

Cuillin Hills 2: South Loch Coruisk



Loch Coruisk (J M W Turner, 1831)



Loch Coruisk (Sidney Richard Percy, 1874)



Loch Coruisk near Loch Scavaig (William Daniell, 1815)



Loch Coruisk, the loch of the water corrie, is undoubtedly one of the most spectacular places on the Isle of Skye. It is both desolate and remote, giving it a grandeur that changes as the weather changes. A location worthy of the effort it takes to get there: a truly magical place. The glacial rock basin of Loch Coruisk, with an outflow to the sea via the Scavaig River, possibly the shortest river in the British Isles, is located within the central part of the Paleocene Cuillin Intrusive Centre, dominated by peridotites and gabbros: the remnants of a complex layered intrusion. Exposure is spectacularly good, with very little vegetation. The biggest enemy is weather – this is a place to relish when the sun shines. When the weather closes in, it is equally spectacular, but not for a detailed investigation of rocks!

Aspects covered: banding, brecciation and layering within the Layered Peridotites; layering and blocks within the Outer Bytownite Gabbros; the glacial morphology, landforms and deposits of the [Loch Coruisk](#) basin.

Route: [Loch na Cuilce Landing Stage](#) - [Loch nan Leachd](#) - [Allt a' Chaoich](#) - [Allt Beag \(the Nameless Burn\)](#) - [Meall na Cuilce](#) - [Loch Coruisk](#) (- return [Loch na Cuilce Landing Stage](#)).

General comments: This is a challenging but rewarding excursion and should be saved for a good weather day. It is difficult to reach [Loch Coruisk](#) by foot, especially as time is required to examine the rocks, but access is made considerably more achievable by tourist boats that run out of [Elgol](#) during the Spring, Summer and Autumn months. Timetables vary and need to be checked/confirmed/booked in advance. This is the best, easiest and safest way to access [Loch Coruisk](#).

Figure Cuillin 2.8: The Stepping Stones across the Savaig River, close to the inflow from Loch Coruisk. These can be submerged during periods of heavy rainfall and cannot be crossed safely.

Locality 1 [NG 4901 1927]:

On the west side of [Loch nan Leachd](#) there is a [small \(54m O.D.\) hill](#) from where the general disposition of the various rocks of the southern part of the Paleocene Cuillin Intrusive Centre may be noted. To the west, on the other side of [Loch na Cuilce](#), the main ridge of the southern part of the Cuillin Hills rises dramatically from sea level to over 900m OD. The southern part of the ridge is composed of a microgabbro (Gars-bheinn type), together with large sheets of intrusive basalt and dolerite. North of the main southern ridge, the deeply-eroded [An Garbh-choire](#) marks the outcrop of the Layered Peridotites (see below). These rocks weather to a distinct brownish-orange and are readily identified from a distance on a clear day. Below these rocks (to the NE), in the [Meall na Cuilce](#) area, the lower units of the Outer Layered Bytownite Gabbros crop out. The basin of [Loch Coruisk](#) has been glacially scoured out of the middle 'member' of this sequence. To the NE of the loch, the ridge of [Druim nan Ramh](#) marks the line of the Inner Cross-cutting Bytownite Gabbro(s).



Figure Cuillin 2.9: View west across the Savaig River to the rounded knoll of Meall na Cuilce (185m OD), beyond which is the pyramidal Sgurr Dubh ridge. To the left (south) of the ridge is An Garbh-choire, at the top of which is the easily recognised Caisteal a' Garbh-choire (the castle of the rough or wild corrie) on the horizon.

The outermost/oldest part of the Outer Layered Bytownite Gabbros crops out locally, in particular the large slabs north of [Loch nan Leachd](#) which exhibit good examples of crystal lamination and slump structures. Xenoliths of basalt, dolerite, bytownite troctolite and peridotite are present throughout the sequence. Also common are large plagioclase-clinopyroxene segregation pods and veins, with crystals more than 4cm long that have developed in response to a more hydrous environment during crystallisation.

