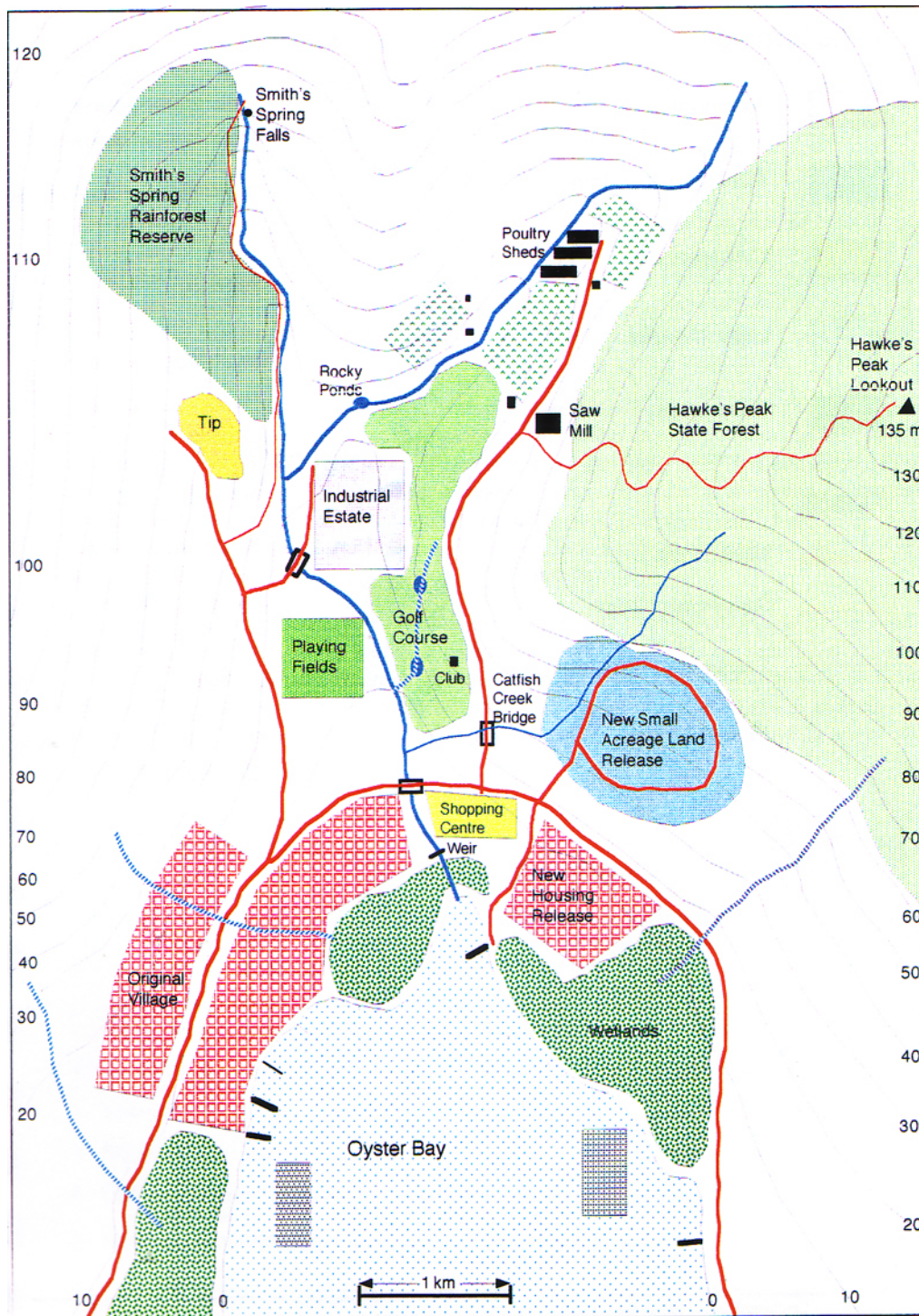







APPENDIX 1




APPENDIX 2






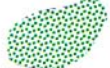
Land Zoning

	Residential
	Rural Small Holdings
	Commercial
	Light Industrial
	Recreation






