

Red Hills

Marsco



Sligachan, located at the meeting point of the loch and the glen of the same name, is a renowned setting-off point for the Cuillin Hills. Two of Skye's pioneer climbers of the 19th Century, Norman Collie (left) and John Mackenzie (right), are celebrated by a dramatic bronze sculpture looking down the glen. Mackenzie, a local man from Sconser, first climbed Sgùrr nan Gillian when aged 10, and Collie, from Manchester, first met in the 1880s and forged a lifetime friendship and love of Skye's alpine peaks. Each has a summit named after them: Sgùrr Thormaid (Collie; 'Norman's Peak') and Sgùrr Mhic Choinnich (Mackenzie). Both are buried at the old graveyard in Struan, in sight of the Cuillins. Mackenzie accompanied Alfred Harker during periods of his fieldwork in the Cuillin Hills.

Aspects covered: hydrothermally-altered Paleocene plateau lavas; the Paleocene Glamaig Granite (normal and marginal facies); alkali olivine dolerite dykes of the Beinn Dearg Type; the Glen Sligachan Granite; the Southern Porphyritic Granite; the hybrid (mixed magma) ring-dyke composed of the Marscoite Suite: the Southern Porphyritic Felsite, a ferrodiorite intrusion and the Southern Porphyritic Felsite; xenoliths of Lewisian Gneiss within the ferrodiorite intrusion; the Marsco Granite; (option: the Marsco Summit Gabbro and summit panorama view).

Route: [Sligachan](#) - [Allt na Measarroch](#) - [Clach na Craoibhe Chaoruinn](#) - [Harker's Gully \(NW side of Marsco\)](#) - (option: summit of [Marsco](#) - [Coire nan Laogh](#) - [Màm a' Phobuill](#) - [Coire Dubh Measarroch](#)) - [Allt na Measarroch](#) (- return [Sligachan](#)).

Distance: 9km (Localities 1 to 5 only) or 15 kilometres (Localities 1 to 6).

Time: 5 hours (Localities 1 to 5 only) or 9 hours (Localities 1 to 6).

General comments: Access to the base of the mountain is easy, but much of the subsequent traverse is on relatively steep ground; the optional last locality involves the summit, where a minor gabbro intrusion crops out.

Excursion Red Hills 4: Marsco

The view is spectacular, reckoned by many to be one of the best on Skye. During bad weather it is advisable to only undertake localities 1 to 5. However, on a clear day, the spectacular view from the summit of [Marsco](#) is well worth the extra effort required.

The geology of [Marsco](#) and the surrounding area is both complex and informative, being composed of several granites of the Paleocene Western Red Hills Intrusive Centre, including a sector of the Marscoite Suite ring-dyke. The summit provides a stunning panorama.



Figure Red Hills 4.1: Geological notes on Sligachan information panel.



Figure Red Hills 4.2: Notes on Collie and Mackenzie on Sligachan information panel.



Figure Red Hills 4.3: Further notes on Collie and Mackenzie on Sligachan information panel.

[Sligachan](#) lies at the head of [Glen Sligachan](#) on the [Broadford-Portree](#) (A87) road. It is 26km (16 miles) from

Broadford and 14km (9 miles) from Portree. Parking is available in the area, for example, on the south side of the road c. 100m east of the new bridge over the River Sligachan but is in demand for much of the year.

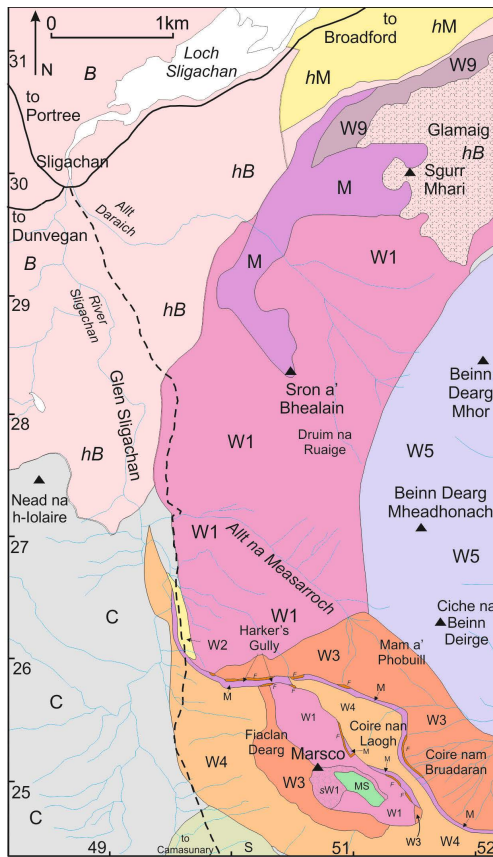


Figure Red Hills 4.4: Summary map and annotated Google Earth® image of the Marsco area.

