3. Henty Glacial Erratics State Reserve

THE LIVING EARTH
West Coast GeoTrail

Key facts about this geosite:

- **The area was originally a volcanic area (Mt Read Volcanics), submerged under the sea and later uplifted into large mountains (West Coast Range).**
- **The mountains and volcanic rocks have since been partly eroded by, and partly buried by, multiple periods of glacial activity**
- **Glacial boulders were sourced mostly from conglomerate beds in the elevated West Coast Range in the Mt Julia – Mt Tyndall area**
- **Huge volumes of rocky detritus were entrained in ice and deposited as glacial till at the foot of the mountains**

How to get there: The Henty Glacial Erratics State Reserve is located 14 kilometres north of Queenstown or about 23 kilometres south of Zeehan via the Zeehan Highway (A10) about 300 metres south of the Anthony Road (B24) turnoff (Figure 1).

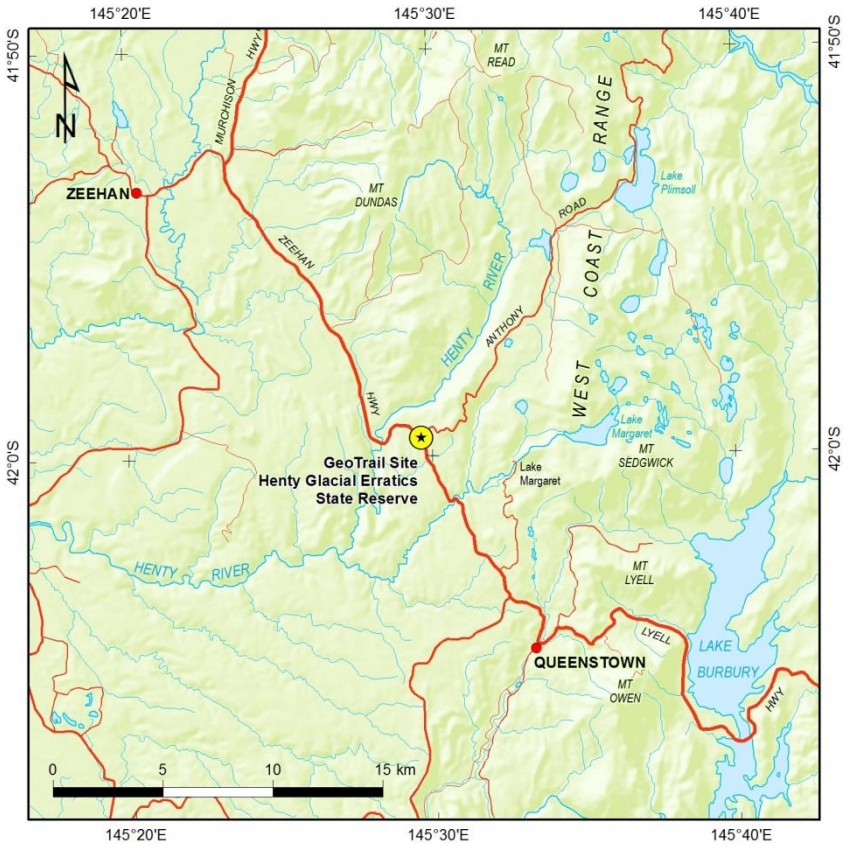

Figure 1. Map showing the location of the Henty Glacial Erratics State Reserve.

Geosite Description: The oldest bedrock visible in this area shows Cambrian rocks comprising ash-rich volcaniclastic siltstones and sandstones of the Mount Read Volcanics, deposited during a period of volcanism about 500 million years ago. These rocks host important copper-lead-zinc-gold mines at Mt Lyell, Rosebery, Henty and Hellyer. The volcanic rocks were subsequently largely eroded and partly deposited beneath the ocean, prior to being exhumed during a Devonian mountain building episode.

During the Pleistocene epoch, Tasmania was affected by multiple periods of glacial activity with large ice sheets covering much of the mountainous central and western Tasmania. The Henty Glacial Erratics State Reserve is located near what was the western limit of ice during the Henty glacial event approximately 34,600 years ago (Figures 2). As the ice sheet melted, rock debris (including large boulders called glacial erratics) and clay that were once entrained in the ice were deposited as glacial till.