Formation of these rocks, commonly referred to as cumulates, may, in part, be attributed to some form of crystal settling; however, intrusive events are more likely for some layers. There is no evidence that there was a single large magma chamber throughout the formation of

the Cuillin Igneous Centre, rather it was formed by multiple injections of magma, essentially a confluent intrusive complex.



Figure Cuillin 2.10: Exposures of the Outer Layered Bytownite Gabbros, north of Loch nan Leachd. Note excellent layering defined by mineralogical variation.



Figure Cuillin 2.11: Outer Layered Bytownite Gabbros, north of Loch nan Leachd. Stratification comprises layers of coarse-grained bytownite gabbro and layers of fine-grained laminated bytownite gabbro defined by variations in modal mineralogy. Pale layers have a higher proportion of calcic plagioclase crystals. Certain layers are non-planar, suggestive of post-deposition modification/deformation. Xenoliths and autoliths are common throughout the sequence. Pole c. 1m long.

From here, re-cross the [Savaig River](#) at the [Stepping Stones](#).

Walk around the [head of Loch na Cuilce](#), noting the similar igneous features on that side of the river, and particularly good layering on the SE side of [Meall na Cuilce](#). The rock face behind the [Coruisk Memorial Hut](#) has well developed glacial striae.



Figure Cuillin 2.12: Horizontal glacial striae on the rock face behind the Coruisk Memorial Hut.

Continue past the [Coruisk Memorial Hut](#) (locked, not accessible without permission and a key), along the coast between the high- and low-water lines (not possible during some high tides) and the [mouth of the Allt a' Chaioich](#) (Gaelic, the Mad or Impetuous Burn and best crossed near the High-Water Line; also difficult and unsafe during periods of heavy rain). From here, proceed SW to the northern side of the [Allt Beag](#) (Gaelic, the small burn, but on some maps referred to as the Nameless Burn or is unlabelled).

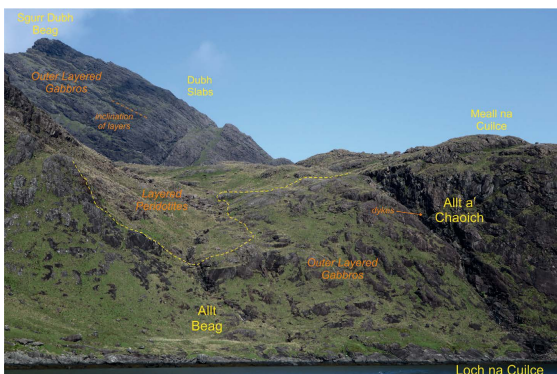


Figure Cuillin 2.13: The Allt Beag and the Allt a' Chaioich viewed looking towards the NW from Loch na Cuilce. Distribution of the Layered Peridotites is indicated.

Locality 2 [NG 4825 1948]:

On the north side of the [Allt Beag](#), Unit 1 rocks of the Outer Layered Bytownite Gabbros crop out. These rocks are plagioclase-olivine-clinopyroxene cumulates, but without the development of good layering. Proceed c. 500m up the north side of the [Allt Beag](#) to [an elevation of 150m OD](#), to where continuous exposures of the Layered Peridotites may be examined in the immediate vicinity of the burn. *En route* to this elevation note isolated outcrops of peridotite on the north side of the stream, together with xenoliths of peridotite (up to 1m across) within the Outer Layered Bytownite Gabbros. The peridotites are readily identified by their distinct brownish-orange weathering characteristics (due to the breakdown of olivine, releasing iron) and 'tortoise-shell' fracture pattern. The magmas involved in the formation of the peridotites were more basic than basalt, most likely

ultrabasic in character; however, crystal-liquid fractionation of basaltic magmas and the interaction (mixing) of compositionally different magmas, both basic and ultrabasic, will also have played important roles in the formation of these units.

