# Excursion 7 Kinloch – Allt nam Bà – Beinn nan Stac – Lower Glen Dibidil

**Highlights**

This excursion focuses on the tectonics of the Main Ring Fault system around Beinn nan Stac and Lower Glen Dibidil. Key relationships in the lower slopes of Beinn nan Stac provide evidence of precaldera uplift and folding followed by subsidence. The upper slopes and peak of Beinn nan Stac host deposits of high-energy debris and pyroclastic flows, interpreted as part of a caldera-infill succession. Along the way, the marginal gabbro to the Layered Centre is examined and its post-Main Ring Fault emplacement verified. The spectacular roof contact between the Stage 1 pyroclastic and sedimentary rocks and the Stage 2 ultrabasic magma chamber rocks is inspected. Superb views across to the Southern Mountains (Figure 63) and to Eigg, Muck and beyond are obtained from Beinn nan Stac peak. Exposed in the Dibidil River are relationships between an enigmatic (Am Màm-type) intrusive breccia, intrusive porphyritic rhyodacite and the deformed basement rocks. Furthermore, Dibidil Cove offers the chance to put a finger on the razor-sharp Main Ring Fault surface between uplifted gneiss and pulverised Torridonian mudstones.

The distance covered on this route is about 16–18 km, if all exposures are examined. The maximum altitude reached is 546 m on Beinn nan Stac, but the total height climbed is probably nearer 800 m.

About 130 m south-east of the White House (Reserve Office) in Kinloch, a rough signposted path (pony track) leads southwards to Dibidil and Papadil from the inland splay of the road between the castle and the pier. The path climbs steadily south-south-east over wet, partly peat-covered, sandstone slabs, and after just over 1 km from Kinloch, levels off at about 200 m altitude.

## Locality 7.1 Allt na h-Uamha – magmatic sediments [NM 4095 9670]

Continue south to Allt na h-Uamha (Figure 26) where a block moraine occupies the valley. Many of the blocks originated from the troctolites and peridotites that form the Hallival–Askival ridge, and so contain good examples of mineral and textural layering and associated sedimentary structures (graded layers, slump folding, etc.). A few metres upstream, badly weathered Marginal Gabbro crops out in the stream banks. Rare, thin felsic sheets, here originating from melting of the adjacent sandstones (cf. Excursions 2, 3), can be seen. South of the stream, the track skirts a prominent cliff of indurated, splintery siltstone. The cliff is formed of a lens-like body of uplifted Laimhrig Shale Member (TCDL) between the Main Ring Fault and the Marginal Gabbro (Bailey, 1945).

## Locality 7.2 Welshman's Rock – a doming-related ?slide [NM 417 963]

Continue south along the track for about 1 km, to the highest point on the path. Along the way, note gently north-west- or west-dipping strata of the Allt Mòr na h-Uamha Member (TCAM) which are cut by rare thin basaltic dykes trending radially to the igneous centre at about N 70° W. About 250 m east of the path is Welshman's Rock (Figure 29), a prominent 'whale-back' exposure of Torridonian rocks. If time permits, confirm that these are mainly composed of coarse, thickly bedded feldspathic sandstones akin to the Scresort Sandstone Member (TCAS). Bedding here strikes roughly east–west and dips to the south, in contrast to the general north-north-east strike and west-north-west dip outside the Main Ring Fault. The boundary between Welshman's Rock and its surroundings is an eastward-inclined normal fault (dipping at *c*. 35°). Downward slip off the updomed roof of the early felsic magma body has been invoked to explain the emplacement of Welshman's Rock, the structurally similar block at Mullach Ard (Emeleus, 1997), and possibly also the Torridonian rocks outside the Main Ring Fault to the south of Dibidil around Loch Dubh an Sgòir (Nicholson, 1992). An alternative interpretation may be that these downthrown blocks are related to movements on the major Camasunary fault system, the trace of which passes close to the east side of the island (Figure 2).

## Locality 7.3 Allt nam Bà – margins of a ultrabasic magma chamber and evidence for subsidence on the Main Ring Fault [NM 4093 9424]

After another kilometre along the path, descend to the ford at Allt nam Bà (Figure 62); note that below the ford the stream has excavated a deep gorge along a Palaeogene dyke. (*Caution – the sandstone slabs in this stream may be slippery; do not cross here if the stream is in flood. Continue up stream and find a safe point.*) From the path at Allt nam Bà ford and other points here, there are good views of the prominent cliff line that defines the north-eastern side of Beinn nan Stac. Composed of baked siltstones and sandstones belonging to the Diabaig Formation, these crags are situated next to and partially roof the Marginal Gabbro and the layered ultrabasic intrusions. Walk up the southern side of the stream for about 250 m, and observe the gradual increase in the west-north-west dip of the sandstone from about 25° to over 45° (north of the stream, dips of 70° occur close to the Marginal Gabbro). At Locality 7.3a [NM 4071 9446] (Figure 62), westerly-trending basaltic dykes cut bleached, thermally metamorphosed sandstone. On the western side of a small ridge the sandstone appears to have become partly mobilised, since the basalt dykes are broken into blocks surrounded by a felsic matrix derived from sandstone. The ridge probably lies immediately outside the Main Ring Fault, which is here locally transgressed by the Marginal Gabbro.

Fifty to seventy metres to the west, the Allt nam Bà flows through a small, steep-sided valley east of a small waterfall in Marginal Gabbro. About halfway between the waterfall and Locality 7.3a, there is a low ridge that resembles a ruined, overgrown drystone wall (Locality 7.3b; [NM 4060 9436]). This exposure contains assemblages of high-temperature calc-silicate minerals (Hughes, 1960b). About 50 m to the south, exposures of marble occur on a low, east-facing cliff. A further 250–300 m south of the Allt nam Bà waterfall, on the north-east slopes of Beinn nan Stac, sheared marble with fossils of probable Jurassic age crops out (Locality 7.3c; [NM 4049 9402]; (Figure 62); Smith, 1985). The presence of Mesozoic limestone inside the Main Ring Fault proves that a phase of downward movement, subsequent to an initial uplift phase (cf. Summary of Geology), was associated with this major Paleocene structure.

