



Study site - location and surroundings

During this course and your fieldwork you will be investigating two neighbouring ecosystems:

- 1. The dry sclerophyll woodland of Sugarloaf Hill**
- 2. The mangrove wetlands of Buffalo Creek Reserve.**

1. Sugarloaf Hill is a valuable pocket of dry sclerophyll woodland covering an almost conical hill on a small promontory that juts out into the Lane Cove River in East Ryde.

Sugarloaf Hill (often referred to as 'The Sugarloaf') became part of Lane Cove National Park in 1996 and is home to many species of native flora and fauna including the threatened Red-crowned Toadlet.

The dry sclerophyll woodland of Sugarloaf Hill is a remnant ecosystem, which effectively means it is a patch of native trees, shrubs and grasses leftover from the bushland that used to cover a much larger area, and is almost totally cut off from the rest of Lane Cove National Park by the suburban area of East Ryde, Buffalo creek and the Lane Cove River.

The Sugarloaf Hill bushland remnant is far from untouched and shows major differences in ecological structure from the original vegetation type due to disturbances by natural and human intervention. Despite these disturbances it is regenerating largely through natural processes. Just because it is remnant bushland doesn't mean it is low quality habitat.

2. Buffalo Creek Reserve occupies the lower reaches and mouth of Buffalo Creek where it meets the Lane Cove river. The area is managed by Hunters Hill Council.

At the end of the 19th Century it was a large low-lying area covered with saltmarsh vegetation and a few mangroves along the creek line, however the extent of the mangrove forest expanded dramatically when the creek and Lane Cove River silted up as a result of urban development.

In the 1950s people didn't understand about the ecological value of these ecosystems and much of the site was buried under a garbage tip. This tip was intended to be in use for many years and would have eventually filled the valley. Fortunately local residents protested and the tip was closed.

The tip area has now been rehabilitated as a recreation-style area with bicycle tracks, playgrounds and picnic amenities, however the rubbish (mainly old vehicles and building refuse), still remains under the grass .

A major source of environmental pollution called Leachate occurs when rainwater filters through the old tip and emerges back into the mangrove swamp laden with dissolved and suspended pollutants.

TASKS:

1. Examine [this Google map](#). (*link url below*) Use the information to carefully shade in the extent of the two fieldwork ecosystem areas and the position of the main study sites.
2. Take the time to read [this fact sheet about remnant vegetation](#). (*link url below*)
Use this to answer the first two questions on page 2 of your worksheet.

Link 1: <http://goo.gl/maps/a7bRp>,

Link 2: <http://www.spiffa.org/uploads/2/6/7/5/2675656/factsheetprotectingremnants.pdf>