

# Fieldwork



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# Zoo and Environmental Education Centres NSW

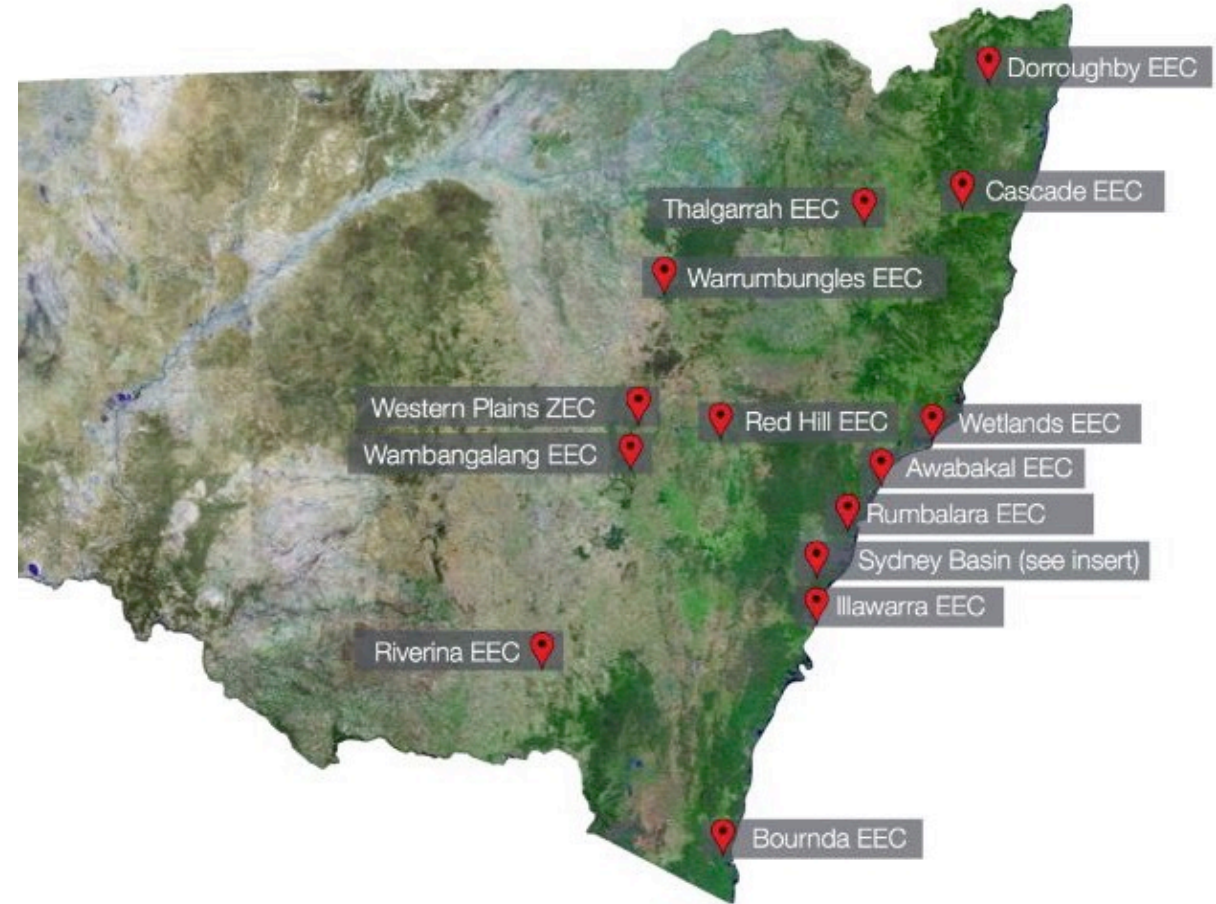
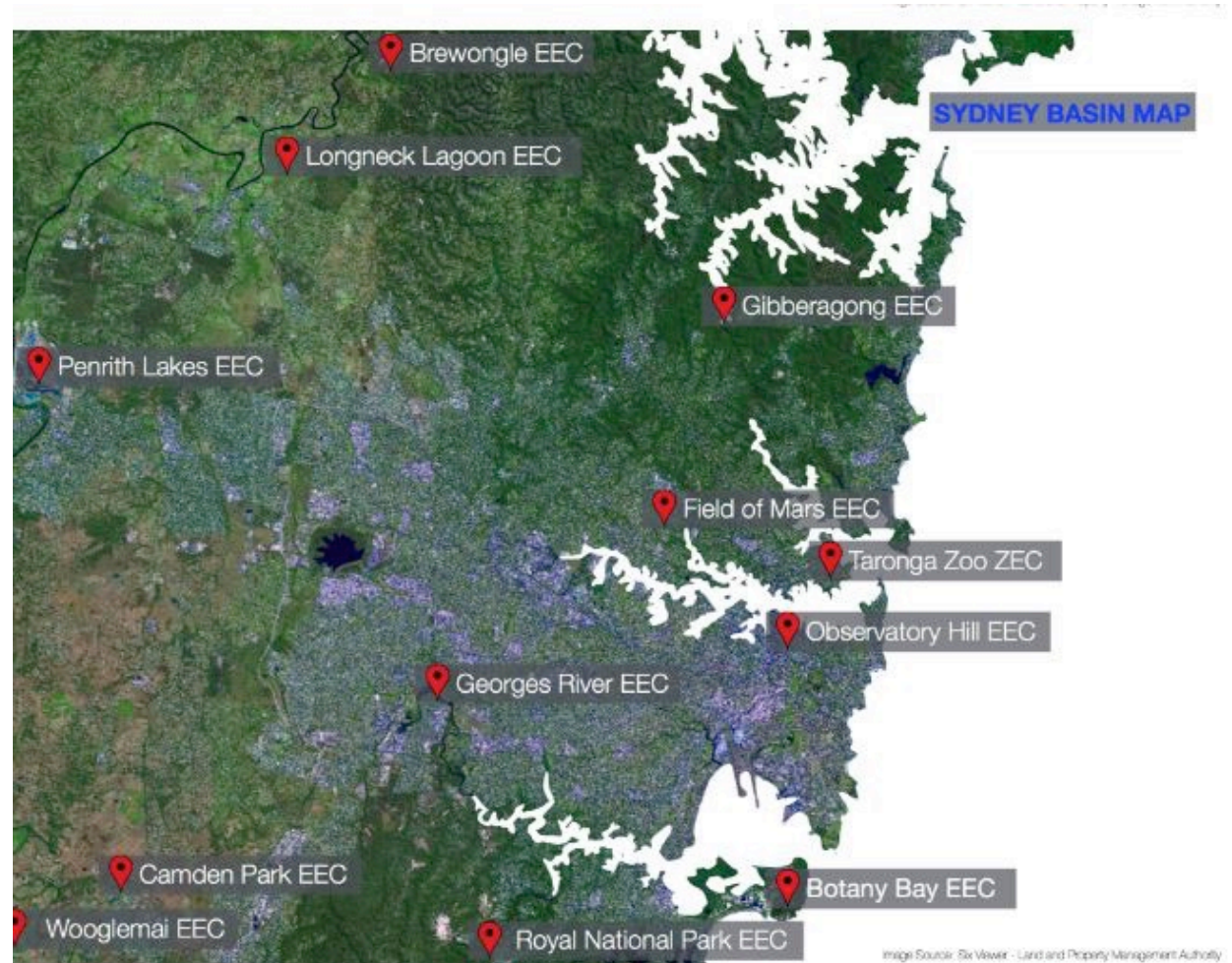