## Locality 7.4 Lower south-east flank of Beinn nan Stac – Paleocene basalt lavas and Lewisian gneiss slivers in the Main Ring Fault zone [NM 4033 9343]

Without losing height, traverse from Locality 7.3c in a southerly and south-south-west direction along the south-east side of Beinn nan Stac. After about 300 m, exposures of fine-grained, sheared, microporphyritic basalt occur; these form a north-north-east-trending zone up to 70 m in width, parallel to and inside the Main Ring Fault (Figure 62). The basalt is believed to belong to the Paleocene Eigg Lava Formation. The boundary between the lavas and the gneiss is a fault that accommodated later caldera subsidence ('Central Ring Fault' – Smith, 1985). Immediately to the east is a parallel strip of Lewisian gneiss that extends at least as far north as [NM 4040 9365], where it is adjacent to north-east-dipping exposures of Fiachanis Gritty Sandstone (TCDF) and Laimhrig Shale (TCDL). The gneiss, which is excellently exposed at [NM 4033 9343] in a low, 'whaleback' ridge just south of the stream, shows signs of severe thermal metamorphism. It is pervaded by small pockets and fingers of felsic material and has evidently undergone a degree of partial melting. The Outer Main Ring Fault strand, upon which the tilted slice of gneiss, sandstone (TCDF), and siltstone (TCDL) was uplifted, crosses the low ground along the south-east edge of the gneiss 'whaleback'. Small, undeformed intrusions of rhyodacite occur between the gneiss and sheared basalt hereabouts, and so 'stitch' the faults.

**Options**: From Locality 7.4 either proceed north-west towards the summit of Beinn nan Stac, to inspect more closely the uplifted Torridonian beds, and Paleocene breccia and rhyodacite bodies that overlie but are cross-cut by the ultrabasic Layered Centre (Figure 8), (Figure 62), or, alternatively, one can follow the south-west course of the Main Ring Fault, to rejoin the Dibidil path near Cnoc nan Gillean [NM 3980 9292], and continue on to lower Glen Dibidil or Papadil.

## Locality 7.5 Beinn nan Stac – folded and tilted Torridonian rocks [NM 4004 9403]

If Beinn nan Stac is to be visited, go first to Locality 7.5a, where baked siltstones and sandstones form the cliff above the Marginal Gabbro. At the base of the cliff, the gabbro is separated from indurated sedimentary rocks by a thin zone of hybrid rocks containing acicular amphibole (after hypersthene, which may occur as relict areas) and plagioclase. Unusually, the gabbro has a sharp, chilled margin against the hybrid rocks (Greenwood *et al.*, 1990). Return to the north-east edge of the mountain and continue westwards toward the summit of Beinn nan Stac. Note the gradual change from thin-bedded or laminated siltstones (TCDL) to the coarser, grittier, and more thickly bedded sandstones (with subordinate laminated siltstone layers) of the older Fiachanis Gritty Sandstone Member (TCDF). Bedding dip angles fluctuate considerably along the way, but bedding strike is usually north-east. The fluctuation of bedding dip angles and younging directions (as given by cross bedding in the sandstone), and the westward change from sandstone to younger siltstone reflect the folded and outward (eastward) tilted nature of the Torridonian strata hereabouts. Such uplift, tilting and folding of the Torridonian beds inside the Main Ring Fault system probably relate to forceful emplacement of the early felsic magma body. At Locality 7.5b [NM 4013 9395], about 250 m upslope from the first Torridonian exposures encountered below, coarse sandstone abruptly changes to well-laminated siltstone (TCDL) of a markedly different bedding orientation. The brecciated contact between the two lithologies is a fault that dips steeply to the west; the fault is visible, but very difficult to access, in the cliffs below. Over the next 50 m upslope, the bedding orientation of the well-laminated siltstones (TCDL) gradually changes from north-east strike and south-east dip to north-west strike and south-west dip, and so defines a south-west-plunging antiform (Figure 62).

## Locality 7.6 Peak of Beinn nan Stac – a volcano-sedimentary succession? [MN 3977 9405]

Continue climbing toward the summit while keeping close to the cliffs until a contact between increasingly brecciated but laminated rocks of the Laimhrig Shale Member and a clast-supported mesobreccia is reached. This contact is quite undulose, locally cutting down into the underlying siltstone by several metres, e.g. at [NM 39912 93881]. The mesobreccia is dominated by clasts derived from the Laimhrig Shale Member, but pieces of coarser sandstone belonging to the Fiachanis Gritty Sandstone Member are also present. Though long thought to have formed through gas-driven subterranean explosive brecciation (Hughes, 1960a), evidence at exposures upslope and elsewhere (cf. Localities 8.5, 8.8, 9.4) shows that the mesobreccia is sedimentary in origin. This contact here probably represents a buried palaeotopography upon which the breccias were deposited, possibly as scree.

Rhyodacite overlies the mesobreccia, but exposure of the contact is restricted to the north-east flank of Beinn nan Stac [NM 39938 93976]. Elsewhere, a distinctive 5–15 m-wide zone of grass obscures it. Mesobreccia may therefore exist unexposed all along the base of the rhyodacite, or pinch out laterally (as depicted on (Figure 62)), in which case rhyodacite may sit directly on the Laimhrig Shale Member. Where seen on the north-east side, the rhyodacite is not obviously chilled at the basal contact against the mesobreccia. Rhyodacite and mesobreccia interfinger, and may even be somewhat gradational through lithic tuff. Two concordant but discontinuous tuff lenses occur in the rhyodacite within 1 m of the basal contact, which dips at about 50° to the west. In the rhyodacite outcrops just upslope from the contact, abundant fiamme are visible as lumpy, lenticular, or streaky features that weather proud of the host rock and/or are of different colour to it. As also seen in the Northern Marginal Zone (see Excursion 2), the fiamme define a foliation roughly concordant to the basal contact.