Roads

	Main Road
	Secondary Road
	Tracks and 4WD trails
	Bridge

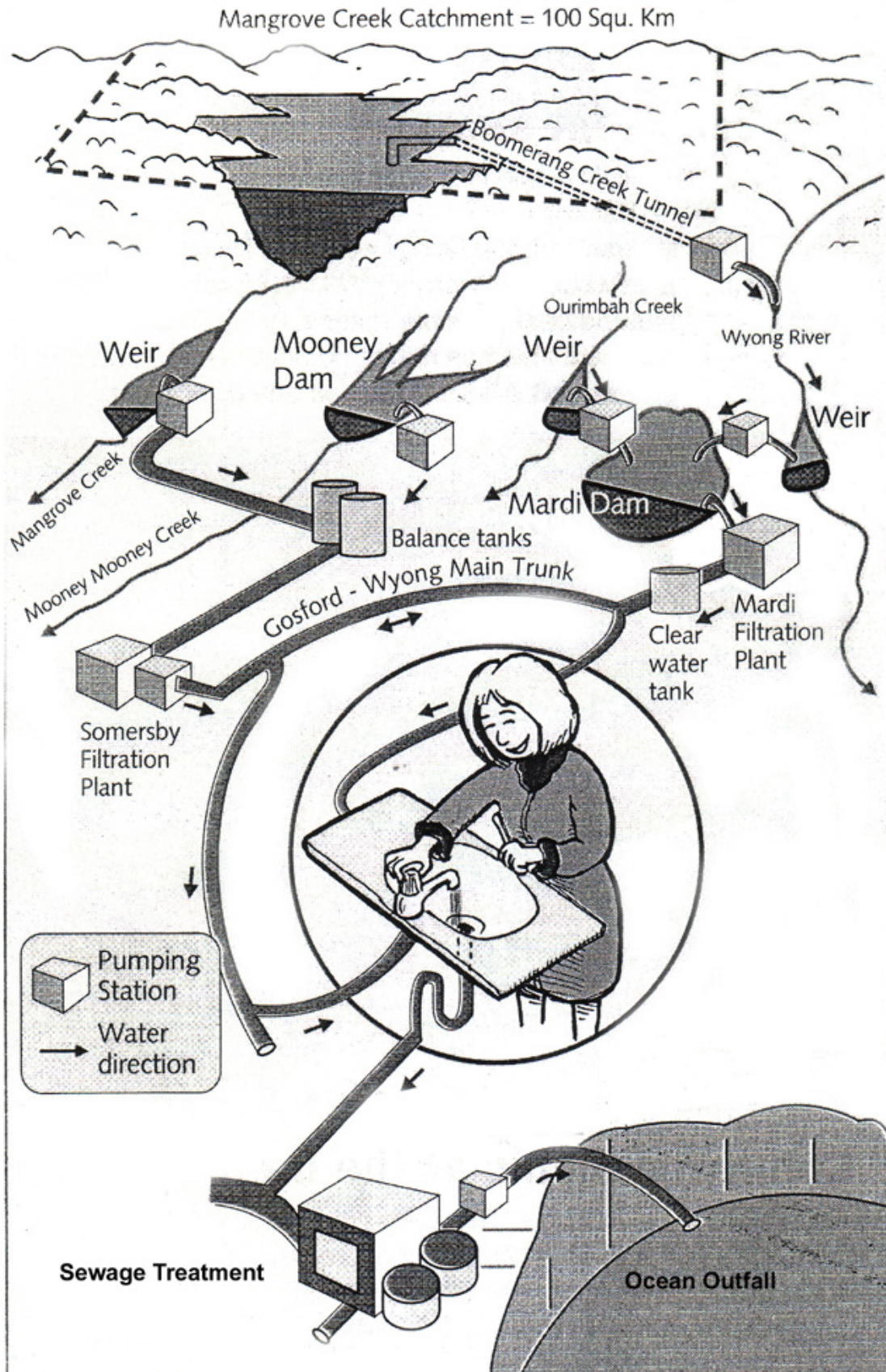
Natural Features

	Main water course
	Minor water course
	Intermittent water course
	Pond
	Estuary
	Wetland