Image Source: Six Weeks - Land and Property Management Authority

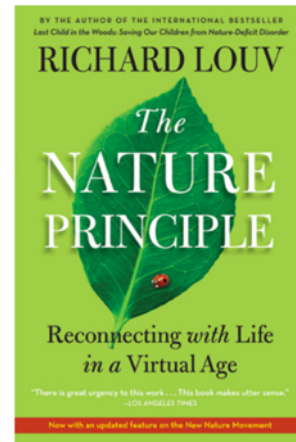
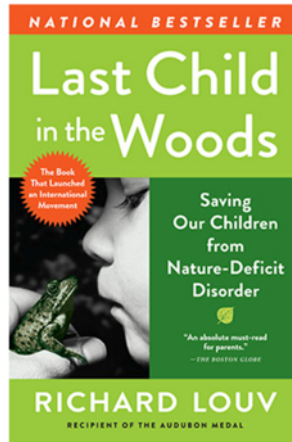
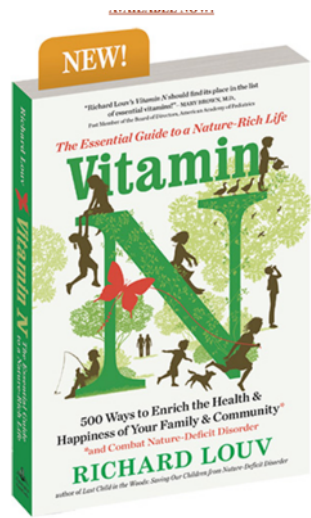
# Sydney Metro EZECs



"We were somewhat surprised to hear that newly graduating teachers often have a fear of teaching outside the classroom — on field trips, excursions and the like —

*From the Review of the Australian Curriculum 2014*

# Nature Deficit Disorder



# Why Fieldwork?

What is the aim of Geography K-10 – as a subject?