Continue directly upslope until the rhyodacite is found in sharp contact with overlying mesobreccia containing abundant sandstone clasts. At [NM 39770 94004] this mesobreccia grades and fines upslope, firstly into a gravelly sandstone with strong pebble alignment, and then into a coarse sandstone. More rhyodacite crops out just upslope, and its sharp unchilled basal contact against the underlying mesobreccia and sandstone is visible in the adjacent cliffs on the north-east flank of Beinn nan Stac. (NB: exercise extreme caution if attempting to examine this contact here.) The mesobreccia-sandstone body is also exposed along strike around the south-west side of Beinn nan Stac; it maps out as a discrete layer sandwiched between two rhyodacite sheets. At [NM 39620 93970] on the south-east side, a very similar gradational upward transition from mesobreccia, through gravelly clast-aligned sandstone, to a lithic-rich rhyodacite basal zone, may also be (more easily) observed.

Fiamme in the upper rhyodacite sheet in the Beinn nan Stac summit area are folded locally, possibly due to rheomorphic flow, and at least one exposure near the top of the sheet [NM 39659 94028] shows distinct white- and black-weathering fiamme types. Mesobreccia, locally containing abundant basalt clasts, overlies the upper rhyodacite sheet and forms the peak of Beinn nan Stac (550 m OD; [NM 3963 9409]). Intercalated with this mesobreccia are smooth-weathering zones of pale-grey, massive, well-sorted, quartzose sandstone. Though somewhat brecciated, this sandstone bears a striking resemblance to the distinctive 'epiclastic sandstone' found just below the extrusive rhyodacite sheets of Cnapan Breaca and Meall Breac in the Northern Marginal Zone (Excursion 2), and so possibly offers a means of correlation, although the successions differ in detail. Like the ignimbrite and breccias of the Northern Marginal Zone, the Beinn nan Stac succession probably represents the lower part of a caldera-volcano's infill; evidence for structural subsidence is seen at

Localities 7.4 and 7.7. Whereas fiamme foliations and bedding contacts dip to the west on the north-east flank of Beinn nan Stac, they generally dip to the north-west or north on the south-west side (Figure 62). This pattern may reflect a roughly north-west-trending palaeovalley in which the sediments and pyroclastic material accumulated. Such an interpretation has also been proposed for a very similar pattern of fiamme foliations, bedding, and base contacts at the south end of Meall Breac (Excursion 2, Locality 2.10; Troll *et al.*, 2000).

## Locality 7.7 Views from Beinn nan Stac [NM 3693 9410]

The precipitous peak of Beinn nan Stac offers spectacular views down into the depths of the glacial Glen Dibidil, across the corries and peaks of the Southern Mountains, and out over Eigg and Muck to the Scottish Highlands beyond. It is also a good vantage point from which to gain an overview of the geology of the Southern Mountains and its influence on the landscape. To the north and north-west, note the distinctive stepped form and brownish-weathering colour of Trollaval, Askival, the Askival plateau, and Hallival, where the ultrabasic and basic layered rocks predominate. Forming the skyline from north-west to south-west is the Ainshval to Sgurr nan Gillean ridge (Figure 63), the less-structured looking grey rocks of which are very similar to those of Beinn nan Stac (i.e. rhyodacites, breccias and Torridonian sandstones). Note the change in vegetation and soil from these quartz-feldspar dominated rhyodacites, breccias and Torridonian sandstones of Beinn nan Stac, Sgurr nan Gillean and Ainshval to the olivine-pyroxene-plagioclase-dominated basic and ultrabasic rocks of the Beinn nan Stac to Askival ridge, the north-east flank and headwall of Glen Dibidil, and the corrie to the north-east of Beinn nan Stac. To the south lie the waters of the Sound of Rum, and across these to the south-east is the Isle of Eigg. Eigg's geology comprises south-west-tilted layers of basalt lavas that sit unconformably upon Jurassic and Cretaceous sedimentary rocks. One also has a great view of the sinuous light-coloured ridge formed by the Sgurr of Eigg pitchstone on the southern end of Eigg. The Sgurr of Eigg Pitchstone Formation is thought to be the weathering-resistant infill (lavas and/or pyroclastic flow deposits, and some underlying fluvial sedimentary rocks) of a Paleocene palaeovalley, in which a long-vanished river once meandered across and cut down into the basaltic lavas (Emeleus, 1997; Hudson and Allwright, 2003).

## Locality 7.8 Lower south-west flank of Beinn nan Stac – subsided slivers of Mesozoic and Paleocene rocks [NM 3988 9341]

Taking care not to stray too close to the high cliff edges, descend from Beinn nan Stac peak in a south-east direction along the south-west-facing flank of the mountain. Pass the base of the rhyodacite and continue to walk south-eastward down over the many exposures of Laimhrig Shale Member (TCDL) that pepper this side of the mountain. Note that further evidence of brecciation and folding (including fold hinges) is present in many of these exposures. At [NM 39882 93411], descend into a horseshoe-shaped grassy area that is delimited by 40–50° sloping 'walls' of laminated siltstone (TCDL) (Figure 62). Within this grassy area are some exposures of buff-weathering, massive, well-sorted grey sandstone. A little further downslope there is an exposure of coarsely crystalline marble [NM 3983 9337]. Still further downslope [NM 3975 9330] is an elongate exposure of ironstone – a dense, dark, and very fine-grained rock that weathers to give an extremely distinctive, splintery or flaky, rusted appearance (like the hull of an old ship). A few metres north of the ironstone, at [NM 39749 93336], are exposures of beige-weathering, well-sorted, light-grey sandstone that is very similar to that seen just below the Torridonian siltstone 'walls' upslope. This sandstone, the crystalline limestone and the ironstone are believed to be Mesozoic in age and, like the fossiliferous rocks seen south of Allt nam Bà (Locality 7.3), are considered to be downfaulted remnants of the Jurassic Broadford Beds on Skye (Smith, 1985; Emeleus, 1997). About 20 m south of the ironstone is a large mass of basalt [NM 39773 93236]. Apart from scattered vesicles, textural evidence for the exact original nature of the basalt is hard to find, but like the basalt found in the sliver zone of the south-east side of Beinn nan Stac (Locality 7.4), it is regarded as a downfaulted remnant of the Paleocene Eigg Lava Field (Emeleus, 1997). Two faults inclined at around 40° N and 50° E respectively exist between the 'walls' of siltstone (TCDL) and the slivers of Mesozoic and Paleocene rocks. Though the exact mechanisms of their emplacement are unclear, these slivers provide further evidence for subsidence inside the Main Ring Fault system.