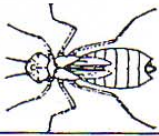






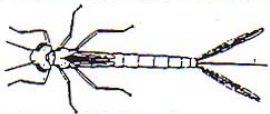




Other Symbols

	Building
	Trig point
	Oyster lease
	Orchard
	Contour line

APPENDIX 3



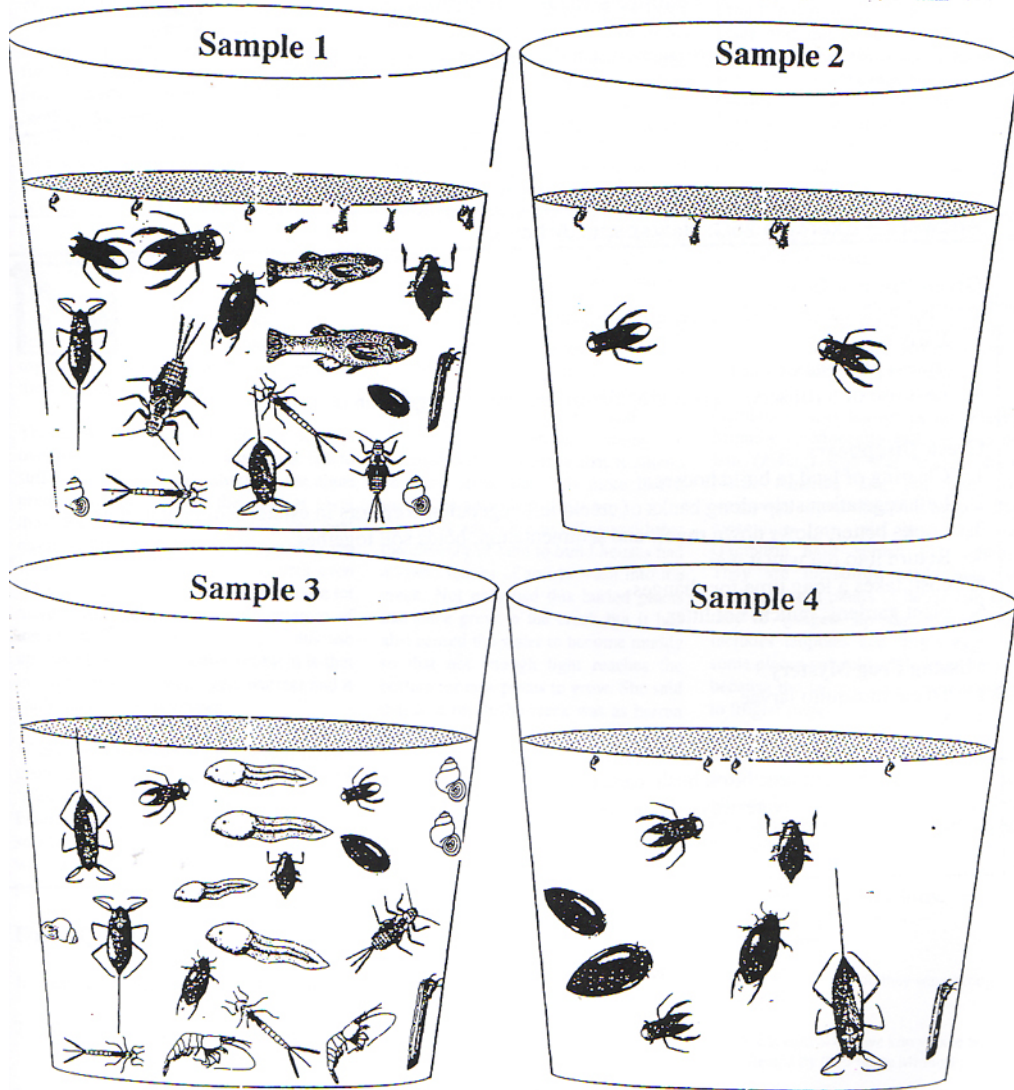
Buckets of Bugs Recording Sheet

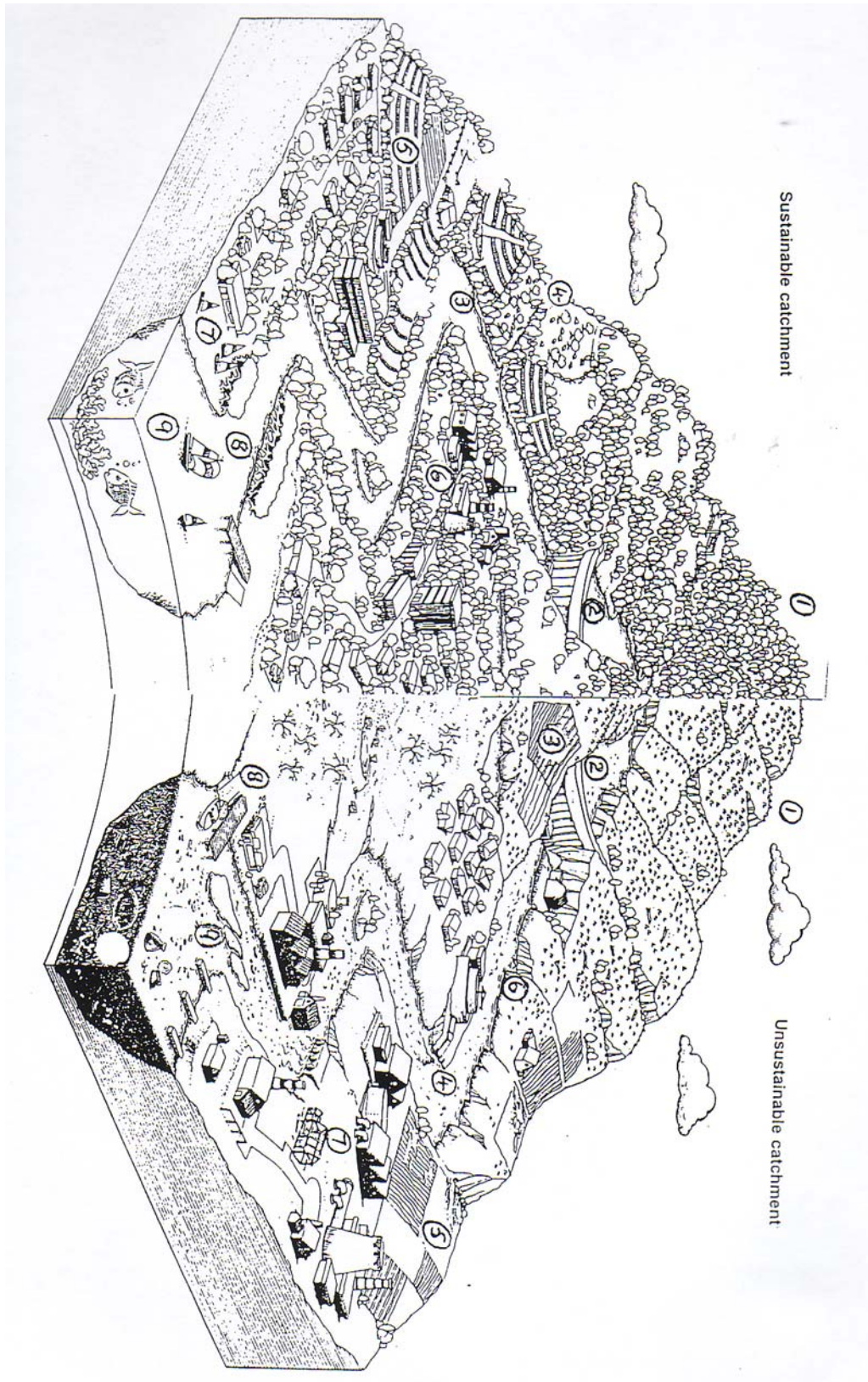
Bug Value	Sample 1	Sample 2	Sample 3	Sample 4
 Midge Worm larvae 1				
 Dragon Fly Nymph 4				
 May Fly Nymph 9				
 Water Scorpion 3				
 Caddis Fly Larvae 8				
 Freshwater Shrimp 3				
 Freshwater Snail 1				
 Water Beetles 2				
 Damsel Fly Nymph 3				
 Tadpole 0				
 Water Boatman 2				
 Plague Minnow 0				
 Mosquito Pupae or larvae 1				
Totals	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