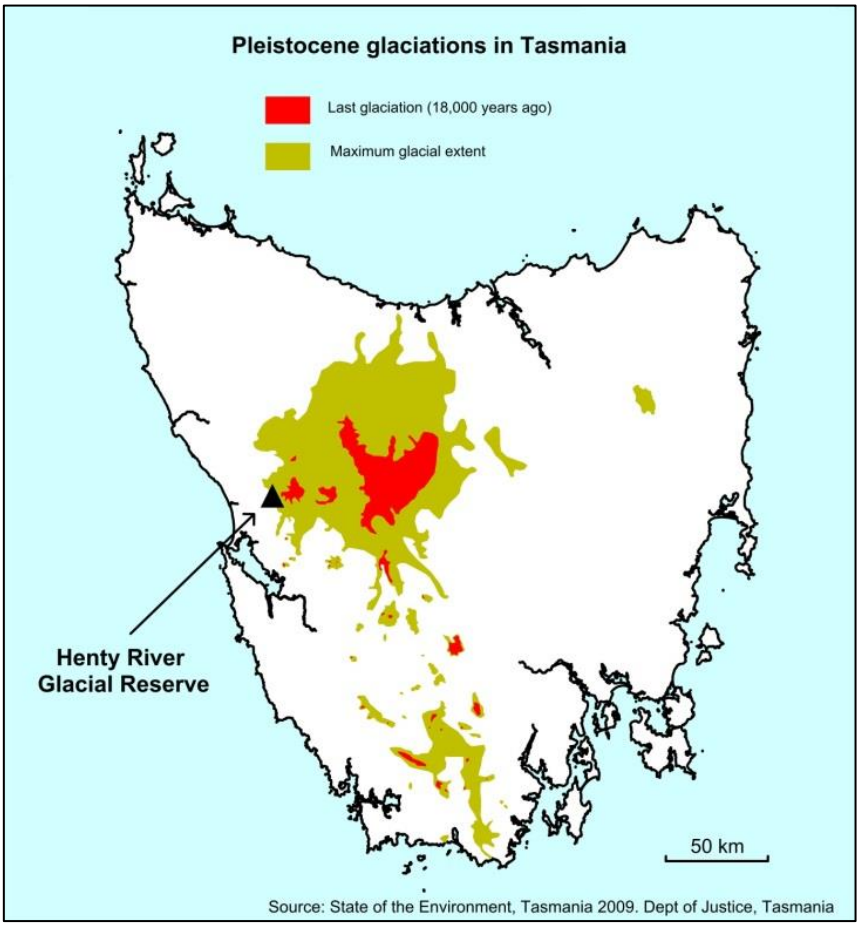

Figure 2. The limit of **Pleistocene glaciations** in Tasmania showing the location of the Henty Glacial Erratics State Reserve.

The large glacial erratic on the south side of the car park has a plaque describing the origin of the major constituent of the till, the Late Cambrian to Ordovician Owen Conglomerate. A paleo-reconstruction of the area suggests that these boulders were sourced from the elevated West Coast Range in the Mt Julia – Mt Tyndall area approximately 10–15 km to the northeast (Figure 3 and 4).