## Locality 7.9 Dibidil River – 'intrusive tuffs' [NM 3934 9307]

From Locality 7.8 walk south or south-west for about 100–200 m until the Dibidil path is reached just to the north or north-west of Cnoc nan Gillean. Follow the path down towards the ford on the Dibidil River [NM 3934 9307]. To the south and south-west, the ground crossed before the river presents few exposures, but north of the path there are several aligned exposures of coarse grey sandstone (TCDF). A brief inspection of cross-bedding in these exposures will reveal that the beds are inclined to the north or north-east, and are upright, younging away from the river. Metre-scale plunging folds can also be seen, as at [NM 39414 93114], and the beds seem to define a tilted anticline as a whole. Take time to look back towards Beinn nan Stac at the dramatic arcuate cliff line formed of Torridonian beds with a rhyodacite and breccia cap. The base of the cliff marks the position of the gabbro bordering the Layered Centre. Inclined ridges, corresponding to layers of gabbro and peridotite, stretch from Askival across the north-east side of the glen, and up to the overarching roof-like cliffs of Beinn nan Stac, where they appear truncated (Figure 8), (Figure 64). This vista has long been considered a superb but rare cross-sectional view of the roof and sidewalls of an ultrabasic magma chamber (Emeleus, 1997).

At Dibidil ford [NM 39335 93065] is an unusual intrusive breccia, the matrix of which envelops clasts of sandstone, dolerite, gabbro and gneiss up to several metres in diameter. The breccia matrix commonly appears particulate or tuff-like. It contains euhedral crystals of plagioclase similar to those in the rhyodacite, and numerous lobate mafic inclusions. Intrusive rhyodacite, also with abundant lobate mafic inclusions, occurs about 50 m upstream of the ford. It is unclear if the rhyodacite intrudes the breccia or vice versa. A few metres further upstream from the rhyodacite are mesobreccia and more coherent siltstone (TCDL). Beyond these the river runs over the gabbros and peridotites of the Layered Centre. Good examples of intrusive breccia veining country rock are visible next to the waterfall 100–150 m downstream of the ford at [NM 39400 92946]. Here polished outcrops of gneiss and intrusive breccia are usually accessible, unless the water is very high. The gneiss here displays brittle 'domino faulting' deformation akin to that in the folded Torridonian beds (e.g. in Coire Dubh – Excursion 2), but the intrusive breccia is undeformed.

Sandstone (TCDF) is exposed a short distance downstream of the waterfall, at [NM 39435 92925] on the north-east side of the river. Bedding is orientated very similarly to that in the sandstone exposures a little further up the valley, just north of the path, so the rock is most likely *in situ*. A dyke-like rhyodacite body chills sharply against the sandstone on one side, but grades into rock very like the intrusive breccia matrix on the other. On the south-west side of the river, along strike of the rhyodacite-sandstone contact, a similar transition from rhyodacite into intrusive breccia matrix is visible just below the river-bank [NM 39408, 92946] (Figure 62). Downstream of these two points, there is no intrusive breccia or rhyodacite exposed on either side of the river. The rhyodacite seems to be marginal to the intrusive breccia body (at least locally), and so a close temporal association between the two lithologies is likely. In the Southern Mountains Zone, this intrusive breccia has previously been termed 'intrusive tuff' or 'tuffisite' (Hughes, 1960a); however, its lithological features, internal structure, structural position and timing of emplacement are very similar to the Am Màm intrusive breccia of the Northern Marginal Zone.

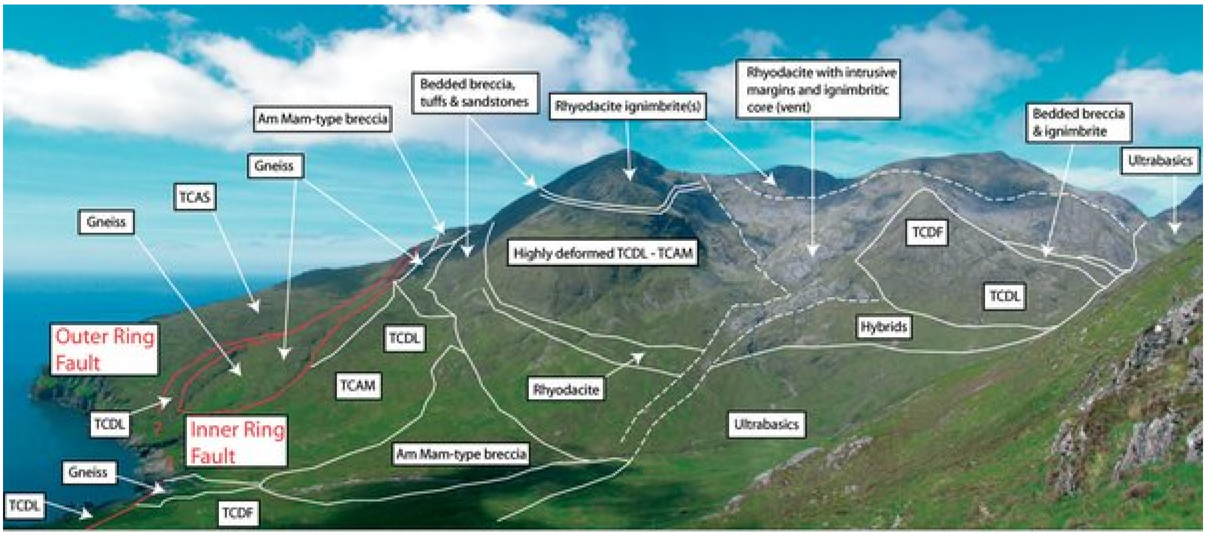
## Locality 7.10 Dibidil foreshore – a ring fault exposed [NM 3947 9374]