APPENDIX 5

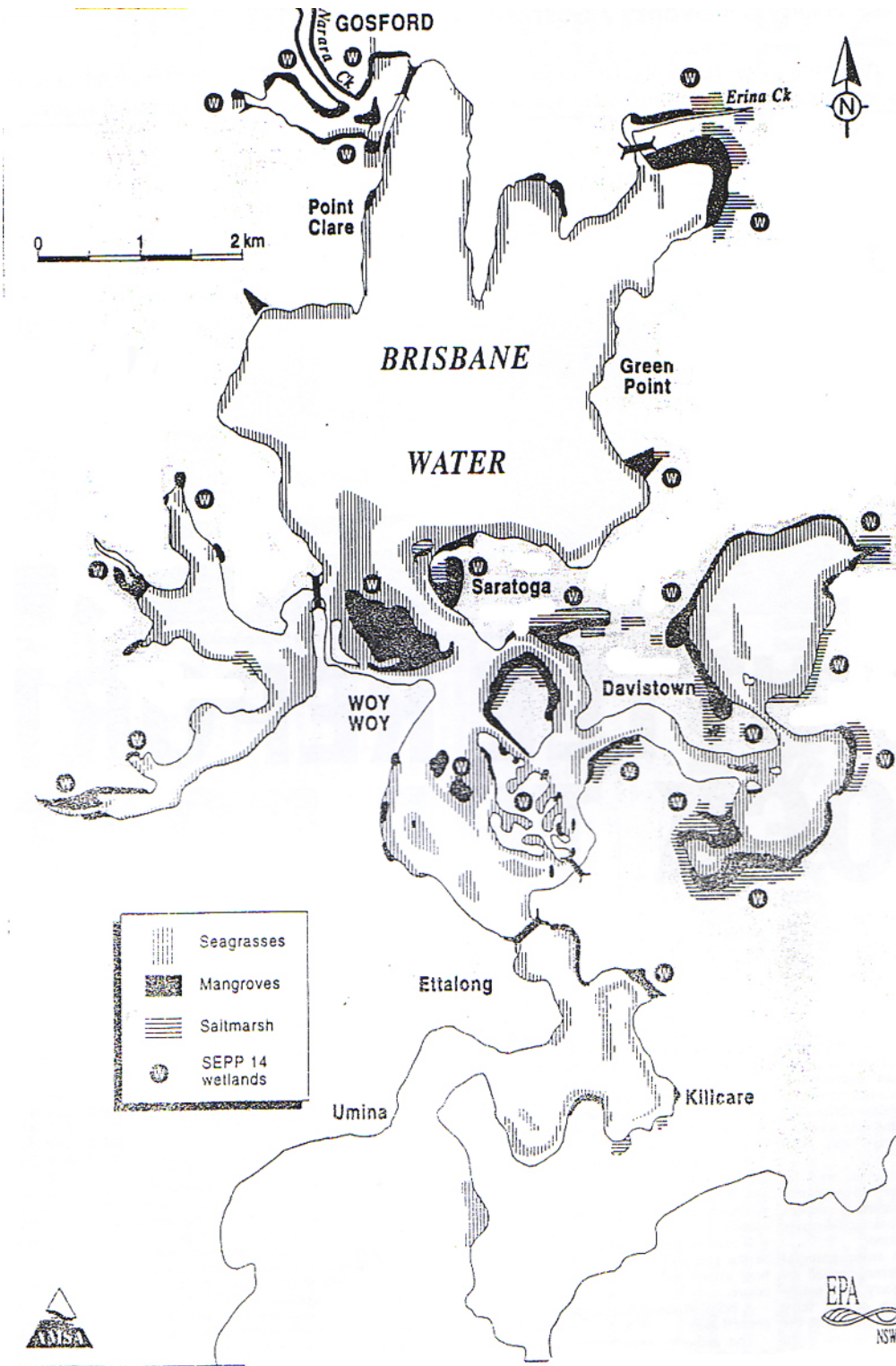
Exercise 25B: Buckets of Bugs

Water bugs from 4 sample sites in the Oyster Bay Catchment



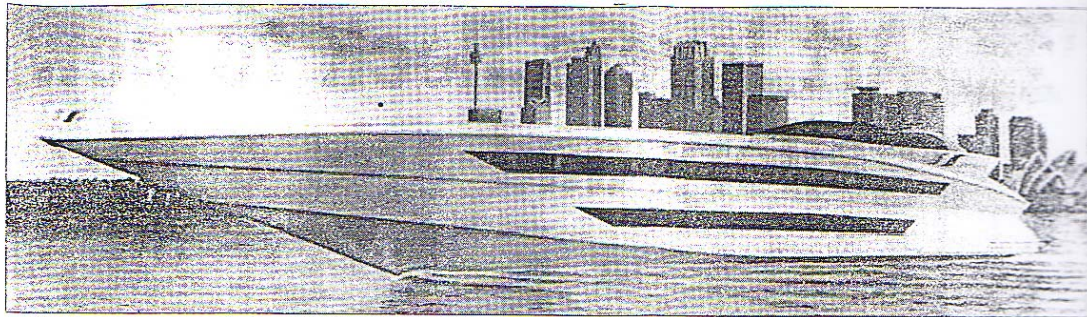


APPENDIX 8



Case Study 3 - Sydney / Gosford Ferry Proposal

The proposal to develop a regular 'Super-Ferry' service between Gosford and Sydney has aroused the community. Read the following newspaper articles and then answer the Questions that follow:



An artist's depiction of the proposed Gosford-to-Sydney Supershuttle

5/3/00

SHUTTLE REPORTS ROCK THE BOAT

THE Gosford-to-Sydney Supershuttle ferry service could be sunk in its present form after a series of critical reports by government authorities highlighting environmental and public safety issues.

A letter in March from Gosford Council to Supershuttle backers concluded council "could not approve the application as currently proposed ... given the outstanding issues and comments made by NSW Waterways and other authorities".

Council agreed to wait for meetings between Supershuttle and the government departments before making a decision on the application.

Council's environmental control unit recommended refusal for the ferry after noting the introduction of the ferry "will significantly increase the danger of navigation" in Brisbane Water.

"The proposal will irreversibly change the recreational waterway of Brisbane

Water to a harbour or port, which is not socially acceptable," the unit said.

A basic premise of the environmental impact statement — that the ferry service would have right of way through Brisbane Water — was wrong, it said. The Supershuttle would be forced to give way to all recreational craft, including wind and man-powered vessels, and would have to "continually stop and start or change course to avoid collisions".

"As a result, the environmental and commercial viability of the ferry is severely compromised," the unit concluded.

It also recommended refusal of the proposed Gosford Harbour marina and ferry docking centre.

A NSW Waterways report to council said:

The authority has "serious doubts" about its ability to issue a Certificate of Survey (required under the Commercial Vessels Act) because of con-

cerns about the proposed use of compressed natural gas.