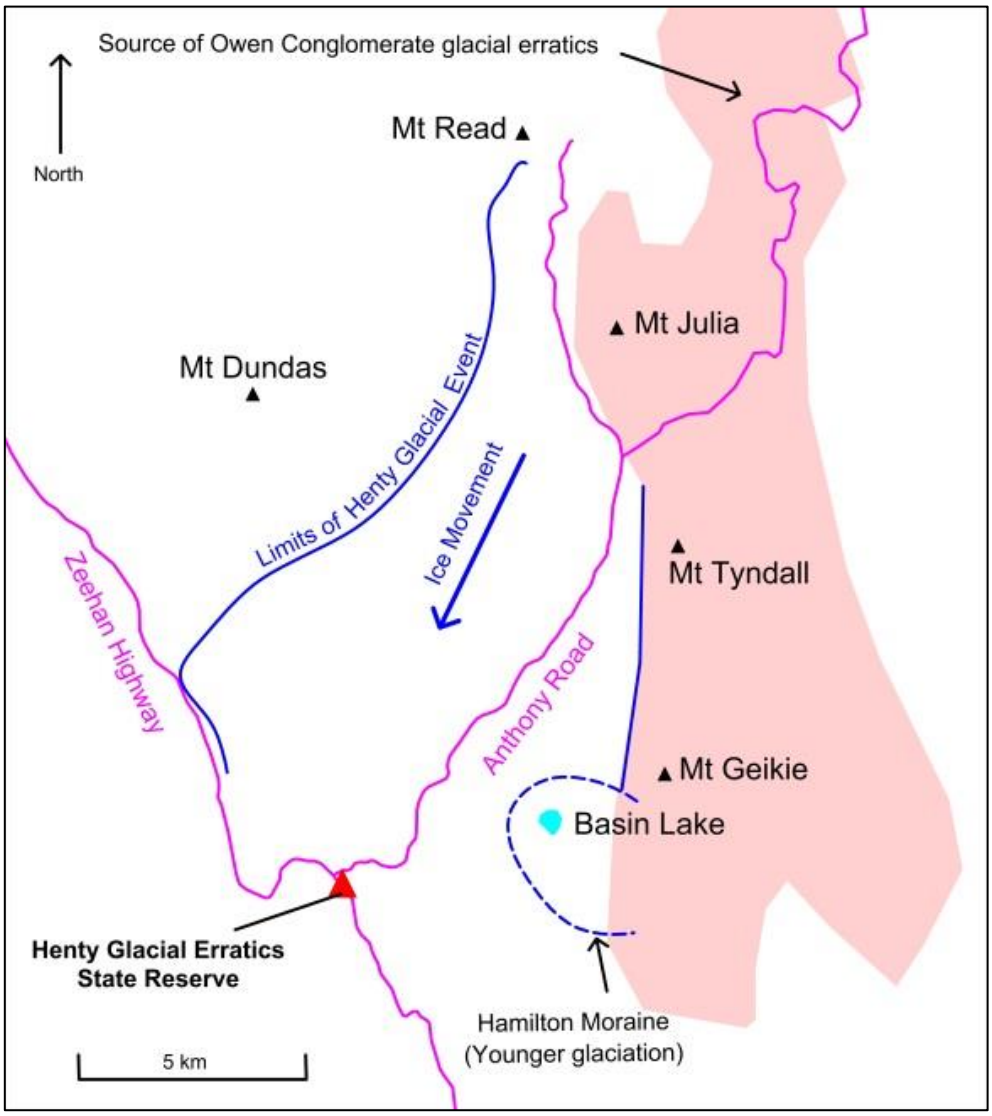

Figure 3. Schematic map showing the source region of the Owen Conglomerate derived **glacial erratics**.

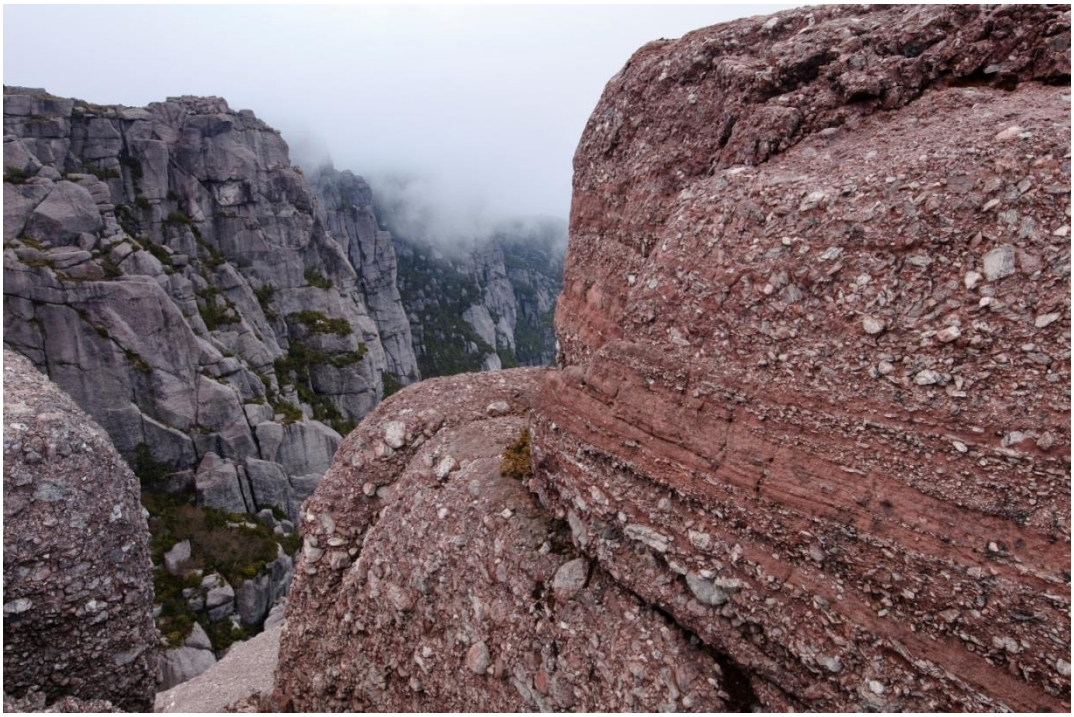

Figure 4. Glaciated landscape of the Tyndall Range showing outcrop of Owen Conglomerate (Photograph: Grant Dixon).

The erosional contact between the Mt Read Volcanics and the overlying Pleistocene glacial till is exposed in the cutting on the road opposite the car park (Figure 5).