Continue to walk downstream along the north-east side of the river. After *c*. 100 m, gneiss crops out a few tens of metres upstream of where the Dibidil river plunges into the sea. A few small exposures of sandstone (TCDF) appear in the small burn north-east of the gneiss here. Like the exposures further upstream, this sandstone probably youngs away from the gneiss along the river, and so the boundary is likely to be the original erosional unconformity. Further downstream, a very sharp linear boundary between banded gneiss and intensely folded and brecciated siltstone (TCDL) is found on the foreshore next to the mouth of the Dibidil river [NM 39466 93744]. This is one of the very few places on Rum where the Main Ring Fault surface (or a splay of which) is exposed such that one can 'place a finger on it'. The fault surface is a < 30 cm-wide zone of comminuted siltstone (TCDL) and gneiss, and is inclined at about 60° to the north-west. The net displacement on the fault is reverse, with gneiss in the hanging wall having been uplifted to its current position against the outward-tilted siltstone in the footwall (Figure 65). From here the fault is traceable north-east through a gully that runs upslope east of Cnoc nan Gillean toward the south-east edge of Beinn nan Stac. The fault may also be traced south-west across Dibidil Cove, to where gently inclined Torridonian strata (TCAS) abut against a ridge of gneiss. Upon crossing over to the foreshore immediately west of the Dibidil river, examine the small (1–2 m-wide) bodies of breccia that 'cut' the shaly beds here (TCDL). Note also that numerous undeformed basaltic sheets and dykes cut the gneiss and siltstone, and so post-date the main brecciation and folding phase(s) associated with the Main Ring Fault.

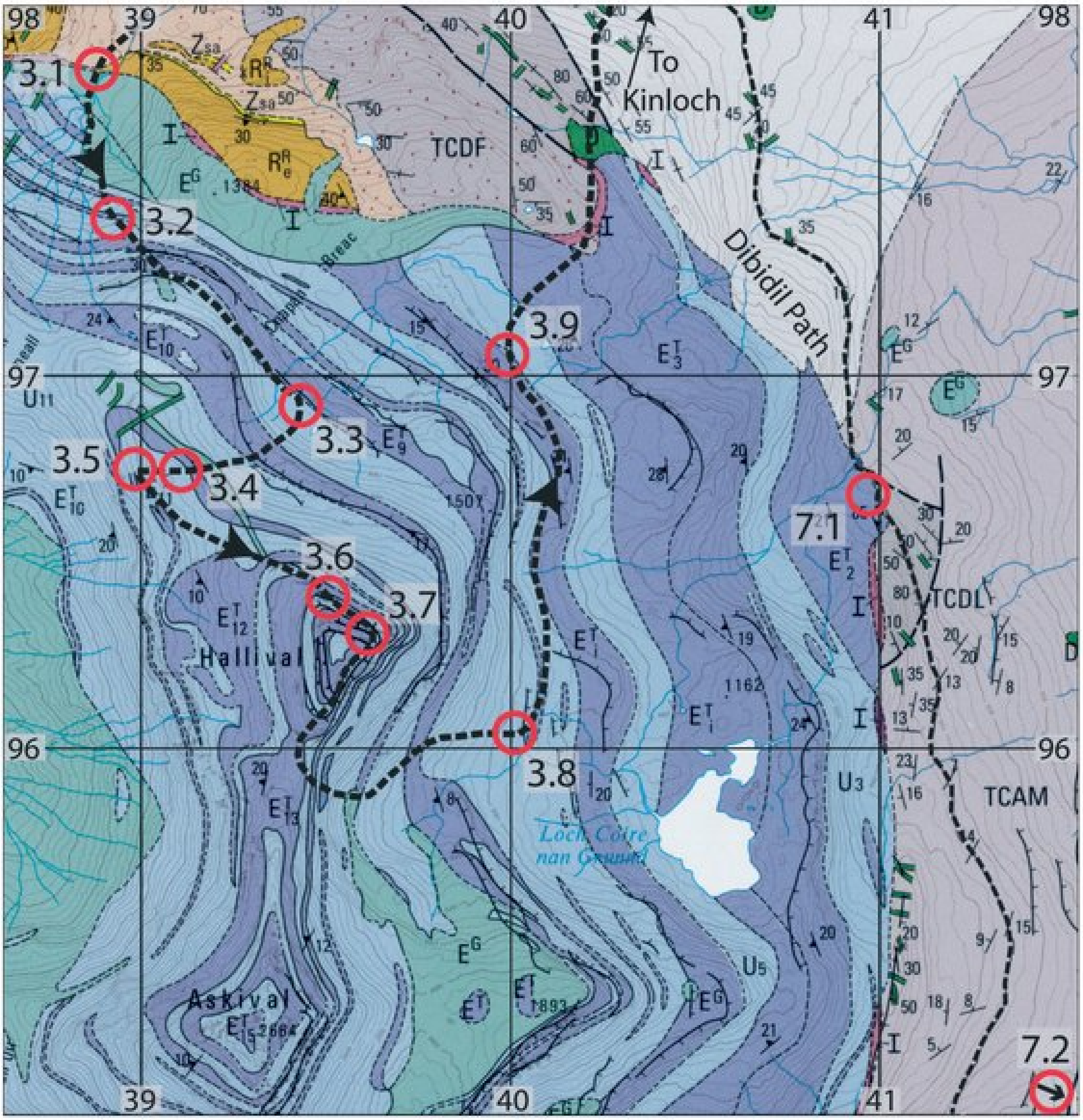
**Options**:

If desired at this point, a return to Kinloch may be made along the footpath (2–3 hours). Alternatively, one can overnight in the bothy (see above) and use the following or subsequent days to explore other areas of the Southern Mountains.