*The aim of Geography in Years K–10 is to stimulate students' interest in and engagement with the world.*

*Through **geographical inquiry** they develop an understanding of the interactions between people, places and environments across a range of scales in order to become informed, responsible and active citizens.*

# What questions do geographers ask?

**What is where?**

**Why there?**

**Why care?**

- What are the effects of it being there?
- How is it changing over time?
- Should it be like this?
- What will it look like in the future?
- What groups are involved?
- What do different groups think?
- What action is appropriate?

# The Inquiry Process

➔ Formulate Questions

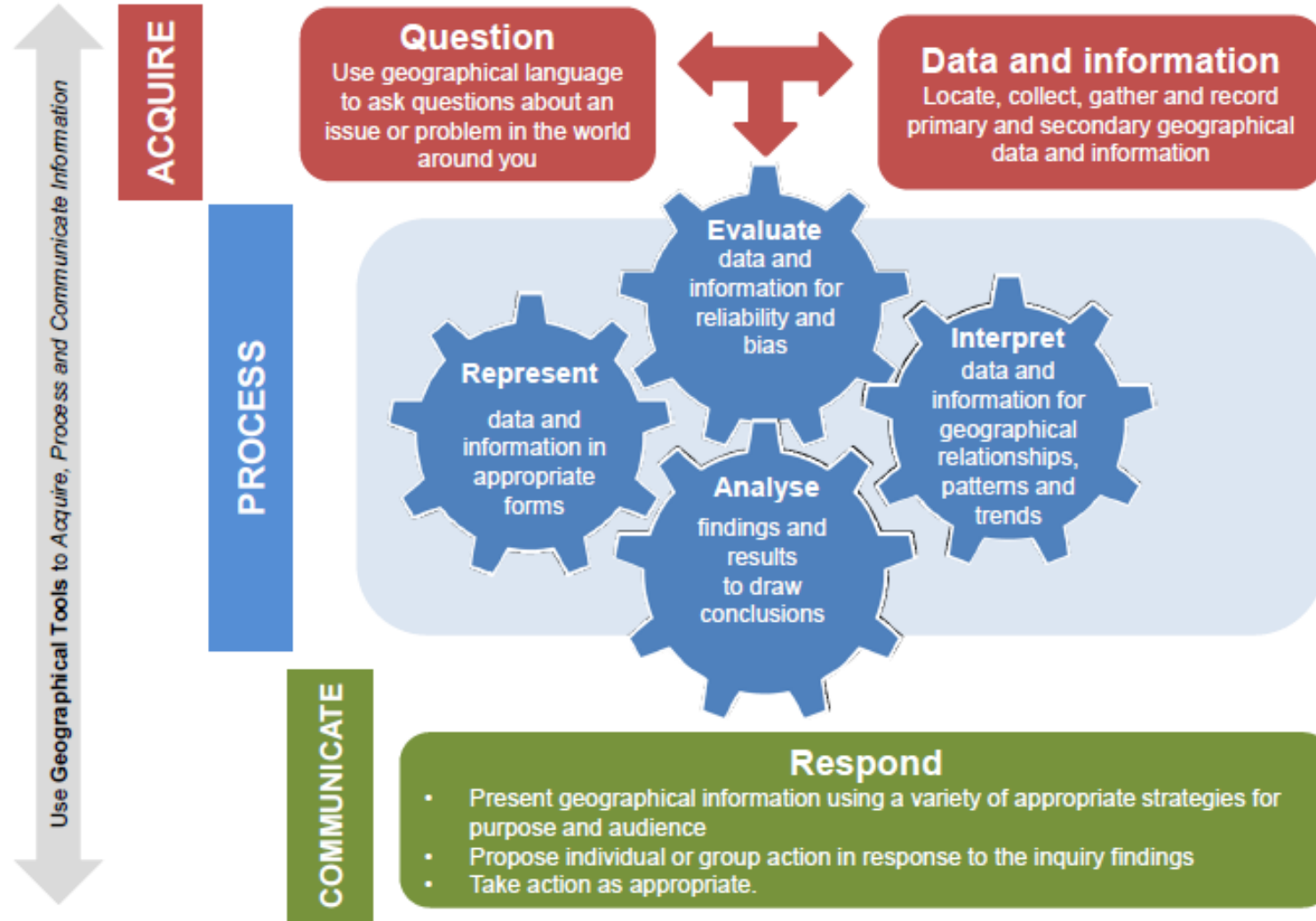
➔ Acquire

➔ Process

➔ Communicate



# A process for geographical inquiry



# Geographical tools



- digital
- non-digital
- pictorial
- large scale
- road maps
- isoline maps
- flowline maps