NSW Waterways applauded Supershuttle for its choice of a relatively clean fuel source but said it had "serious doubts about its ability to condone the use of compressed natural gas to fuel the Gosford to Sydney fast ferries" because its flashpoint was below 35C.

The code of safety for high-speed craft states that fuel with a flashpoint below 35C should not be used.

"Officers of the authority have conducted research to determine whether a high-speed vessel using compressed natural gas as its fuel source currently operates anywhere in the world," Waterways said.

The authority was unable to find a precedent.

NSW Waterways also had concerns about the wash created by the fast ferry. The environ-

mental impact statement found a model of the proposed vessel travelling at "only 10-15 knots ... may produce a considerable amount of energy", generating waves of up to 1m at a five-second period.

"The vessel is prototype untested at this stage and the possibility remains that, with full scale testing ... it may not be able to operate within an acceptable wash regime," the Waterways report said.

Waterways said it required precise information about the minimum velocity at which the vessel was expected to travel in Brisbane Water to provide a viable service and the distance at which the vessel would travel from the coast to determine the risk of freak waves occurring.

Speeds for vessels on Sydney Harbour are restricted to 12 knots between Sydney Heads and Bradleys Head and 10 knots between Bradleys Head and Sydney Cove. "Similar or lesser maximum speeds are likely on Brisbane Water which

is largely a recreational waterway," the report said.

Waterways had "reservations" about the regular operation of a large vessel in Brisbane Water, which is described as a "navigationally constrained" waterway in the environmental impact statement.

The report on navigational issues contained in the EIS noted "any inclination towards tentativeness (by a vessel master) could hazard the craft and its passengers".

NSW Fisheries said it had concerns about possible pollution of sensitive sections of Brisbane Water and the impact on seagrasses. It had concerns about the potential "opening up" of Brisbane Water to other large vessels once dredging for the ferry occurs.

It said a list of 31 conditions, including extensive monitoring for three years, was warranted because of the complexity of the proposal and the sensitive nature of aquatic habitats.