The main outcrop of the Layered Peridotites lies to the south of the [Allt Beag](#), which flows along the southern side of the rock basin formed mainly by the [upper tributaries of the Allt a' Chaioich](#). Proceed upstream on the south bank of the [Allt Beag](#) through unlayered and weakly laminated dunites (P1). Follow the [Allt Beag](#) to where it dies out. The area to the south consists of continuous exposures of units 2 and 3 fluxionated/layered peridotite and bytownite troctolite (P2 and P3) that form the south and SW side of the rock basin draining from the [Coire' a' Chruidh](#) and [Coire Beag](#).



Figure Cuillin 2.14: Dunite within the lowest unit, P1, of the Layered Peridotites, adjacent to the Allt Beag. Coin c. 24mm across.



Figure Cuillin 2.15: Typical laminated peridotite (P2) of the Layered Peridotites in the vicinity of the southern tributaries of the Allt a' Choich. Pole c. 1m long.

From these rock-faces proceed north to a [knoll \(193m OD\)](#) in the confluence area of the [upper tributaries of the Allt a' Chaioich](#). This knoll and much of the surrounding area consists of brecciated peridotite and bytownite troctolite (P4). Formation of these breccias involved disturbance and fragmentation of previously formed material (P1, P2 and P3; commonly layered) with 'younger' material (magma(s)), typically orange-weathering peridotite, now acting as the matrix of the

breccias. Abundant glacial erratics offer excellent examples of these breccias.



Figure Cuillin 2.16: Typical brecciated peridotite, with blocks of dunite, layered feldspathic peridotite and layered bytownite troctolite, with abundant anastomosing veins of peridotite and feldspathic peridotite, all set in a matrix of peridotite. An Garbh-choire. Pole c. 1m long.



Figure Cuillin 2.17: Typical brecciated peridotite, with blocks of dunite, layered feldspathic peridotite and layered bytownite troctolite, with abundant anastomosing veins of peridotite and feldspathic peridotite, all set in a matrix of peridotite. An Garbh-choire. Pole c. 1m long.



Figure Cuillin 2.18: Typical brecciated peridotite, with blocks of dunite, layered feldspathic peridotite and layered bytownite troctolite, with abundant anastomosing veins of peridotite and feldspathic peridotite, all set in a matrix of peridotite. An Garbh-choire. Pole c. 1m long.



Figure Cuillin 2.19: Typical brecciated peridotite, with blocks of dunite, layered feldspathic peridotite and layered bytownite troctolite, with abundant anastomosing veins of peridotite and feldspathic peridotite, all set in a matrix of peridotite. An Garbh-choire. Pole c. 1m long.



Figure Cuillin 2.20: Typical brecciated peridotite, with blocks of dunite, layered feldspathic peridotite and layered bytownite troctolite, with abundant anastomosing veins of peridotite and feldspathic peridotite, all set in a matrix of peridotite. An Garbh-choire. Coin c. 24mm across.



Figure Cuillin 2.21: Typical pale, laminated feldspathic peridotite, bytownite troctolite and dark layered dunite. Note irregular boundary between the contrasting lithologies, suggesting some form of reaction along the interface. An Garbh-choire. Pole c. 1m long.

From here, proceed north and across the [Allt a' Chaoich](#), well above (west of) where it flows within a near-vertical gorge, towards [Meall na Cuilce](#) (185m OD).

Locality 3 [NG 4833 1988]:

In the summit area of [Meall na Cuilce](#), the rocks of the (younger) Outer Layered Bytownite Gabbros contain a significant proportion of xenoliths of peridotite derived from the Layered Peridotites, together with fragments of bytownite troctolite and bytownite gabbro. The block concentration decreases up-sequence, to the NE. Close to the blocks, deflection and distortion of layering within the bytownite gabbros can be seen, suggesting that the blocks slumped into a younger unconsolidated crystal-liquid mush.



Figure Cuillin 2.22: Laminated Outer Layered Bytownite Gabbros with xenoliths of orange-weathering peridotite at the summit of Meall na Cuilce. View is towards the east, with Sgùrr na Stri in the distance. Hammer c. 60cm long.



