

16. Darwin Dam



Key facts about this geosite:

- Varied geology including the Late Cambrian Owen Conglomerate, Ordovician Gordon Limestone, Silurian Eldon Group sandstones, partly concealed by Pleistocene glacial deposits
- A meteorite impact structure (Darwin Crater) is located about 10 kilometres to the southeast.
- Darwin Glass, melted country rock formed during the meteorite collision may be found locally (be sure to leave the glass in place for future visitors).

How to get there: The site is 27 kilometres south of Queenstown via the Mt Jukes Road.

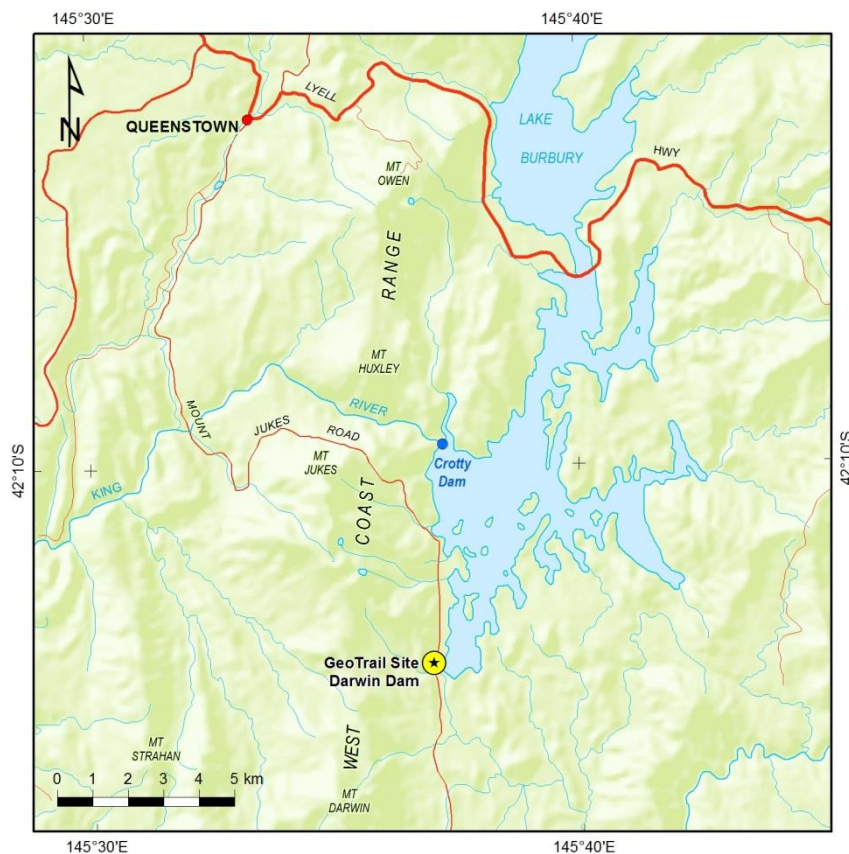


Figure 1. Location of the Darwin Dam Geosite.

Geosite Description: Lake Burbury is an artificial lake that flooded the old mining town of Crotty (Figure 2), when the Crotty Dam on the King River was constructed by Hydro Tasmania) in 1991.

The Darwin Dam (Figure 3) is a secondary structure to prevent the lake waters from spilling over a low watershed into the Andrew River, a tributary of the Franklin River.



Figure 2. The North Lyell Smelters at Crotty. The smelter site and township has been submerged under Lake Burbury (Source: www.linctas.tas.gov.au).



Figure 3. The Darwin Dam (image courtesy of Danielle Fairfield).

The geology of the region is shown on the geological map (Figure 4). The ridge to the west of the dam has formed from resistant Late [Cambrian Owen Conglomerate](#). Just west of the dam, a pair of north-south trending faults are roughly parallel to the shore of the lake, which have downthrown the rock sequence to the east. A sliver of Ordovician Gordon Limestone, partly concealed by [Pleistocene](#) glacial deposits, lies between the faults, whereas [Silurian Eldon Group](#) sandstones and siltstones form the eastern (far) abutment of the dam (Figure 5). On a clear day, take in the view to the north towards Mt Owen.