- observing
- measuring
- collecting
- recording
- sites
- real world
- virtual fieldwork

- charts
- tally charts
- pictographs
- pie graphs
- weather charts
- statistics
- data tables

- software
- hardware
- real world
- virtual maps
- satellite images
- GPS
- remote sensing

- diagrams
- images
- photographs
- paintings
- illustrations
- symbols
- multimedia

# **Geographical continuums**

- a) geographical concepts
- b) geographical inquiry skills
- c) geographical tools

# Geographical Toolkits

NSW DEPARTMENT OF EDUCATION ILLAWARRA ERC


experience the district  
ILLAWARRA ENVIRONMENTAL EDUCATION CENTRE

**GEOGRAPHY CONTINUUMS K-10**  
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**SPATIAL TECHNOLOGY & VISUAL DEPICTIONS**  
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**FIELDWORK TECHNIQUES & TOOLS**  
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## GEOGRAPHY



### IEEC Geographical Toolkit


A focus on **fieldwork** plus:

- Maps
- Spatial technologies
- Visual representations
- Surveys

Prepared for Geography Curriculum Networks Illawarra


Sometimes taking photos and leaving only footprints isn't enough. Geography informs our sense of place, perceptions of identity and connection with culture and the environment. Geography enables our predisposition and capacity to act.

GEOGRAPHY K-10



## Geographical Toolkit K-6

Maps  
Fieldwork  
Graphs and statistics  
Spatial technologies  
Visual representations

 **Education**  
Public Schools

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# Fieldwork in Action

## **Investigate the natural and / or human features of a place**

- Use a compass to determine direction of places
- Use GPS to determine latitude, longitude and altitude of places
- Measure distance travelled using a pedometer, trundle wheel, GPS
- Collect samples e.g. soils, plants
- Measure air and water body temperatures using a thermometer
- Observe and record cloud cover, use a grid to determine coverage and cloud chart to determine cloud type
- Observe and record the features of places or things e.g. plants, trees, buildings, streets
- Look and listen for evidence of wildlife
- Observe and record the land use features along a street
- Construct a transect to show change over distance
- Do a tally of an identified action – passing trucks, transport modes, aircraft overhead.

# Fieldwork in Action









# Choosing a fieldwork location

## Consider:

Transport

Amenities

Program development

Risk assessment

Contemporary issue

Contextual / local

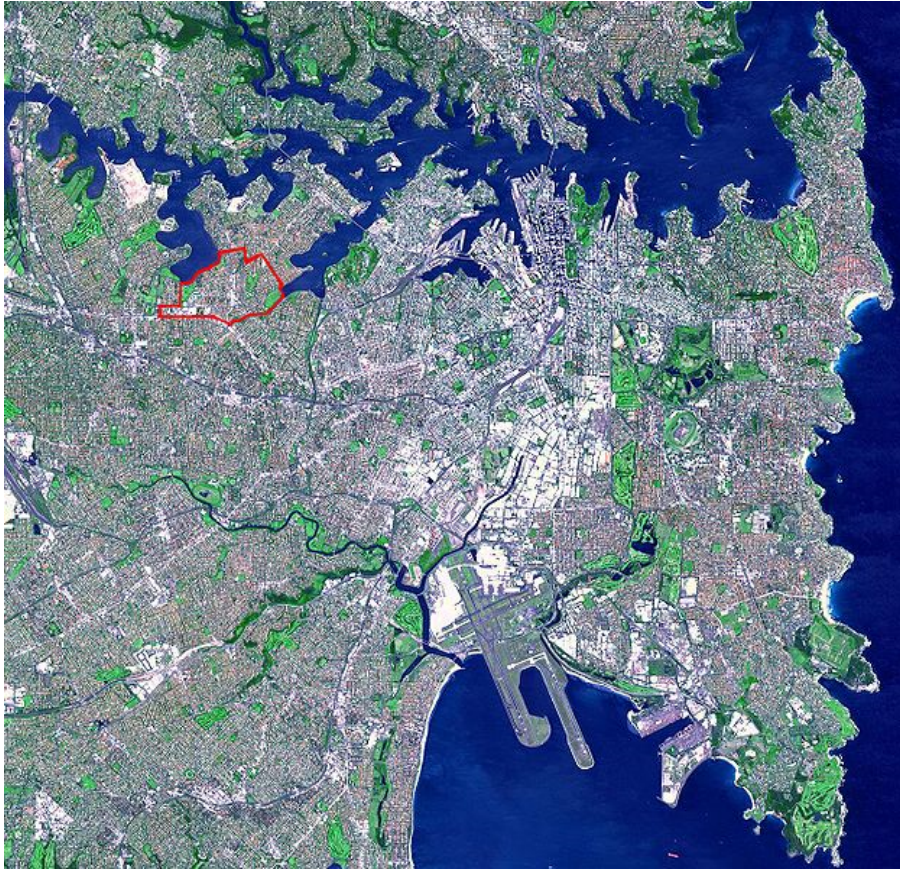


# Protocols

Where fieldwork is proposed for Aboriginal sites, participants should be familiar with protocols for working with Aboriginal communities and ensure appropriate consultation with local communities and education consultants occurs.



