;
- A description of the role of government in organising or managing the place as well as the perspectives of other stakeholders, for example developers, conservationists, recreationists and local residents;
- An evaluation of the potential for Fishing Bats to return to the local area;
- A description and justification of a course of action to increase the likelihood for Fishing Bats to return to Blacktown Showground.

Please refer to the [Stage 3](#) Geography page on the Brewongle website for extra resources, including a Storyboard Template and a “How To Guide for iMovies”.