The tremor that

It is 50 years on Monday since a violent earthquake rocked the state. **SHANE MAGUIRE** reports.

DAMAGE: The cracked northern face of the GPO clock, the remains of a balcony which collapsed on to a city footpath, and debris on a bed.

SATURDAY **INSIGHT**

IT WAS the early hours of March 1, 1954, and in less than two hours the sun would start to rise over the Adelaide Hills, heralding the first day of autumn.

The milkos and paper sellers in the city and suburbs, along with other early starters, busied themselves while night watchmen counted the minutes until the end of shift. Street sweepers cleaned footpaths in readiness for another Adelaide Monday morning.

For the most part, people slept soundly, oblivious that they would soon be in the middle of a frightening experience. Not even the sudden howling of dogs, sensitive to what was about to happen, alerted people to the pending disaster.

At 3.40am, from Darlington to Pirie St, city, down to Victor Harbor, Burra in the north and on Kangaroo Island, windows started to rattle and tea cups fell from kitchen hooks as the earth convulsed in a violent movement across the state.

In many cases, those who had been sleeping soundly were flung from their beds.

Plaster from walls and ceilings started crumbling and chimneys vibrated.

Within 20 seconds, South Australia was in the midst of an earthquake so powerful that solid homes crumbled and tall buildings swayed.

The tremor continued for nearly 40 seconds, long enough to wake people from their sleep in time to see cracks opening up in their bedroom walls and chunks of cornices fly about.

Widespread blackouts added to the confusion and rising fear as children, huddled under blankets, cried for their parents and bewildered mums and dads struggled to comprehend what was happening.

OVER a large part of SA, from Kangaroo Island and the South-East, particularly the Robe area and north to Jamestown and Port Augusta, and west to Tumby Bay, the story was the same.

At the height of the quake people reported hearing thundering sounds like that of a "high speed train".

A milkman doing his rounds at Murray Bridge reported seeing "a brilliant flash and many lights like falling stars". As he drove the road started to "billow" and he could see homes on either side moving.

In the city and suburbs damage ranged from slight to complete.

The northern face of the GPO (Australia Post) clock in King William St was smashed, Maughan Church was so badly damaged it was later demolished, as was part of St Jude's Church of England at Brighton.

Only three people were injured during those seconds of terror, however 30,000 buildings were damaged at a cost of $350 million.

The University of Adelaide seismograph was the only monitoring instrument in the state at the time so calculating the earthquake's epicentre was difficult, although experts agree it was probably close to Darlington.

Within days of the earthquake, geophysicists were convinced tremors were a result of slippage along the Eden Fault Scarp which runs along the edge of the Adelaide Hills between Marino and Waterfall Gully.

To add to this view, large cracks up to 100m long were found near the Darlington Sawmills with homes in the area badly damaged.

Although there is no accurate record of the intensity of the quake, experts agree it was probably a 5.5 on the internationally accepted Richter Scale.

BY comparison, the earthquake which hit Newcastle, NSW, in 1989 registered 5.6 on the scale, and 13 people died.

Adelaide's 1954 quake was the third recorded in this state – and the smallest.

In 1897 a quake hit which registered 6.5 on the Richter Scale and is the largest recorded, with the epicentre at Robe although it was felt

shook our world

across Adelaide and up to Gepps Cross.

In 1902, a 6.0 quake hit the Yorke Peninsula with medium level damage reported. Two people died from shock attributed to the tremor.

When the next earthquake will hit is all but impossible to predict, although measures have been taken to provide some warning.

Primary Industries and Resources SA seismologist David Love said a monitoring program began last May.

"We have established a research project in the Mt Lofty and Flinders Ranges and the Eyre Peninsula to accurately measure tiny movements that may give us a better idea of the possibility of large earthquakes," he said.

"It is designed to give us a better handle on earthquakes and predictions, and the detailed monitoring program in the Flinders Ranges over the next two years will also give us a better understanding.

"When we go back and read the results they will tell us if something happened.

"When and where the next one will happen, I can't tell."

Mr Love said it was possible, using data from earthquakes and some "fancy statistical number crunching", to gauge damage in Adelaide when a quake hits.

"The chance of damage occurring as it did in many southern suburbs in 1954 is 1 per cent or less," he said.

"While Australia is considered a stable continent it does not mean that large earthquakes will not occur, only that they will occur less often."

Mr Love said buildings on a fault line did not necessarily put them at greater risk to others away from faults.

"Building on soils on slopes involves some extra risk, especially if soils are saturated when the earthquake occurs," he said.

DEEP, soft soils also "amplify earthquake vibrations, causing greater damage".

"Some of Adelaide's soils are soft or deep, particularly towards the coast and Port Adelaide," he said.

Darian Hiles, chairman of the Civic Trust of SA, a monitoring body for heritage buildings which has gathered research on earthquakes, said a common misconception was that tall buildings are at greater risk.

"While the consequence of a tall building collapse is much greater, the likelihood of collapse is generally much less than for shorter buildings," he said. "The reasons are that taller buildings receive more attention from engineers in their design and taller buildings vibrate more slowly than short buildings.

"We find that the high frequency of ground shaking associated with earthquakes causes less damage to tall buildings than to short buildings.

"Generally speaking, older, unreinforced methods of construction such as brick cavity masonry perform worse in earthquakes than newer, reinforced methods such as timber and steel framed housing, reinforced concrete frame and shear wall construction.

"A large percentage of damage in Newcastle in 1989 occurred in older, unreinforced masonry buildings.

"Since then it has been strongly recommended – and legislated in some places – to use stainless steel wall ties in cavity walls situated near the seaside."

A public lecture involving seismologist David Love and other speakers will be held at the Bonython Hall, North Tce, city, at 6pm on Monday to discuss earthquakes and what to do when they hit.

THROWN: Colin Schumacher thought the quake was a train. Picture: MICHAEL RUDOLPH

Memories of a rude awakening

BLACKWOOD sits right on top of the Eden Fault and on the morning of March 1, 1954, Colin Schumacher felt the full force of the earthquake.

Mr Schumacher, then 22, was in bed at his parents Fern Rd home not far from the railway line when the quake struck.

"My bed started vibrating vertically," he said. "There was this enormous rumbling and then I was severely thrown up and down and it seemed to go on for a long time.

"The irony is, I didn't think it was an earthquake, I thought it was a passing train because I was an enthusiast and I knew every engine by sound.

"At that time, diesels had started and my first thought was that it was one of them coming through.

"But when I started getting thrown up and down, I soon realised what was happening.

"Things fell off walls and crockery crashed.

"Our house was severely cracked, virtually every archway was damaged by the force."

Now 72 and living at Linden Park, Mr Schumacher remembers travelling into Adelaide that morning for work and being confronted by damaged buildings.

"I saw cracked church towers and other buildings damaged," he said. "You just wonder when it's going to happen again."