# Prepare your students



- Students should be fully aware of what the purpose of the fieldwork is.
- Make them familiar with the study area through maps, aerial photographs, computer mapping.
- Ask the students questions about the landform, vegetation, drainage, human impact of the area from the maps, photographs, etc.
- Practise the fieldwork techniques (using equipment, recording skills) in the classroom and playground.

# MyMaps (Google)

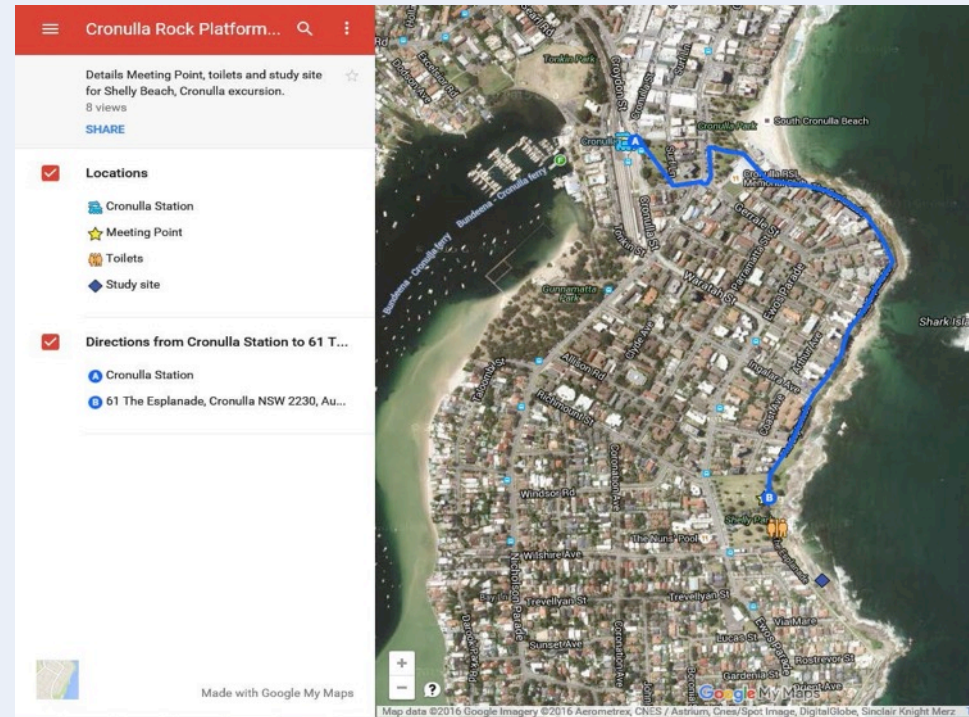
<https://www.google.com/mymaps>

## Positives:

- Different base maps (e.g. topo, satellite, street)
- Save and share easily
- Pin photos (URL only; can google search) and other details easily to a marker
- Add directions to map
- Zoom in to make large-scale maps
- Measure distance, perimeter, area

## Negatives:

- Must log in with a google account
- MyMaps is now available for all teachers and students for free as part of Google Apps For Education (GAFE).
- Students need to open their portal, open GAFE, select Google Maps, then select my maps from the menu on the top left.



