## OVERVIEW Year 11-12: Land Cover Transformations: Diminished Riparian Health

**Toohey Forest Park** is a significant remnant of native forest located approximately 9 kilometres from Brisbane's city centre. However, its ecological integrity is increasingly threatened by surrounding urban development. The construction of roads, tracks and bridges have altered natural landforms and contributed to the degradation of vegetation along ephemeral creeks and water quality in the park's riparian zones. These changes present challenges to both land and water management.

The full-day fieldwork program: **Diminished Riparian Health**, is designed for **senior students** to collect primary data to allow them to explore the interactions between the biophysical environment and anthropogenic change. The primary data collected will be compared to tested index and scales used by Queensland Government and Environment authorities to enable students to assess riparian health, water quality and land cover change in Toohey Forest Park.

Data collection involves a range of scientific tools and techniques, including data loggers (Vernier: soil moisture / temperature, Horiba: turbidity, dissolved oxygen, water temperature), soil pH kits, GPS and spatial technologies, transects and quadrats to monitor changes in the riparian zone across selected sites within the park.

The data collected will support students in developing informed recommendations to mitigate environmental impacts, enhance riparian health and promote the long-term sustainability of Toohey Forest Park.

The program has been assessed as medium risk. A Curriculum Activity Risk Assessment is available on request. A student field booklet is provided upon confirmation of your booking.





## Senior Geography

Unit 3: Responding to land cover transformations

Topic 2: Responding to local land cover transformations

## Subject matter:

- **Explain** the geographical processes that result in particular physical features (e.g. river systems) that shape the identity of places at a local scale
- Interpret land use maps to identify where changing land cover (e.g. urbanisation, land drainage) has had an impact on the biophysical environment in a local area
- **Explain** geographical processes that have contributed to land cover change in a local area, including anthropogenic processes, e.g. urbanisation
- Recognise the spatial changes to land cover at a local scale and represent these on maps using spatial technologies
- **Explain** a local land or water management challenge using a conceptual model, e.g. reduced water quality, diminished riparian health
- **Conduct** a field study (for assessment purposes) to collect primary data for investigating a land management or water management challenge as a result of land cover change on a local scale



Toohey Forest Environmental Education Centre

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