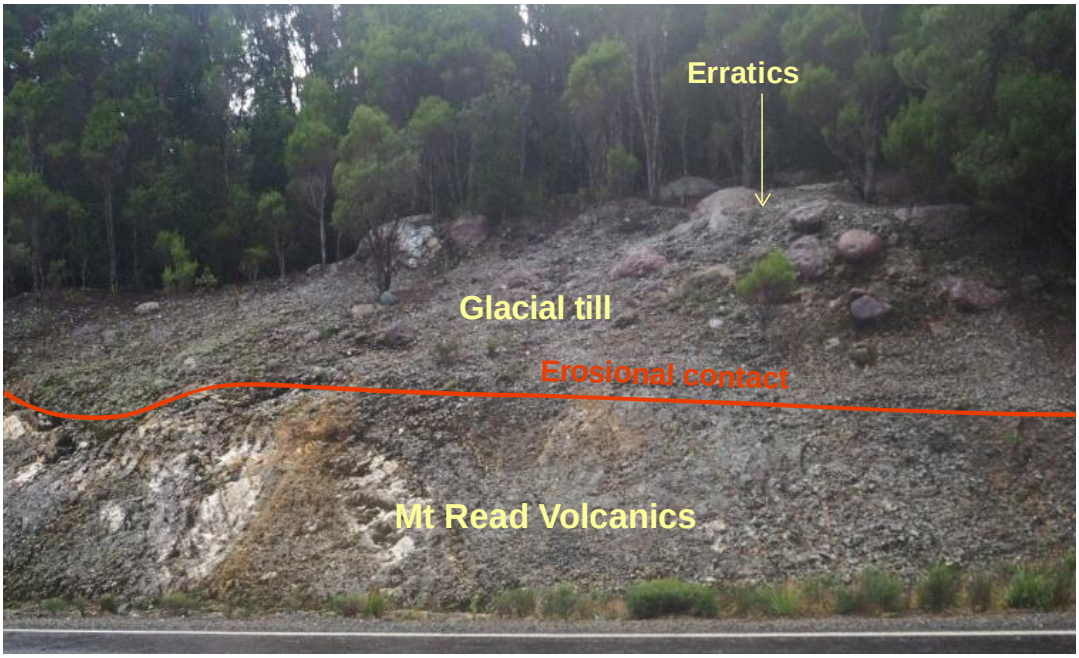

Figure 5. The erosional contact between the Mt Read Volcanics and the overlying Pleistocene glacial till exposed on along the road.

What to See: A short walk commences on the south side of the cutting opposite via a short staircase and highlights some unique glacial features present at this location (Figure 6), including a large glacial erratic showing evidence of ice-scouring and a perched or balanced erratic (Figure 7). The latter displays a dedication to Dr Clive Loftus-Hills, an influential geologist in the early part of last century.

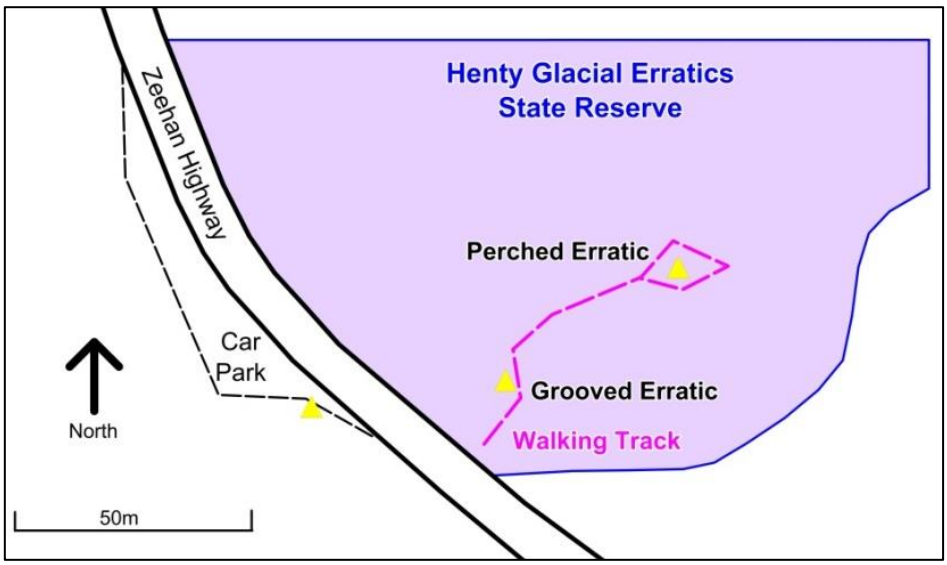

Figure 6. Map showing the walking track to the glacial erratics.

Figure 7. Glacial features present at this location, including a large glacial erratic showing evidence of ice-scouring (left) and a balanced erratic (right).

Further Reading:

Manchester, P. S., 2010. Created from Chaos, pp275-277