# SIX Maps

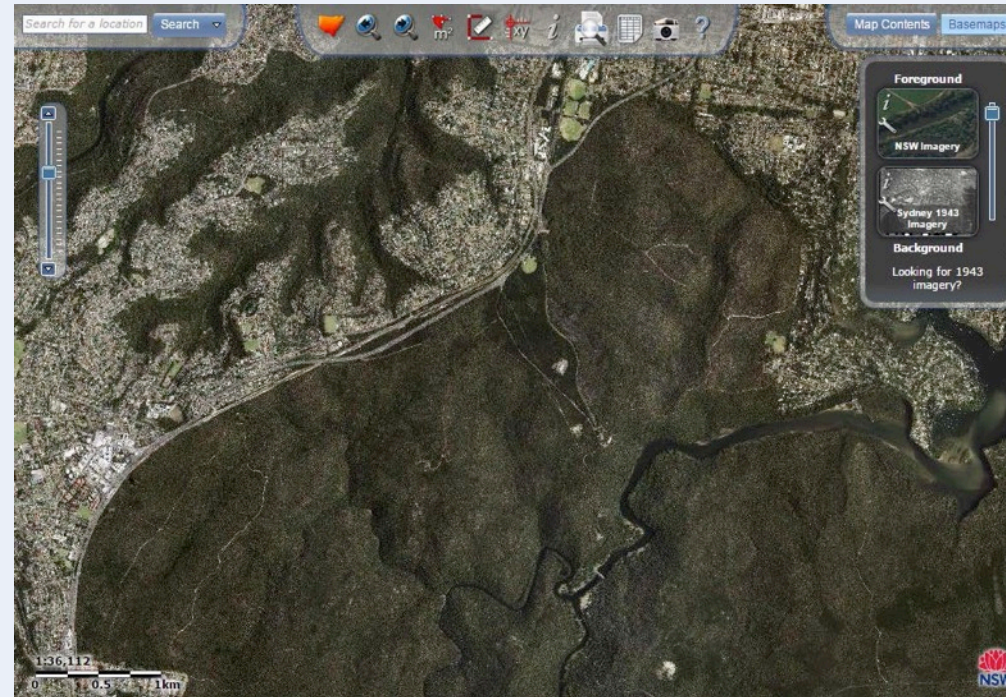
<https://maps.six.nsw.gov.au/>

## Positives:

- Measure area, distance
- Enter or identify longitude & latitude
- Search for Address, Lot, Suburb, POI (Point of Interest)
- Add layers, e.g. flood imagery
- Sliding bar between types of map, including comparing 1943 to present day satellite

## Negatives:

- Cannot draw on/annotate map



# SCRIBBLE MAPS

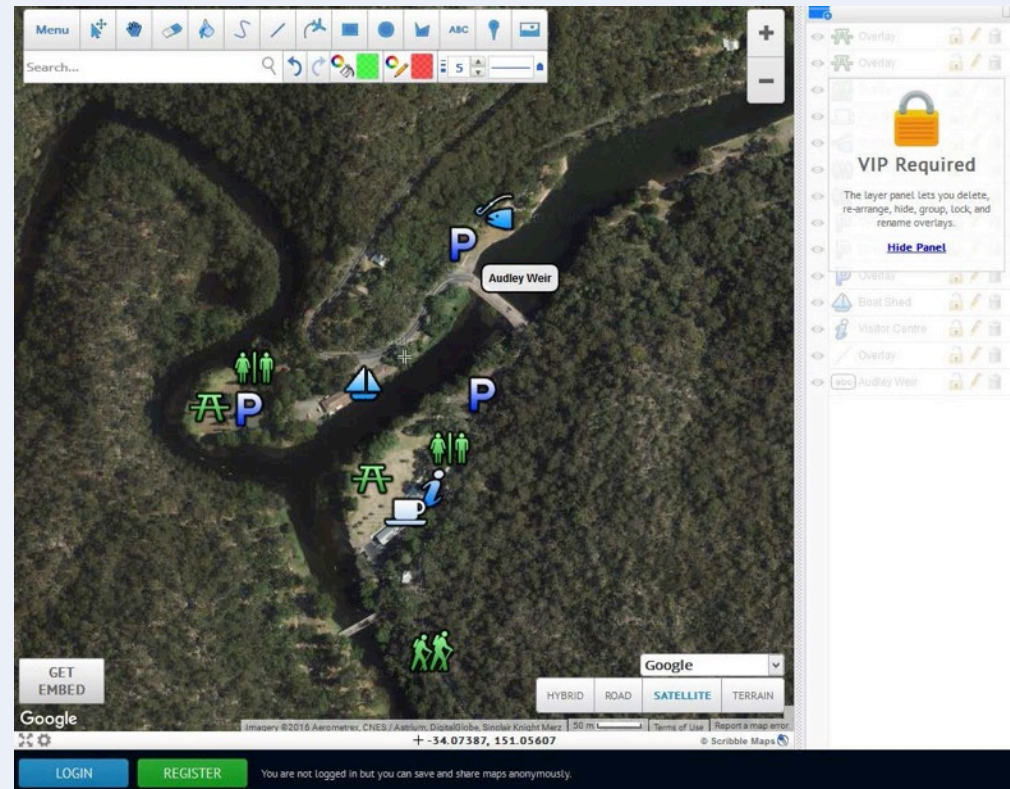
<http://scribblemaps.com/>

## Positives:

- Easy to draw on top of map
- Easy to change colours
- Measure area
- Measure distance and bearing between two points
- Add text that stands out well
- Add photos (have to know URL)
- Huge range of markers