**References**

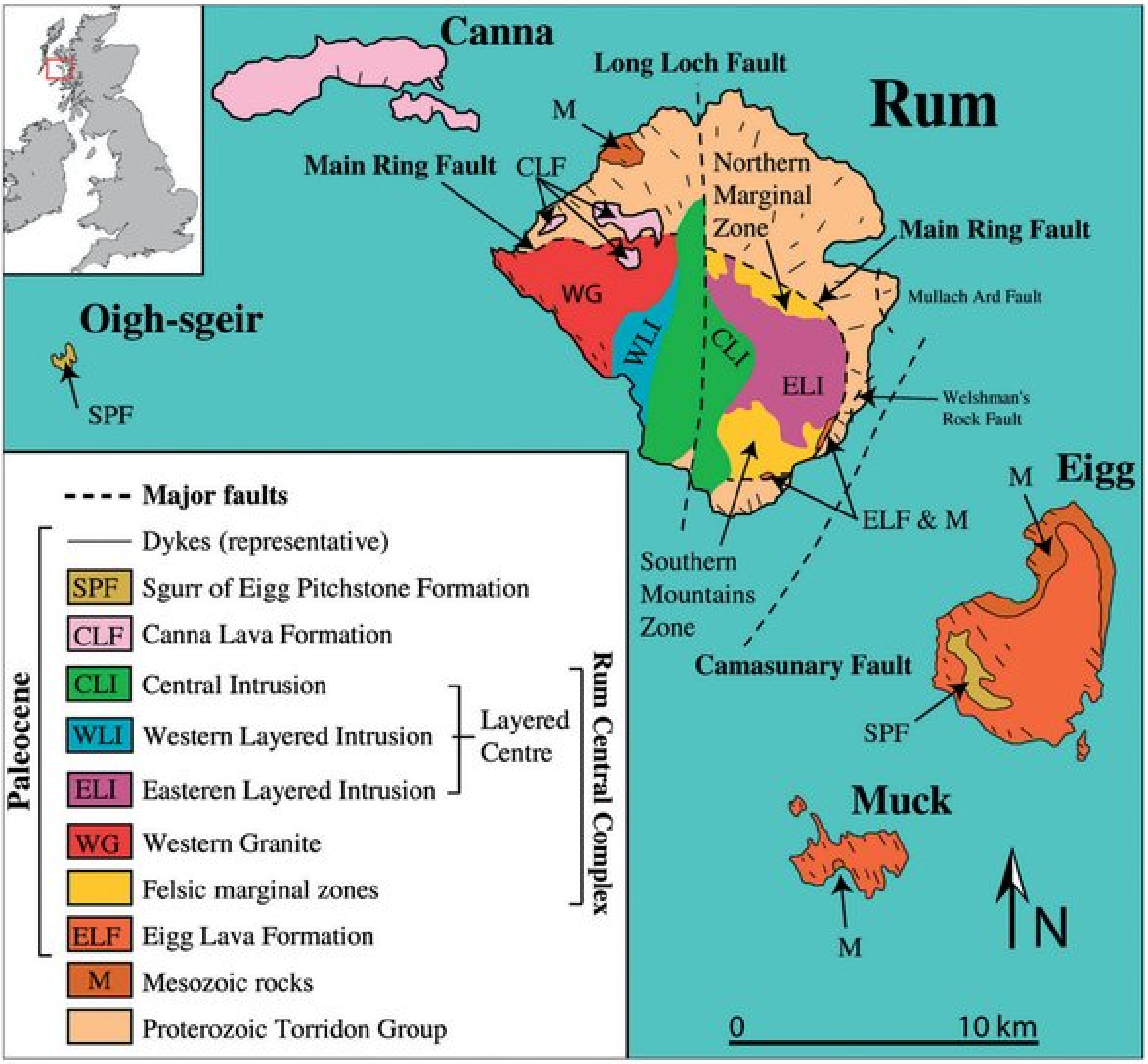



*(Figure 63) Panorama and geological outline of the lower south-west side of Glen Dibidil and the Sgurr nan Gillean–Ainshval Ridge, viewed from the south-east side of Beinn nan Stac (cf. (Figure 64)).*