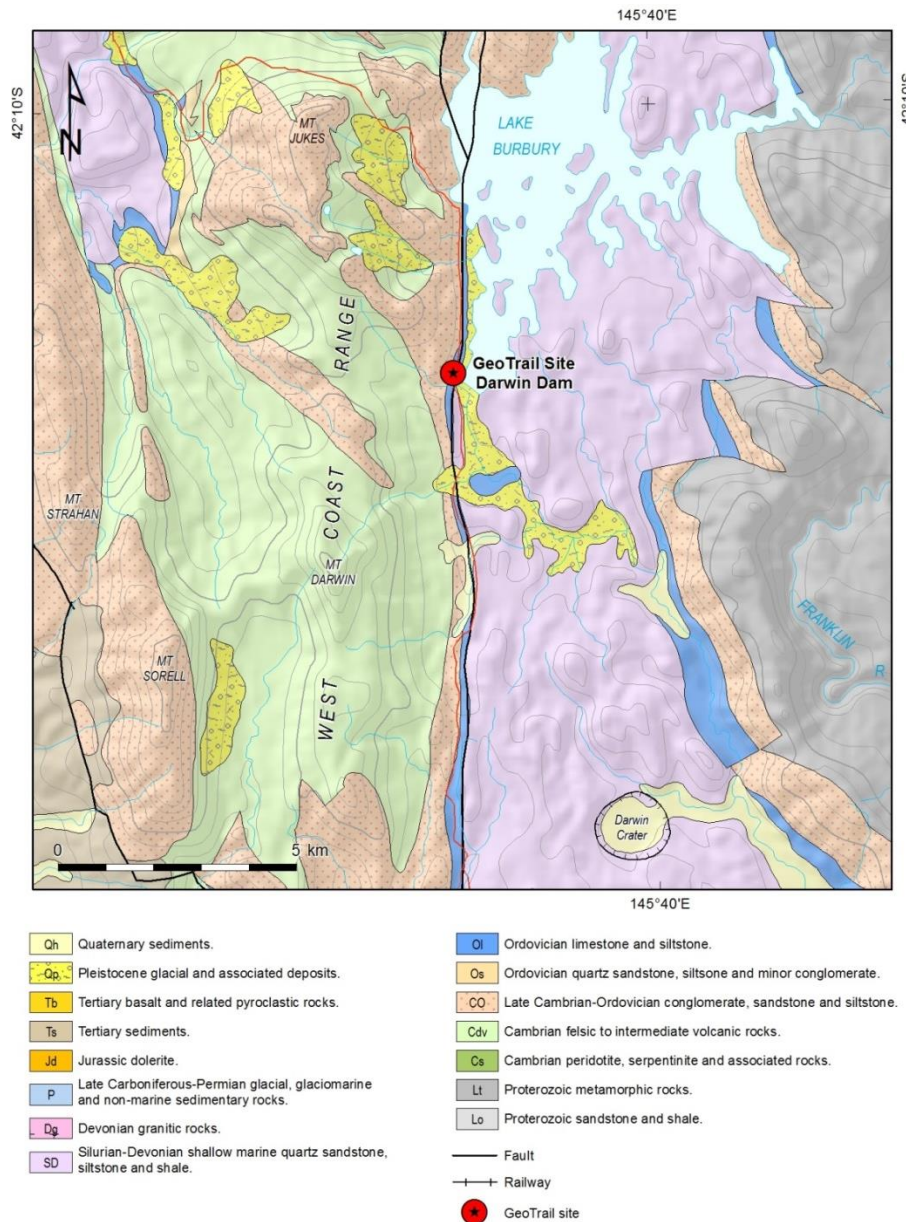


Figure 4. Geological Map of the West Coast Range with the location of Lake Burbury, Darwin Dam and the Darwin Crater highlighted.



Figure 5. View looking towards the north east from the Darwin Dam (image courtesy of Danielle Fairfield).

About 10 kilometres southeast of here is the [Darwin Crater](#), which formed from a meteorite impact 816,000 years ago (Colhoun et. al., 2014). The crater is now severely eroded and has been filled by up to 230m of breccia and lake sediments, to form a flat-bottomed amphitheatre-like feature about 1 km across. Black to green glass formed by the impact can still be found in this area however be sure to leave the glass in place for future visitors (Figure 6).



Figure 6. Examples of Darwin Glass (images courtesy of Ralph Bottrill).

References

COLHOUN, E.A., HARRIS, P.T., HEAP, A., BOTTRILL, R.S., BACON, C.A and DUNCAN, D. McP., 2014. Chapter 10. The Quaternary in Tasmania in CORBETT, K.D., QUILTY, P.G and CALVER, C.R. editors, 2014. *Geological Evolution of Tasmania*, pp 511-548. Geological Society of Australia Special Publication 24, Geological Society of Australia (Tasmania Division).