## Negatives:

- Too many options (can get distracted by all the markers! – good range under Standard – Shapes)
- Complicated toolbar
- Costs money to upgrade



# GOOGLE TOUR BUILDER

<https://tourbuilder.withgoogle.com/>

## Positives:

- Easy to draw on top of map
- Easy to change colours
- Add your own descriptions of places
- Add photos to a track identified on a map

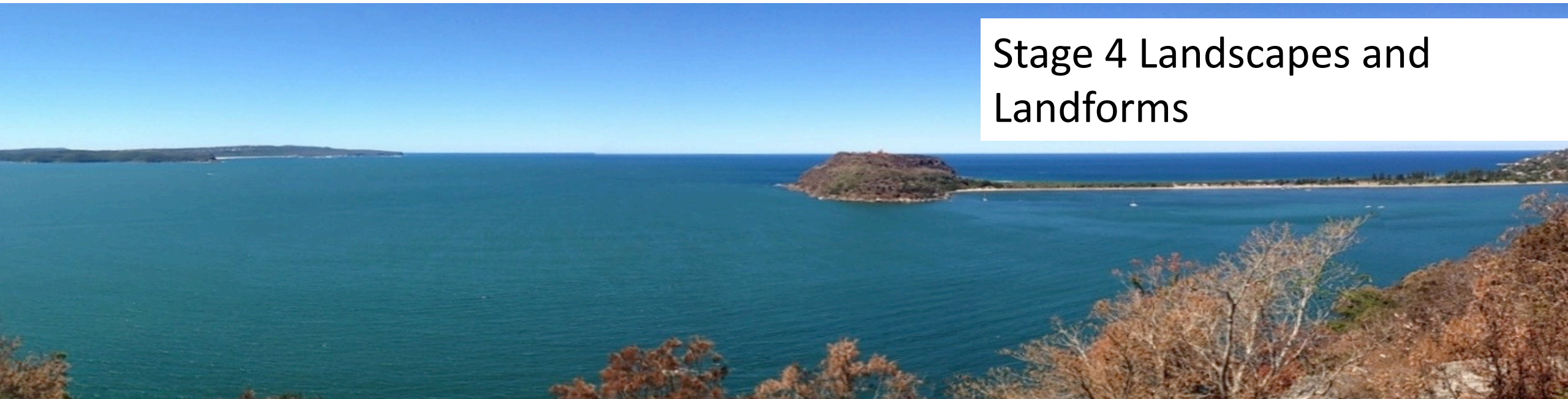
## Negatives:

