

#### STAGE 4: AFTERSHOCKS

Numerous aftershocks can be felt for hours and days afterwards. Some of these can be large and cause further destruction to already weakened structures.



#### STAGE 5: RECOVERY

A state of emergency is declared after the main earthquake and is coordinated by Civil Defence. The immediate concerns after tending the injured are food and shelter for survivors. Unsafe areas are **evacuated** and schools, halls and marae used as shelter centres. The state of emergency may not be lifted for several weeks.



#### STAGE 6: REHABILITATION

The rebuilding of buildings, roads, services and economic **facilities** may take months and is very costly.

## ACTIVITY

### Case study – Napier Earthquake (1931)

Important events in the Hawkes Bay earthquake in 1931 are listed below in a random order.

- 1 Read the events listed.
- 2 Divide your page in to six divisions. Give each division one of the headings in resource 16.1.
- 3 Write the statements down in chronological order and place them in the appropriate divisions.

Offers of assistance came from all over New Zealand. The naval vessels HMS Dunedin and Diomedes rushed to Napier with relief and workers from Auckland. Eventually Napier's CBD was rebuilt in the Art Deco style.

First on the scene were sailors from HMS Veronica, berthed in the port at the time. They joined firemen, policemen and locals in the search for survivors. Fire-fighting was difficult because water pipes had been broken. The Veronica sent the message for help. Residents left their homes and camped on the beach front, lawns and open spaces. The race course became the field hospital and Nelson Park the refugee centre. Many children were sent to relatives or friends in Palmerston North.

The Pacific Plate is being subducted 23 km beneath Napier and continues to a depth of 80 km beneath Mt Ruapehu. Riding over it is the deformed edge of the Indo-Australasian plate forming the ranges of Hawkes Bay. The plates are colliding at a rate of 55 mm per year.

674 aftershocks occurred after February 3.

A total of \$300 million of damage was caused as buildings collapsed. Within minutes in Napier, fire spread through the inner city destroying 2.5 hectares of the CBD. People trapped in the rubble died. The inner city of Hastings collapsed killing 90 people. All roads (except the highway from Hastings to Wellington), railway lines, and telephone links were out and much of the power supply.

At 10.47am on Tuesday, February 3 1931, these processes within the earth showed themselves on the earth's surface when two violent earthquakes struck Hawkes Bay within 30 seconds of each other. Centred 17 km beneath Patoka (30 km northwest of Napier) the earthquake sent seismic waves in all directions travelling at 6 km per second. The first quake was 7 on the Richter Scale. Miss Nancy Hobson describes the start of the earthquake 'like being on the deck of a ship in rough seas'.