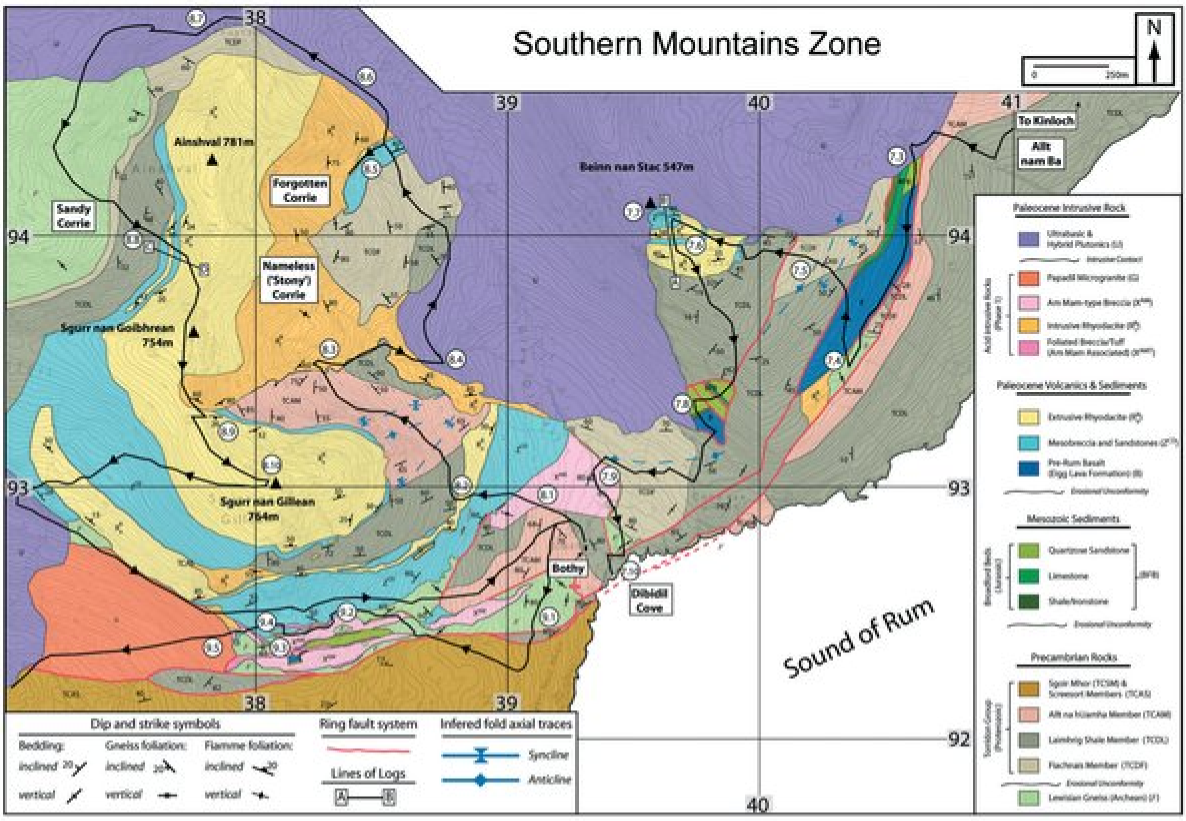



(Figure 26) Geological map of Excursion 3: Eastern Layered Intrusion, Hallival and Askival ((Key) ; based on SNH 1:20,000 solid geology map; © SNH).

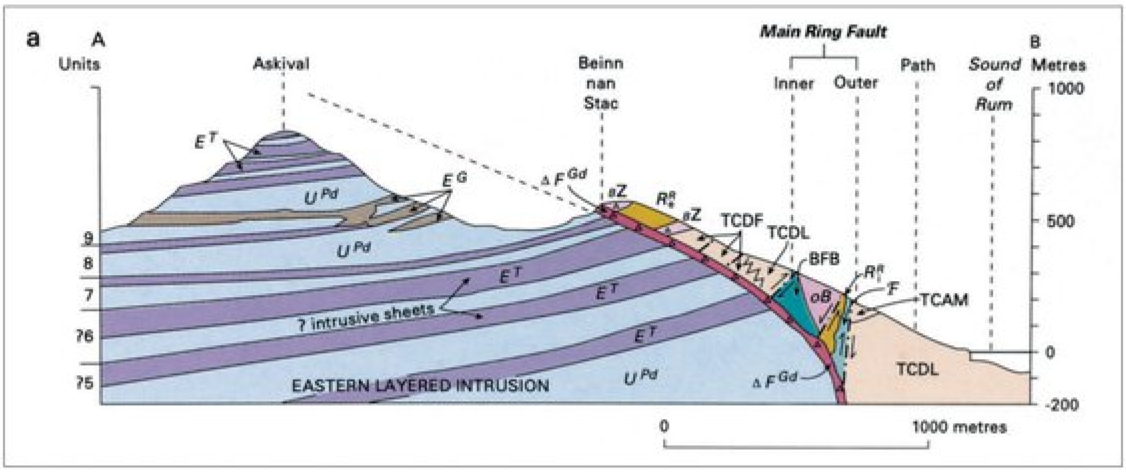
*(Figure 29) Slump structure in Unit 13 troctolite, Eastern Layered Intrusion, locality 3.6, Halival. Scale: hammer shaft c.30 cm.*