- Sometimes issues with different browsers




# Example – Gibberagong EEC

Stage 4 Landscapes and Landforms





# The Inquiry

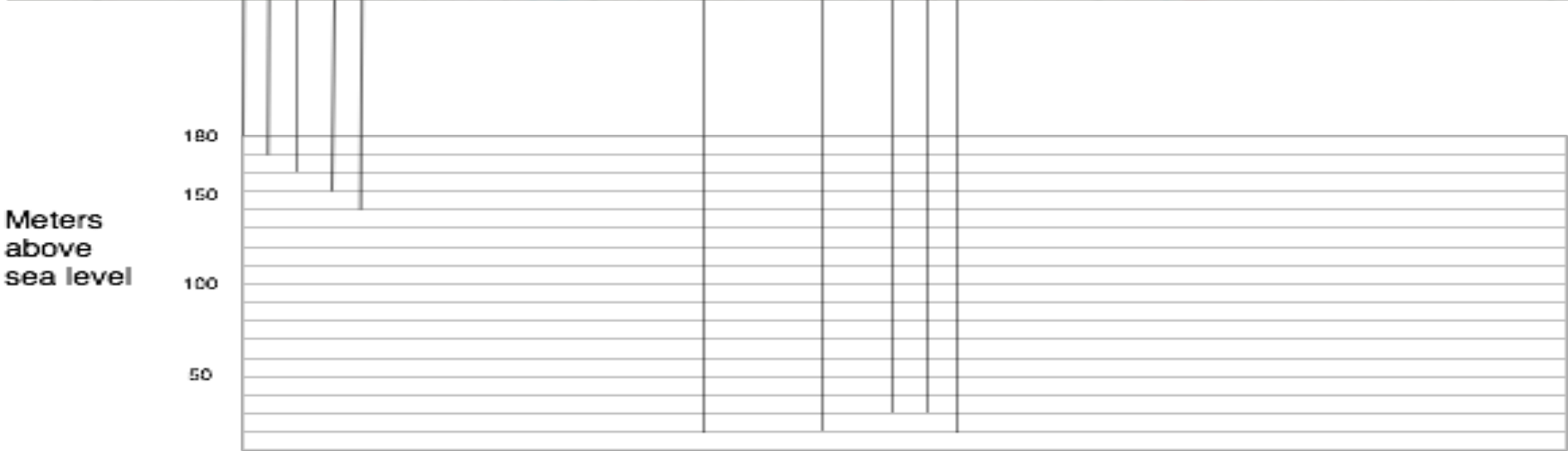
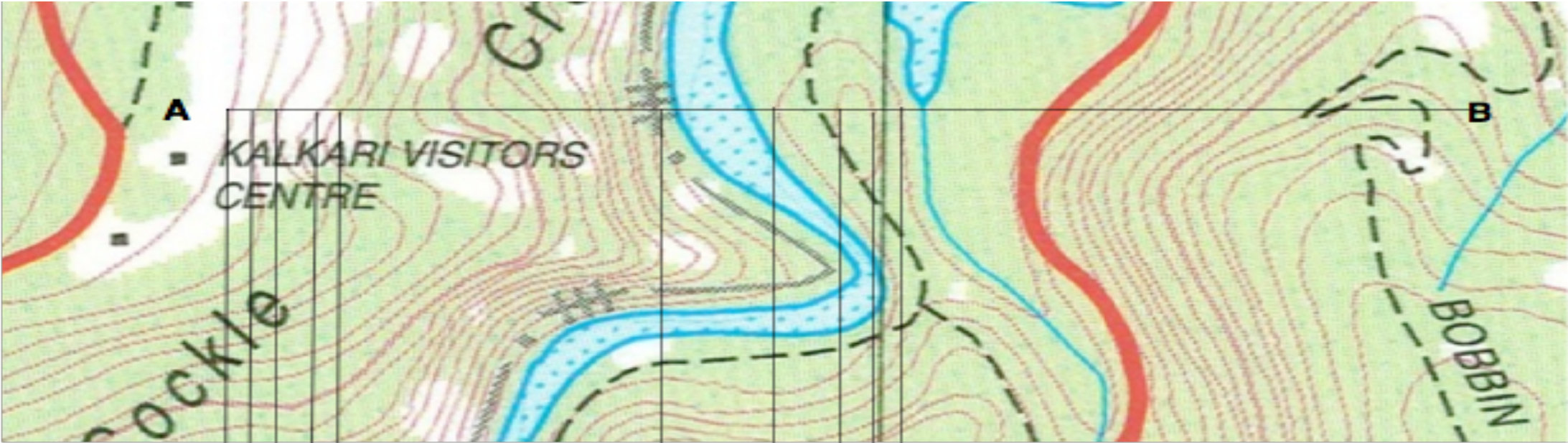


*How is the landscape at Bobbin Head valued, managed and protected?*

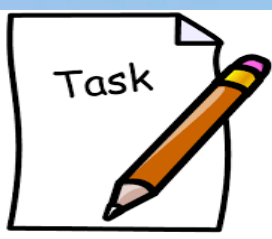
# Geographical features



# Geographical features



# Geographical features



*Field sketch of landscape*  
*Label landforms*  
*Label areas of erosion, deposition*

# Interactions



# Abiotic Measurements

Light

pH

Wind speed

Soil temp

Air temp

Soil moisture

Gradient

Salinity



# Management Strategies



# Communicate





## S2 Geography Earth's Environment, Rainforest: A Significant Environment



S2 Rainforests Case Study



## S3 Geography – Factors That Shape Places



S3- Program – Factors That Shape Places



## Stage 4 Landscapes and Landforms: Mt Keira



*S5 Resources. Landscapes and Landforms. Mt Keira*

## Stage 5 Environmental Change and Management: Warilla Beach



*S5 Program. Warilla Beach. Environmental Change and Management.*



## Stage 6 Biophysical Interactions fieldwork by canoe



*S6 Program. Biophysical Interactions: Streambank Erosion Minnamurra River by canoe*



*S6 Resources. Biophysical Interactions Streambank Erosion Minnamurra River by Canoe*

## Stage 6 Ecosystems at Risk Coastal Dunes and Littoral Rainforest of Killalea State Park



*S6 Program Ecosystems at Risk Coastal Dunes and Littoral Rainforest of Mystics Beach, Killalea State Park*



*S6 Resources Ecosystems at Risk Coastal Dunes and Littoral Rainforest, Killalea State Park*

## Stage 6 Biophysical Interactions Rainforest Bangalee Reserve- rainforest studies can be conducted at other sites



*S6 Program Biophysical Interactions Rainforest Bangalee Reserve*



*S6 Resources. Biophysical Interactions Rainforests Bangalee Reserve*



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Education