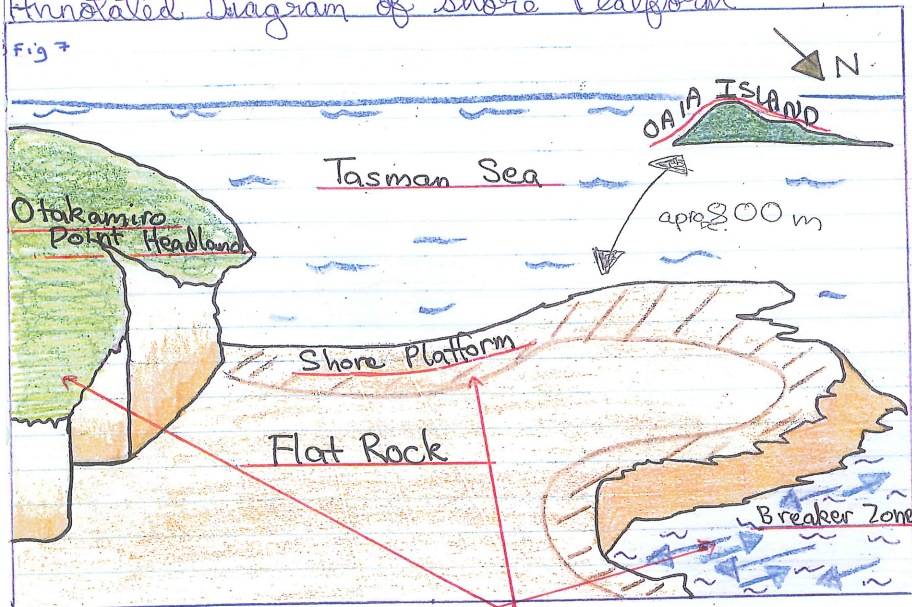


## Annotated Diagram of Shore Platform

Fig 7



Breaker Zone

- When waves hit platform they refract.

Otakamiro Point Headland

- Volcanic 17 million years ago
- uplifted 1 million years ago
- Highest point 40m

Shore Platform

- Extends into Tasman Sea 450m
- Approx 100m wide
- Made of hard igneous rock
- Blow hole
- High tide surf breaks over the rock/erodes outer edges
- Water depth 6-8m in cove
- Lave at Northern side of headland 20m high, 100m wide

## Diagram of Littoral Drift occurring on Shore Platform



Fig 18

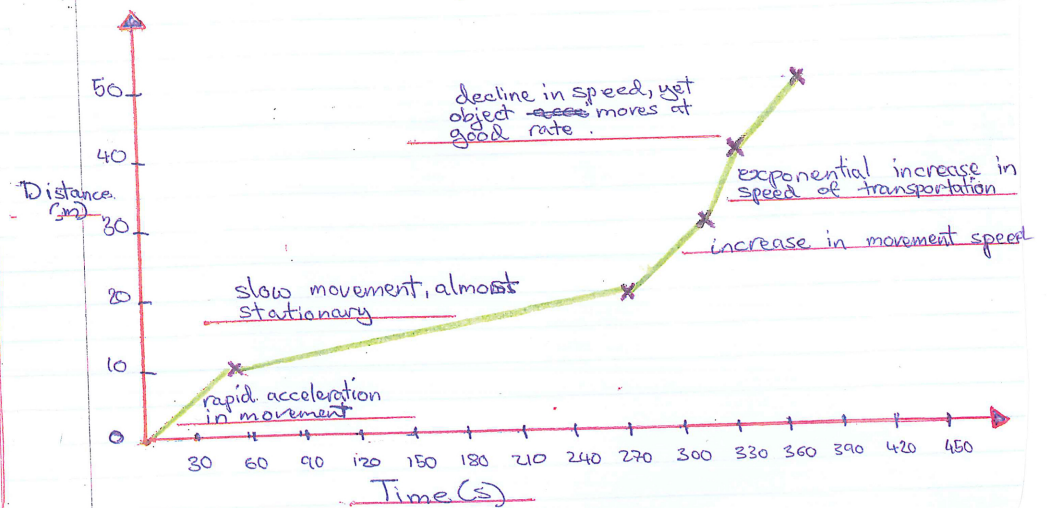
## Distance vs Time Results Table for Experiment with Capsicum