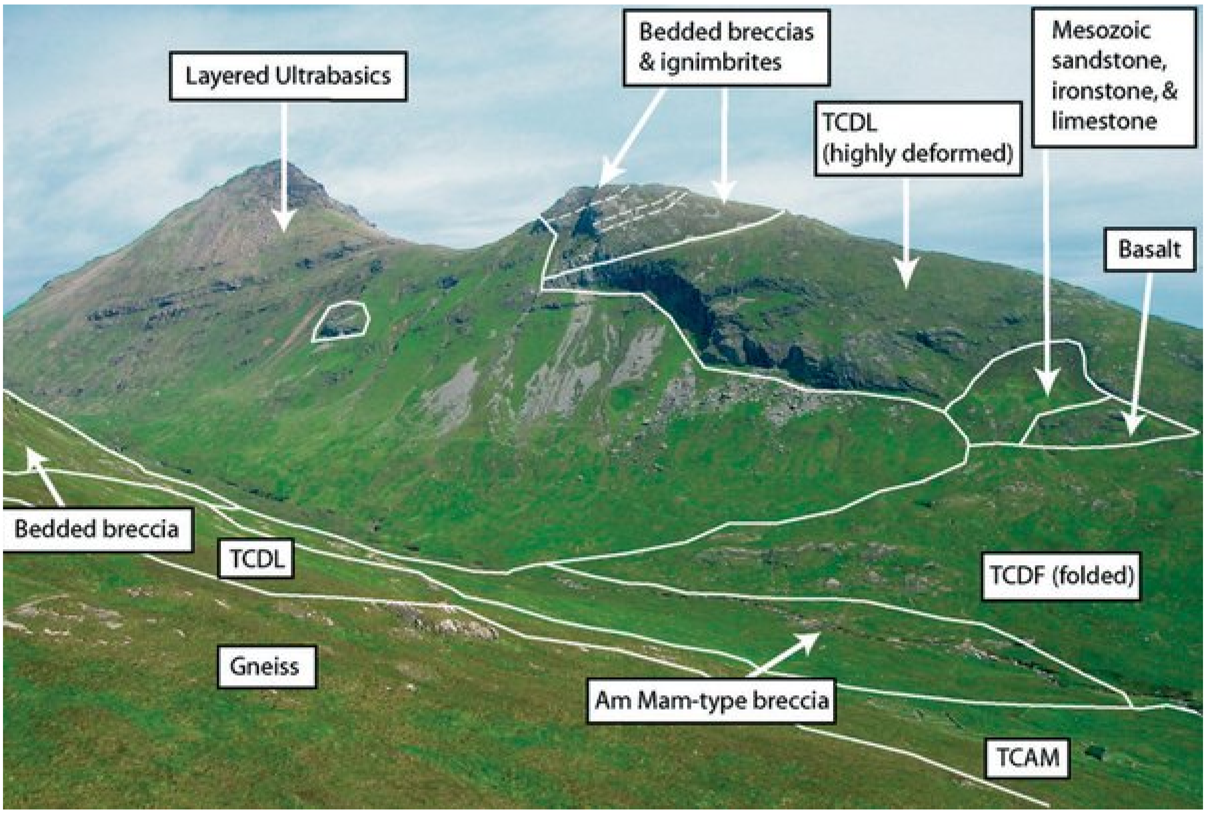

*(Figure 2) Simplified geological map of Rum and adjacent islands.*



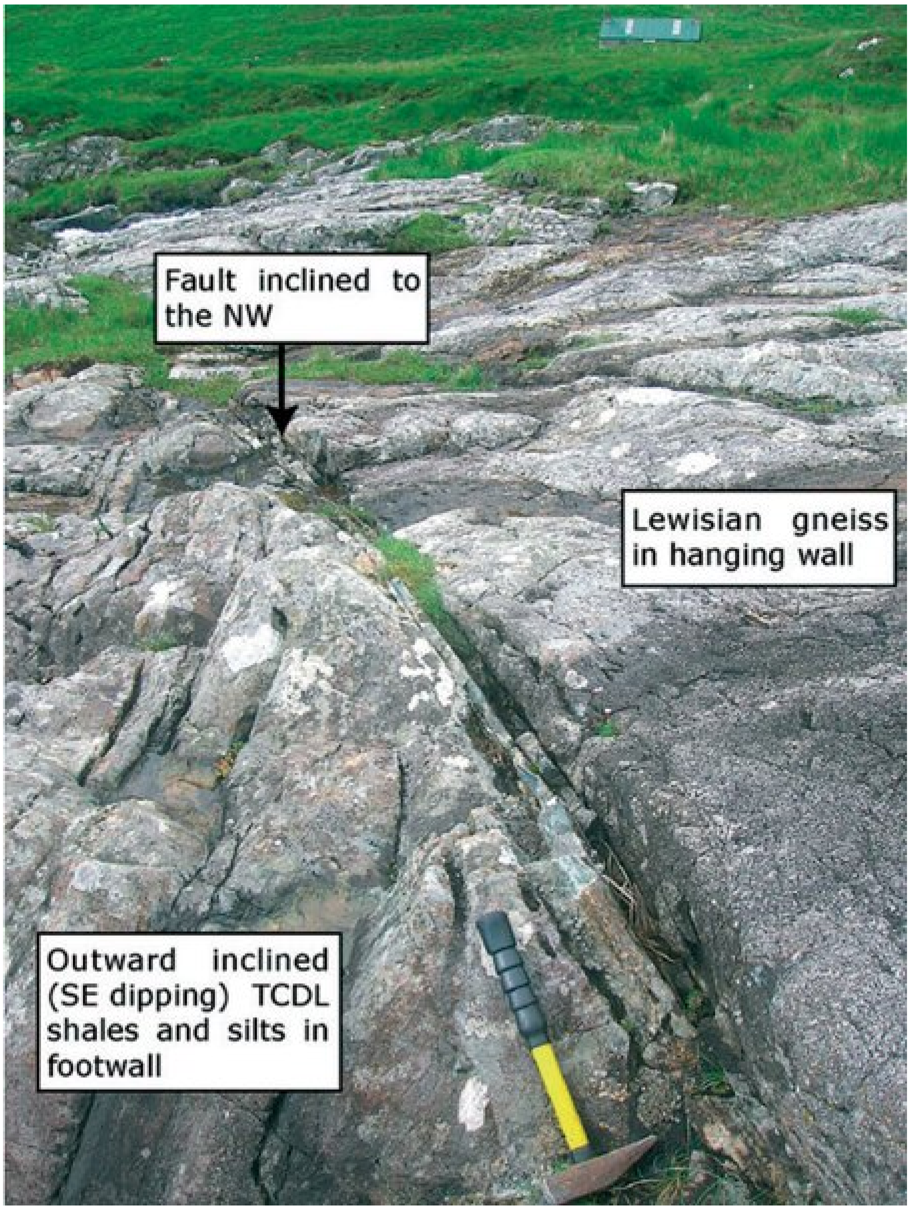
(Figure 62) Geological map of the Southern Mountains Zone. Based on SNH 1:20,000 solid geology map (© SNH), but extensively revised by E. Holohan and M. Errington. Excursions 7, 8 and part of 9. For localities 7.1 and 7.2 see (Figure 26), and for all of Excursion 9 see (Figure 71) (Key) .




(Figure 8) Cross-section through the south-east portion of the Rum Central Complex (Askival–Beinn nan Stac–Sound of Rum), illustrating relationships and tectonics along the Main Ring Fault system, after Emeleus (1997) (see pp. 148–49 for full (Key).) (© NERC)




(Figure 64) North-east side of Glen Dibidil with geological outline, viewed from the lower south-east side of Sgurr nan Gillean.




*(Figure 65) Siltstones of the Torridon Group (TCDL) brought against Lewisian gneiss (right) on the Main Ring Fault (by hammer). Scale: hammer shaft c.30 cm. Dibidil foreshore (Locality 7.10).*