Geotourism starting with a bang and a shake

10:59am on 14 October 1968 was a time of infamy for the farming community of Meckering in WA’s wheatbelt, 130 km east of Perth. The Meckering thrust fault moved — and being located a mere 2.7 km west of the town, the magnitude 6.9 earthquake caused severe destruction of many of the older brick and rock buildings. Of 51 occupied houses, 12 business premises and 15 buildings used for government, public and sporting purposes, only 18 remained standing intact and usable after the quake.

The destruction and the accompanying social disruption formed the sad part of the passage of the ground waves. The fortunate aspect was the lack of serious and fatal injuries, with no deaths. One driver did suffer a broken arm when the car he was driving easterly hit the scarp when it suddenly jumped up across the road in front of him!

Move on 50 years and a remembrance ceremony was held in Meckering in 2018, attended by between 1 000 and 2 000 people. Presentations on the day continued with reminiscences from those who experienced the shaking, videos from the time and recordings of interviews from people talking about the earthquake at other remembrance events.

The Meckering earthquake occurred in an area that previously had not been known for destructive quakes. However, the Geological Survey’s regional geological maps do show a number of north-south trending fault scarps of presumed Cenozoic ages across the Yilgarn Craton. All seem to relate to thrusting of the eastern side upward over the western side, as had occurred at Meckering. Research since 1968 shows the movement at Meckering occurred along thrust and fault planes over an area of 35 x 8 km. The maximum displacement mapped was only in the order of about 2.5 metres, but it produced anastomosing networks of scarps and uplifted steps of up to 1.5 metres. One site of the scarp has been preserved by a local farmer and it is worth visiting (located at GR 501J, 497 880 mE, 6 491 425 mN).

One speaker at the formal speeches was the Hon Alannah Mscieman, the WA Government Minister for Regional Development, Agriculture and Food, who had seen a booklet called Understanding the Meckering Earthquake. She gave a huge compliment to the Geological Survey and the booklet’s authors, Jean Johnston and Simon White. They had 600 copies and all were handed out freely to the visitors. Alannah’s compliments are strongly deserved for the effort and foresight that went into presenting a good geological description of the background science for the public in an easily and well-explained manner.

A huge effort had gone into preparing for the day. The Shire of Cunderdin built a self-guided walking trail around the town with signboards showing and describing sites and buildings of the destruction, which are now just cleared parkland. This ‘ad hoc’ geotrail, made to show an unfortunate side of an active Earth, provides another perspective on geotourism. Buses were supplied to ferry interested people to surrounding sites — one of a destroyed farmhouse undisturbed since 1968, and another to the preserved scarp site on farmland. The former farmhouse residents would never have believed their house would be visited by the numbers viewing the property 50 years after the collapse.

Snook’s farmhouse, located 1.5 km west-northwest of Meckering almost on one of the thrust surfaces, left as it was when it collapsed 50 years ago. All images courtesy Mike Freeman.
Scitech took about ten different hands-on activities and displays for school kids. Both boys and girls loved the imitation earthquake shaker-table, building wooden-block structures and watching them collapse when the motion started. The children seemed fascinated by the demonstrations of what earthquake shaking meant to people, given by an enthusiastic guide. Well done Scitech.

For the beer drinkers’ interest, the Lucky Bay Brewing Company had earlier specifically selected what it believed to be the best local barley from the Meckering region, and brewed a commemorative beer they named ‘Richter Ale’ for the day. It was notable that the ‘blow-up’ pub was never short of customers on the day!

The remembrance day was a huge success in reminding people of ever-present geohazards, even in places not recognised as being susceptible. Several people asked me, when they realised they were talking to a geologist, as to when and where another may occur. Regrettably, their minds could not be put at rest, and explanations of the likely low probabilities of recurrences were difficult for many to appreciate. Such are the problems of science explanations.

Members passing through Meckering are encouraged to take a break and walk along the self-guided and signposted trail (start at Grid Reference 50J-500 785 mE, 6 500 770 mN where Byfield Street meets the Great Eastern Highway).

MIKE FREEMAN

The ad hoc ‘geotrail’ with walkers viewing signboards explaining the destroyed buildings and showing the nature of some collapses.

Tourist bus passengers view a preserved part of the main scarp, 10 km south-southwest of Meckering. The uplifted and overthrust side is beneath the camera point.