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## Excursion 1 Kinloch and surroundings

### Highlights

Minor basic and ultrabasic intrusions will be seen on the first part of the excursion, with spectacular metamorphism of the country rocks. The distinctive topography associated with the Torridon Group in north Rum is well displayed, as are the disturbed Torridonian rocks along the northern margin of the central complex. The Applecross Formation (Torridon Group), intruded by Paleocene dykes, is excellently displayed in coastal exposures east of Kinloch, traversed in the second half of the excursion, and there is evidence for a major fault affecting the Torridon Group rocks.

The boat from Mallaig normally reaches Rum before 2pm, except on summer Saturdays when the early service arrives at about 9am. The first afternoon may be spent around Kinloch, on the sandstones of the Torridon Group and the numerous Paleocene minor intrusions. The latter include basaltic sheets and dykes, and several plugs of feldspathic peridotite and gabbro (Figure 10), (Figure 12). Alternatively, if time on Rum is limited, some or all of the localities in Coire Dubh could be visited (Excursion 2; (Figure 13); Localities 2.1 to 2.8).

### A. West of Kinloch

Take the Kilmory road west from Kinloch, along Kinloch Glen (Figure 10). Sandstones belonging to the Scresort Sandstone Member of the Applecross Formation (TCAS) in the Torridon Group crop out in the adjacent Kinloch River and in roadside exposures. They have a general dip of 15–20° to the west-north-west. These sandstones occur on either side of the glen and cause the strong features on Mullach Mòr to the north (Figure 11).

#### Locality 1.1 Kinloch Glen — sandstone intruded by dolerite plug and sheet [NM 3927 9987]

About 1 km from Kinloch a small dolerite plug and a south-dipping dolerite sheet are exposed in the roadside. Sandstone near the dolerite is somewhat bleached and has developed numerous irregular joints, both of which are features typically found near the numerous small doleritic and gabbroic intrusions in northern Rum.

Pass through the deer fence (close the gate) and continue along the track for 900 m, noting several north-trending dykes and exposures of dolerite (plugs).

#### Locality 1.2 Bridge over Allt Bealach Mhic Neill – peridotite plug in sandstone [NM 3803 9983]

At the bridge over the Allt Bealach Mhic Neill there are exposures of brown-weathering peridotite belonging to a plug more than 200 m wide.

#### Locality 1.3 Allt Bealach Mhic Neill – spectacular spherulithic structures in baked sandstone adjoining gabbro plug [NM 3803 9966]

Follow the path on the eastern (right-hand) side of the Allt Bealach Mhic Neill for about 250 m south, to the foot of a waterfall. The feldspathic sandstone (TCAS) in the stream bed has a spectacular spherulitic texture (Holness, 2002). The sandstone has been extensively recrystallised and partially melted by the gabbro plug seen in the left-hand stream bank. It contains quartz paramorphs after tridymite and relict quartz grains in a fine-grained felsic matrix. The alteration is considered to have occurred at a depth of about 700 m (Holness, 2002). Return to the bridge (Locality 1.2). On the north side of Kinloch Glen, the uniformly west-dipping sandstones on Mullach Mòr are seen to be interrupted by a wide cleft at [NG 379 005]. This is the site of a peridotite plug, with a small gabbro plug on its eastern margin. Turning towards the south and south-west, many slab-like outcrops are visible on the hillside. One large slab, about 300 m to the west-south-west of

the bridge, is formed by a gabbro plug [NM 379 997], but the majority are of sandstone that dips steeply (60° or more) to the north. They are part of a belt of steeply dipping strata that extends along the north side of the central complex, from A'Bhrìdeanach [NM 298 995] in western Rum to the hillsides south of Kinloch. The beds became tilted as doming developed over the central complex during the rise of felsic magmas in Stage 1. Return to Kinloch. (Total distance c. 2.5 km.)

## **B. South side of Loch Scresort**

From Kinloch Castle go to the White House (the SNH Reserve Office) and take the shore road. Cross a small stream and go down to a rocky promontory immediately to the north-east (Figure 12).

