

# Trail 2: Lerwick

To the north of Quarff, a steep river valley cut through the mountains and opened onto the South Mainland basin. The fast-flowing river carried stones of all sizes, some of them a metre or more across, down from the mountains. At the edge of the basin, where the gradient eased and the water lost its power, the larger stones were dumped and built up into **alluvial fans**.

Alluvial fan, Taklimakan



easily (and safely) studied at the west end of Sands of Sound **1**. Unlike the stones in the Quarff breccia, all of which came from nearby sources, the conglomerate includes rock types not found in Shetland today. These must have come from further west, in what is now North America but, before the Atlantic Ocean opened, would

Conglomerate, Sands of Sound



The fans extend at least eight kilometres, from Rova Head (north of Lerwick) to Gulberwick in the south. They are composed of thick wedges of **conglomerate** interspersed with beds of sandstone. These can be seen in road cuttings on the way to Rova Head and on the coast around the headland itself, but they are more

have been a westward continuation of the Old Red Sandstone continent. Also, unlike the angular breccia, they have been tumbled and rounded by the action of the river, smoothing them into nearly spherical cobbles.

Lerwick is a town built on sandstone and of sandstone, using stone quarried nearby, so a walk around the old town provides a glimpse of the local geology. The oldest buildings along the seafront **2** mostly used fine-grained, greenish grey sandstone. Soft and easy to work, it also erodes easily, as can be seen by the crumbling surface of many of the stones.

Further north the bedrock changes to coarse, pinkish sandstone, and the buildings, including Fort Charlotte **3**, change accordingly. Later, in the 19<sup>th</sup> century, the New Town was built using the most suitable

building stone available, dug from quarries on what was then the edge of the settlement. One such quarry has since become Gilbertson Park **4**. Here we see hard, coarse-grained sandstone, with occasional layers of pebbles that were carried out into the lowlands by flash floods. Closer inspection reveals that many of the sand grains are pink- or cream-coloured feldspar, rather than the more usual quartz.

Feldspathic sandstone



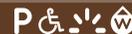
Feldspar usually weathers quickly when exposed to air and water, breaking down into clay. Its presence here indicates that the sediments that formed the sandstone were eroded, transported and buried quickly, before the feldspar could degrade.



## Directions

By car / bike: Continue north along the A970 from Quarff to Lerwick. From the main road, take the right turn signposted to Nedersund. Follow this road until it turns sharp left, taking the junction on the right at this point. Follow this road (then track) to the Sands of Sound beach (HU46273992).

## Access



- Wheelchair access to 2 3 4 5
- 1 includes a self-closing gate

## Interpretation

- Information on Shetland's geological heritage in Shetland Museum & Archives 5

## Facilities



- Toilets and café at Shetland Museum & Archives 5
- Public toilets at Esplanade 2

## Glossary

**Alluvial fan:** a wedge-shaped deposit of water-transported gravel, sand, and even smaller pieces of sediment.

**Conglomerate:** a rock made up of rounded stones set in a matrix of finer sediment.