Figure Cuillin 2.23: Detail of laminated Outer Layered Bytownite Gabbros with xenoliths of orange-weathering peridotite at the summit of Meall na Cuilce. Pole c. 1m long.



Figure Cuillin 2.24: Coarse-grained (here unlayered) Outer Layered Bytownite Gabbro, intruded by a dolerite dyke of the regional swarm, Meall na Cuilce. View is towards the southern end of the Sgùrr na Stri peninsula, with Strathaird in the distance. Pole c. 1m long.

Proceed west towards the [upper, meandering tributaries of the Allt a' Choich](#) and onwards to the valley SE of [The Slabs](#), which provides a safe route down to the [SW shore of Loch Coruisk](#). *En route*, note the excellent exposures of xenolithic Outer Layered Bytownite Gabbro forming the [SE faces of The Slabs](#).



Figure Cuillin 2.25: The Sgùrr Dubh Ridge and The Slabs from the NE side of Loch Coruisk. The boulder-strewn valley to the SE (left) provides a safe route to the shore of Loch Coruisk.



Figure Cuillin 2.26: The valley SE of the Sgùrr Dubh Ridge and The Slabs. This boulder-strewn valley provides a safe route to the shore of Loch Coruisk.



Figure Cuillin 2.27: Typical xenolithic Outer Layered Bytownite Gabbros on the SE face of The Slabs.

On the NE side of [Loch Coruisk](#) at c. [\[NG 4862 2077\]](#) is an obvious rockfall dating from the 1980s, where blocks of Inner Cross-cutting Bytownite Gabbro have detached, most likely through freeze-thaw action.



Figure Cuillin 2.28: Rockfall dating from the 1980s, where pale blocks of Inner Cross-cutting Bytownite Gabbro form a boulder field on the NE side of Loch Coruisk.



Figure Cuillin 2.29: Detachment surface on the NE side of Loch Coruisk, resulting a significant rockfall in the 1980s.

Continue along [the path on the SW side of Loch Coruisk](#) to the [SE end of the loch](#). Note the glacial striae, common on the ice-moulded ('whale back') surfaces nearby.



Figure Cuillin 2.30: Elongate, striated, glacially-moulded ('whaleback') ridges of gabbro adjacent to the path on the SW side of Loch Coruisk.



Figure Cuillin 2.31: Crescentic scars and fractures ('chattermarks') on gabbro surface, SW side of Loch Coruisk. Ice flow direction right-to-left (NW-to-SE). Pole c. 1m long.

The view NW along the axis of [Loch Coruisk](#) is of a classic glacially-scoured basin, with steep crags to the NE and SW. The loch has a reported depth of 38m below sea-level.



Figure Cuillin 2.32: Loch Coruisk from the summit of Sgùrr na Stri. View is towards the NW.

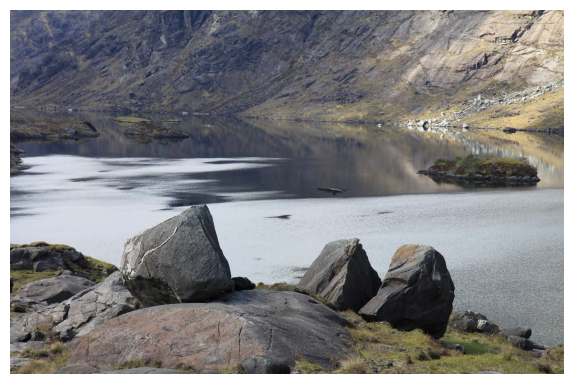


Figure Cuillin 2.33: Glacial erratics at the SE end of Loch Coruisk. Note the recent (1980s) rockfall on the far side of the loch.

Continue along the [west side of the Scavaig River](#) towards the [Loch na Cuilce Landing Stage](#).

Return to [Elgol](#) by tourist boat (by previous arrangement) or, alternatively, return to [Elgol](#) or [Kirkibost](#) or [Sligachan](#) if any of these were the starting point for the excursion (see above). The tourist boat is, however, by far, the most practical and sensible access route for this excursion.

End of excursion.