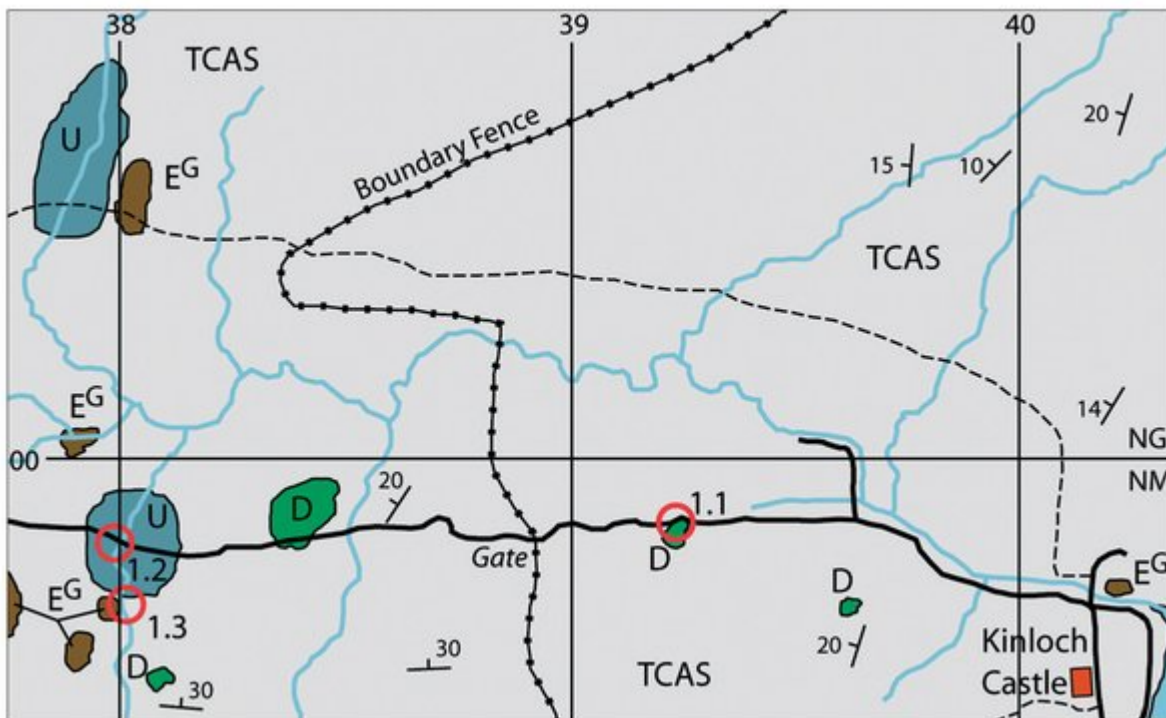
### **Locality 1.4 White House, Kinloch – picrite dyke cutting sandstone [NM 4044 9928]**

Sandstone on the promontory is cut by a broad, north-east-trending picritic dolerite dyke with abundant fresh olivine crystals. This dyke is probably the continuation of the picritic dolerite that cuts Stage 1 rocks in Allt Slugan a'Choilich in Coire Dubh (Excursion 2; Locality 2.2). Continue east past the new ferry terminal (c. 1 km east of the White House) and take the path along the south side of the loch. West-north-west-dipping sandstone belonging to the Scresort Sandstone Member is cut by several thin north-east- to north-north-east-trending basalt dykes and less common south-dipping basalt sheets. Some 400 m east of the ferry terminal, coarse-grained sandstones of the Scresort Sandstone Member (TCAS) give way to progressively finer grained beds down the sequence that make up the Allt Mòr na h-Uamha Member (TCAM) (Figure 3).

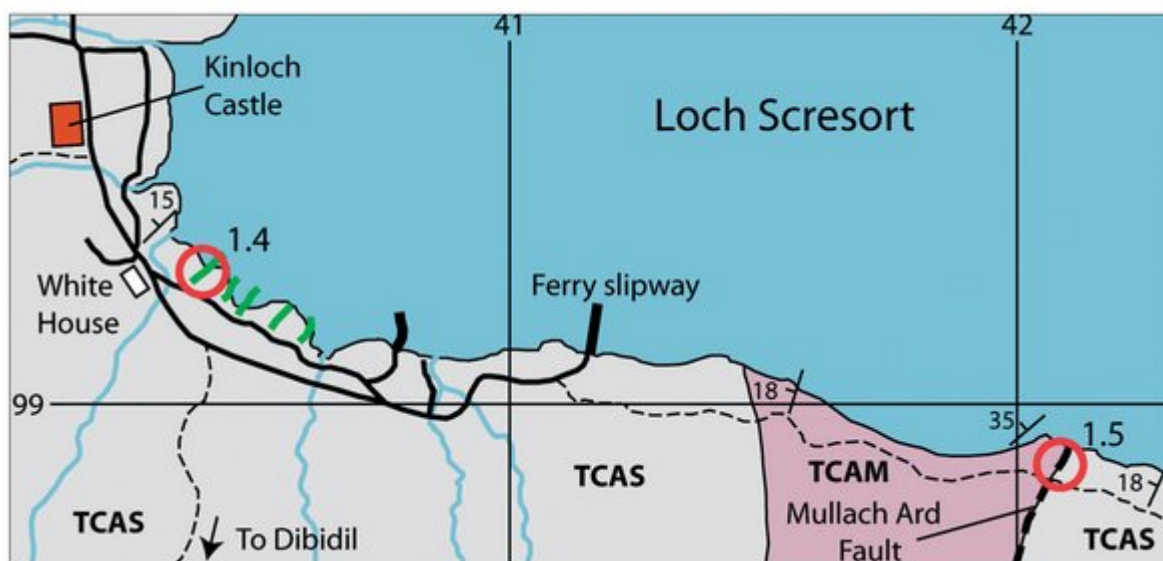
### **Locality 1.5 Cro nan Laogh – Torridonian sandstone displaced along the low-angle Mullach Ard Fault [NM 4208 9893]**

