

Kamay Botany Bay Environmental Education Centre

Excursion outline

Stage 6 - Geography

Ecosystems and Global Biodiversity - Towra Point Nature

This study will investigate:

- The character of the ecosystem, including its spatial patterns and nature of its biodiversity
- The dynamics of ecosystem functioning including vulnerability, resilience and ecological disturbance
- Human induced modification to the ecosystem
- Responses and strategies including for maintaining ecosystem functioning and actions for sustainability
- Ecosystem management including research and innovation in sustainable management of the ecosystem.

The outcomes to be achieved from this field study by the student are:

GE-12-01 analyses rural and urban places, ecosystems, global biodiversity and economic activity, for their characteristics, spatial patterns, interactions, and nature and extent of change over time

GE-12-02 analyses geographical processes and influences, at a range of scales, that form and transform places and environments

GE-12-03 assesses geographical opportunities and challenges, and the role of varying perspectives and responses in their management

GE-12-04 evaluates responses and management strategies, at a range of scales, for sustainability

GE-12-05 synthesises and evaluates relevant geographical information from a variety of sources

GE-12-07 selects and applies geographical inquiry skills and tools, including spatial technologies, fieldwork, and ethical practices, to investigate places and environments

Towra Point Nature Reserve is a protected nature reserve under the Ramsar Convention as a wetland of international importance. It is an important breeding ground for many vulnerable, protected and endangered species of birds. It includes the surrounding that is located in Sutherland hire, Southern Sydney, New South Wales, in eastern Australia. The 603-hectare (1,490-acre) reserve is situated on the southern shores of Botany Bay at Kurnell, within the Sutherland Shire.[1] The reserve is protected under the Ramsar Convention as a wetland of international importance as an important breeding ground for many vulnerable, protected, or endangered species. The Towra Point Aquatic Nature Reserve is located in the surrounding waterways.

? sites on the Towra Point peninsula will be used during the field study (or Quibray Bay?):

1. The cleared area adjacent to Captain Cook Drive (the old horse stables)
2. The old radar station site and the barrier swamp
3. Remnant littoral rainforest
4. Towra beach
- 5.

Students are advised that taking additional notes, photographs or other recording of geographical information about the biophysical environment of the area is advised. Not all aspects of this study can be completely addressed in the time available on site. Additional materials have been provided to give an overview of:

- Weather and climate;
- Geomorphic and hydrologic processes which have shaped the landform.

Resource

Mangrove and Saltmarsh ecosystems

<https://vimeopro.com/littlegeckomedia/gsls-saltmarsh-and-mangrove-ecosystems>

Booking Information

Location	Towra Point Nature Reserve
Bus booking	Meet at the gate. A map with directions will be provided
Timing	Ideally schools should allow 4 hours for the program, including meal and toilet breaks.
Student checklist	<ul style="list-style-type: none"> <input type="checkbox"/> low waste food (reusable containers, no plastic wrap) <input type="checkbox"/> refillable water bottle <input type="checkbox"/> sunscreen <input type="checkbox"/> school or sports uniform (sports uniform preferable) <input type="checkbox"/> sturdy, enclosed walking shoes <input type="checkbox"/> backpack and raincoat (no plastic bags)
Appropriate dress	Students should wear clothing/shoes suited to working in an outdoor environment and appropriate to the season. Students will be walking through water in mangrove wetlands. It is essential to wear enclosed footwear to cater for the conditions eg old shoes
Staffing	The EEC complies with NSW DEC policy for a student/adult ratio of 15:1 for bushwalking. Parent helpers welcome, no pre-schoolers.
Extreme or wet weather	May result in the excursion being modified, postponed or cancelled. An out of hours contact number will be supplied in your booking information. Rescheduling in the event of extreme or wet weather include: high winds and/ or heat greater than 34 degrees, bush fire, National Park closure and flood risk.
Medical or special needs	Please notify EEC staff at time of booking
Risk Management Guidelines	RMG will be provided at the time of booking
Excursion Pack	Teacher background notes and digital worksheets will be provided (worksheets must be printed in colour and brought on the day).

Weather

In the event of extreme weather conditions, please phone or text 0477 742 281

Bushfire

During bushfire season (approximately 1 October-31 March), check [Rural Fire Service fire danger rating](#). During catastrophic ratings, the park and centre are closed. Kamay Botany Bay Environmental Education Centre fieldtrip experiences will be postponed. During extreme or severe conditions, fieldtrip experiences and locations may be cancelled or modified to ensure the safety of all students and staff.



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- Mangrove Swamps
- Salt Marshes
- Coastal Tall Grasses
- Coastal Freshwater Lagoons
- Coastal Heath Swamps
- Coastal Swamp Forests
- Coastal Floodplain Wetlands
- Sydney Coastal Heaths
- Coastal Headland Heaths
- Wetland Sand Heaths
- Kurnell Dune Forests
- Coastal Dune Dry Sclerophyll Forests
- Sydney Coastal Dry Sclerophyll Forests

Kurnell Peninsula Land Based Vegetation Communities



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Datum/Projection: GCS GDA 1994