Fig 16

| Distance (m) | 0 | 10 | 20   | 30   | 40   | 50   |
|--------------|---|----|------|------|------|------|
| Time (s)     | 0 | 56 | 4:56 | 5:30 | 5:59 | 6:24 |

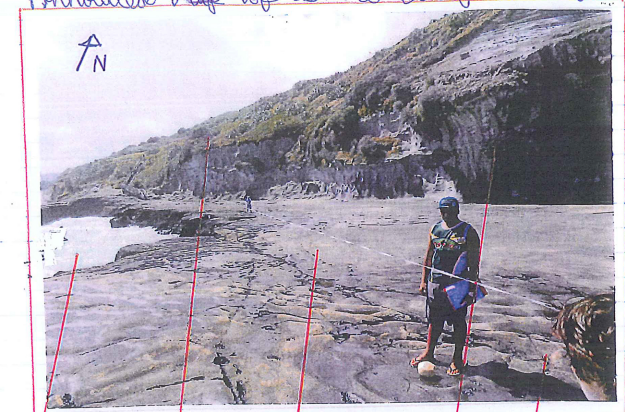
Fig 17

## Distance vs Time Graph with Results from Capsicum Experiment



## Annotated Photo of Shore Platform

Fig 8



Breaker Zone  
waves refracting

Area where experiment  
will take place

Shore Platform

Vegetation/Bush

Pillow lava

**Research Aim:** To examine how the processes of wave action and longshore drift operate and interact along the Muriwai Coastal Environment.

### Analysis of findings:

The first site is near the dune blowouts shown in Fig 5 and 6...

...Fig. 7 and 8 provide a spatial and visual interpretation of the Otakamiro Point Headland - shore platform and the breaker zone. There is evidence that this is mainly an erosion zone but as it is largely volcanic or igneous rock it does not provide large volumes of sediment like... Nor does sediment carried by longshore drift become deposited here on the headland because ... The data shows that sediment transport does occur in this section of the MCE (2)...

...The float took 6 minutes and 24sec to travel 50 m... The trend seemed to be different in the swash and backwash zones evident by the float crossing the first 10m in just 56 seconds. It is clear that the refraction of waves at about 120 degrees after hitting the headland caused them to carry the float backwards, thus halting its progress. This can be proven by the float taking 4 minutes to cross the next 10 metres (3). However, beyond this point the float moved more steadily but the influence could be attributed to the action of wind as much as waves... the waves at this point were pushed by the southerly wind northward and no refraction occurred.

In conclusion for this part of the MCE, longshore drift is occurring in a Northerly direction while not evident in the breaker zone of the shore platform, the wind interacting with refraction of waves ensure that it is happening (4)...

### Conclusion

The aim of the research which focused on the processes of wave action and longshore drift along the Muriwai Coastal Environment and the evidence clearly indicated that longshore drift is occurring northward (5)... The evidence also shows that several interactions influence the characteristics of this drift, for example wind can accelerate movement of sediment when it is in the same direction as the waves (northward and southerly wind) (6)...

The process of longshore drift occurs when south westerly winds cause waves to strike the shoreline obliquely, to wash carried sediment sideways (7). The backwash returns the sediment at right angles to the shore, as it eventually travels northwards...

### Evaluation

My research aim was clear and very specific so I knew what information was needed to make valid conclusions. The aim gave direction to the planning so I could decide on the best data collection methods for long shore drift... Data from the three sites was collected in the same way so the results could be presented using the same techniques and scales which made for easy comparison... The only difference would relate to the change in conditions like wind and tide between taking recordings at the first and last sites, this could influence results (8).