At Cro nan Laogh, cyclically interbedded siltstones and sandstones in the Allt Mòr na h-Uamha Member are well exposed and a thin (50 cm) basalt sheet is intruded near the base of the cliff. Immediately to the east, coarse-grained sandstones belonging to the Scresort Sandstone Member are downfaulted against the finer grained beds by the Mullach Ard Fault. This fault extends south to Bàgh na h-Uamha [NM 423 974] and is inclined at c. 35° in an easterly direction. It is one of several low-angle faults in eastern and southern Rum on which substantial masses of country rocks are thought to have slid off the central complex when a dome-like structure developed early in Stage 1. Return to Kinloch. (Total distance c. 4 km.)

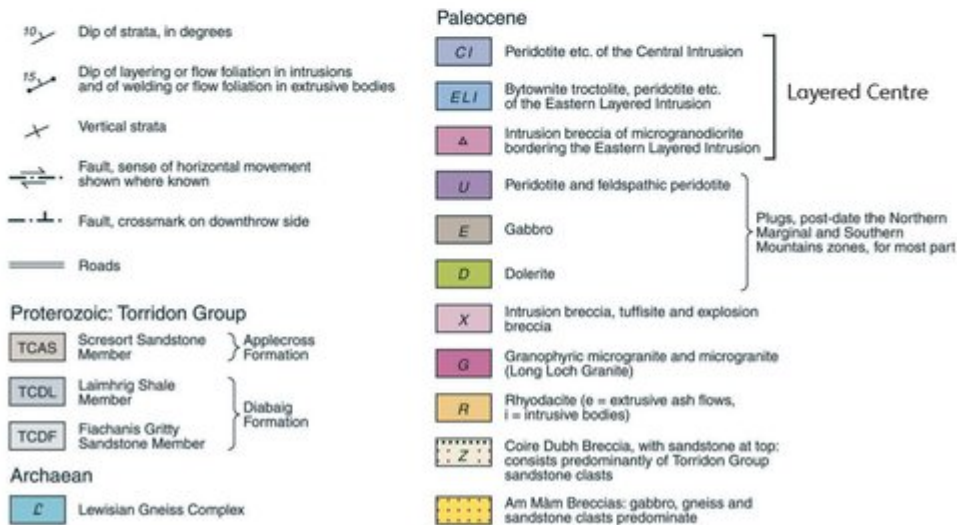
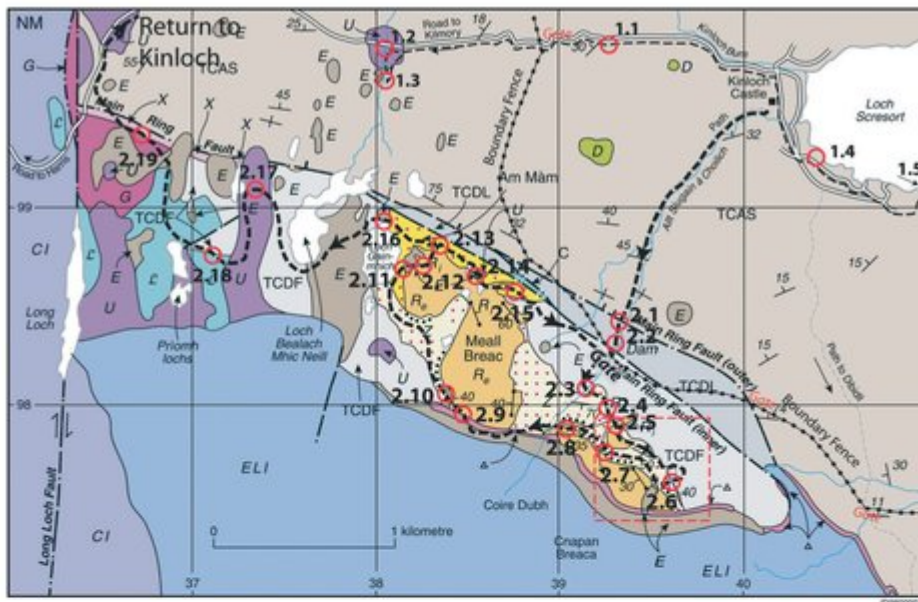
## **[References](#)**



(Figure 10) Map of Excursion 1A, west of Kinloch (Key).



