
NWHG Ref. 055 — Traigh Allt Chailgeag

Location, grid reference and photograph

The beach of Traigh Allt Chailgeag lies on the north coast of the Geopark at Ceannabeinne, some 4.5 km east of Durness, Grid Ref. [NC 443 654].

(Figure 46) Vertical foliation and boudins of dark amphibolite in Lewisian Gneiss, Traigh Allt Chailgeag beach. M Krabbendam.

GCR site reference, block, volume and notified feature of SSSI?

The site is not GCR-listed and does not lie within a SSSI.

Description and geological significance

The c. 500 m long beach looks out towards the north-east with rocky headlands at the western and eastern ends. It represents a stunning example of a beach feature containing accumulations of wind-blown sand forming dunes along much of the beach, with excellent exposures of Lewisian Gneiss forming the headlands and, locally, along the beach. The metamorphic foliation (or mineral banding) of the Gneiss is almost vertical and is exposed in the face of the first of the headland features encountered at the western end. Here, there are classic examples of boudinage, with isolated “boudins” (or sausage-shaped lenses) of dark grey/black igneous rock interleaved within the main gneissic foliation. These are cut by later veins of pink pegmatite. The exposure demonstrates very clear age-relationships between the host Lewisian Gneiss, later dolerite intrusions and even later cross-cutting pegmatites, all occurring within the very expansive Lewisian time-scale. It is also an excellent locality for demonstrating the repeated phases of extreme shearing along the foliation planes during the history of formation of the Lewisian Gneiss, one consequence of this being the stretching (and final rupturing) of what were originally doleritic intrusions, resulting in the formation of boudins. The main beach feature is also important in the study of beach formation and associated geomorphological processes.

Accessibility

There is a large car park on the landward side of the A 838 ([NC 443 653]) with a good outlook over the beach area. A fairly steep path leads down to the beach over wind-blown sand features and it is important to note that tidal conditions can restrict access to the further-out rocky headland features. There is no access for all abilities.

Conservation

Low conservation requirement due to the scale and nature of the site area.

Visibility and “clarity”

The key features of the Traigh Allt Chailgeag beach are very easily seen from the car park and road, although the rocky headland and faces at the western end are too far away to be able to distinguish the finer details of the examples of boudinage. Once the beach has been accessed and the rock exposures are reached, the boudins within the vertically banded Lewisian Gneiss are very dramatic and the whole Lewisian Gneiss exposure is truly inspiring.

Interpretation and interpretation potential

Although the beach and associated Lewisian Gneiss exposures are visually attractive, there is no interpretation panel for these either at the car park or at the beach itself. The features require specialist interpretation and the site area has considerable potential as an educational resource both for the general public as well as students of geology and physical geography. A new interpretation panel at the car park and one closer to the beach are recommended and the area merits the running of a guided walk for visitors. The site should also be included in a future Geopark guide.

Key references

RAMSAY, J.G. 1997. The geometry of a deformed unconformity in the Caledonides of NW Scotland. In Sengupta, S. (eds) Evolution of geological structures in micro- to macro-scales, Chapman & Hall, London, 445–472.



(Figure 46) Vertical foliation and boudins of dark amphibolite in Lewisian Gneiss, Traigh Allt Chailgeag beach. M Krabbendam.