(Figure 12) Map of Excursion 1B, east of Kinloch (Key).

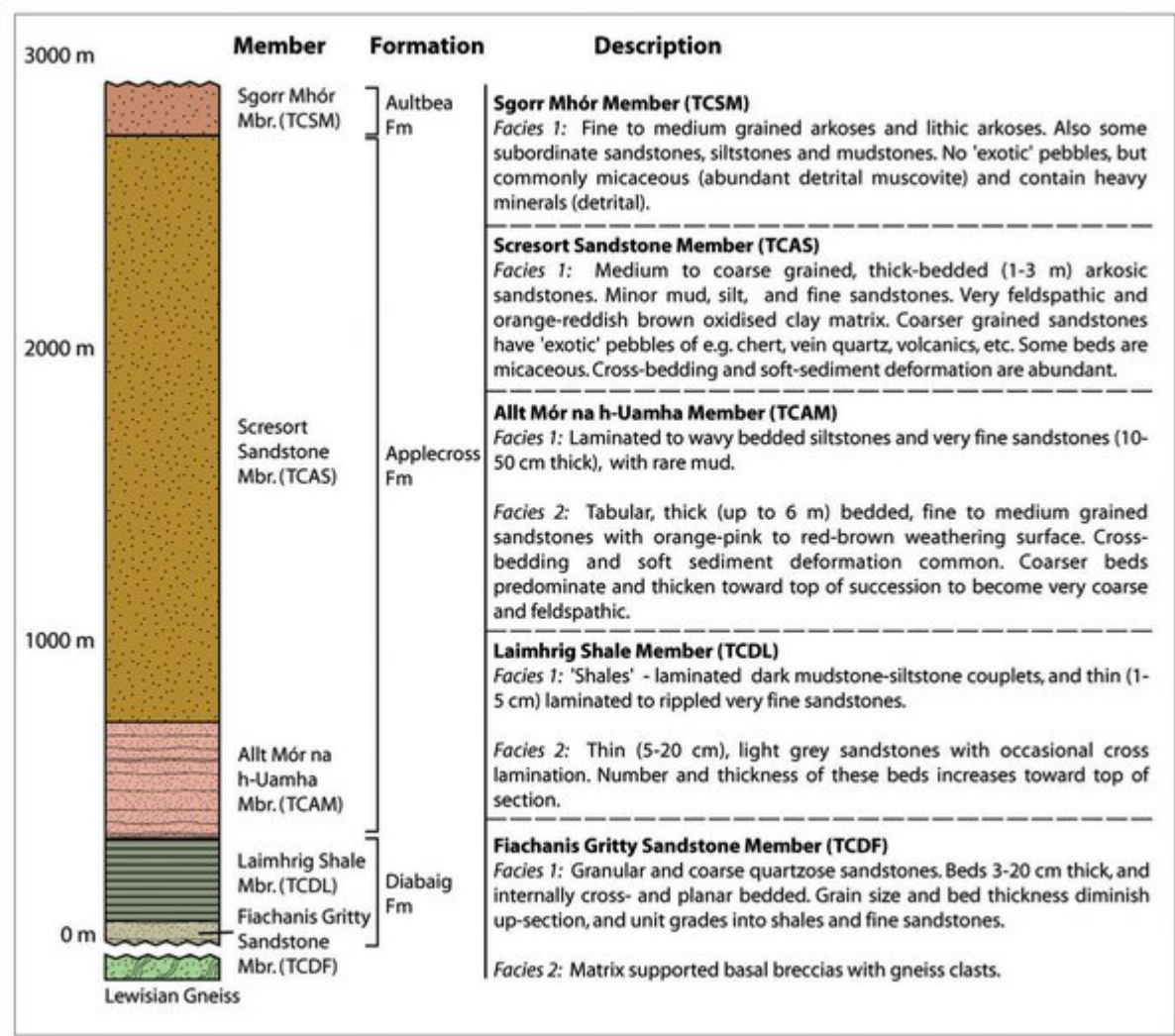


(Figure 13) Geological map of Excursion 2: the Northern Marginal Zone. Dykes and cone-sheets omitted. Modified after Emeleus and Bell (2005). (© NERC)





(Figure 11) Regular west-north-west-dipping Torridonian sandstone beds on Mullach Mòr, with the Skye Cuillin in the distance.



(Figure 3) Stratigraphy of the Torridon Group on Rum (after Nicholson, 1992).