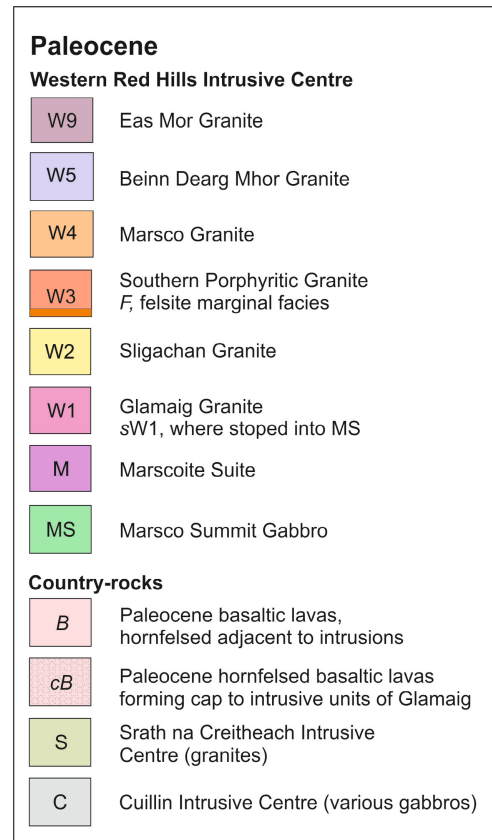


Figure Red Hills 4.5: Key to summary map of the Marsco area.

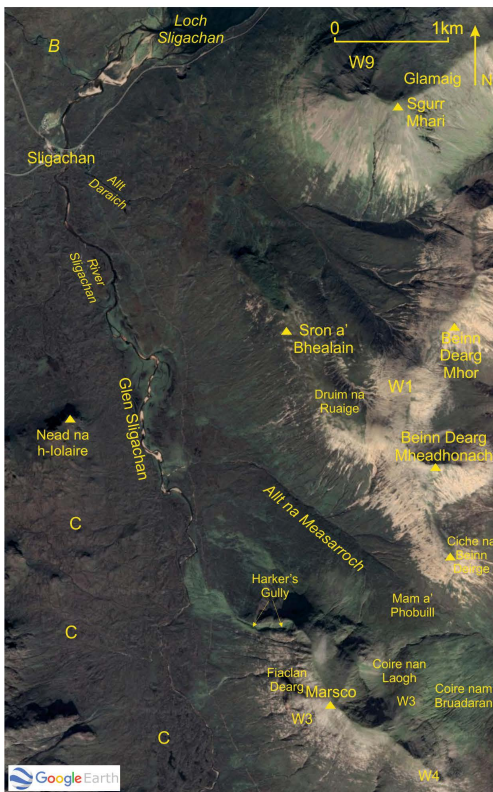


Figure Red Hills 4.6: Annotated oblique Google Earth® image of Glen Sligachan viewed towards the east. Marsco is located on the far right (south) of the image.



Figure Red Hills 4.7: Marsco, a distinctive red hill with a pyramidal profile at the southern end of Glen Sligachan (the shelly place). Its name translates from Old Norse as

seagull rock. The prominent crag on the west (right-hand) side of the mountain, *Fiaclan Dearg*, is Gaelic for *red teeth*.

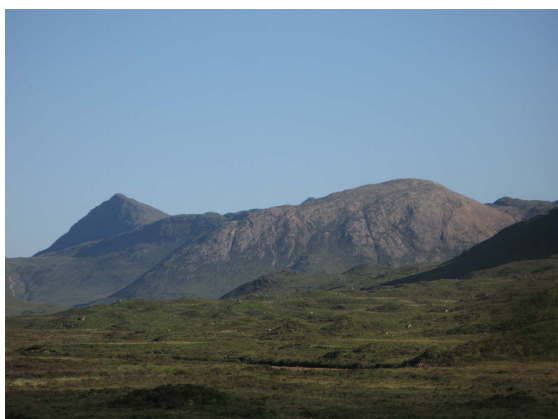


Figure Red Hills 4.8: Sgùrr Hain (left) and Meall Dearg (right) from Sligachan.

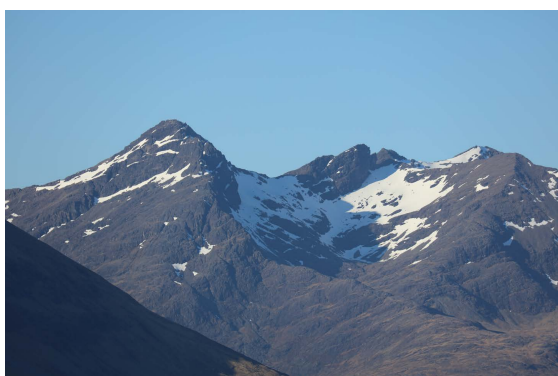


Figure Red Hills 4.9: Sgùrr nan Gilleann (left), Coire a' Bhàsteir (centre) with Am Bhàsteir, beyond, and Sgùrr a' Bhàsteir (right), from Raasay. View is towards the SW.

Locality 1 [NG 4867 2982]:

From the Collie and Mackenzie Sculpture, one of the most spectacular (and easily achieved!) views of the Cuillin Hills and the Red Hills is obtained on a clear day. In the immediate area and looking down [Glen Sligachan](#), the flat-lying ground to the south is composed of Paleocene plateau lavas, giving way, at [Nead na h-Iolaire](#) on the west side of the glen, to rocks of the Cuillin Intrusive Centre. On the east side of the glen, granites and associated rocks of the Western Red Hills Intrusive Centre crop out. These include: the Glamaig Granite on [Druim na Ruaige](#); the Beinn Dearg Mhór Granite on the [summit of that name](#); and, a sheet of the mixed-magma rock-type, marscoite, forming the crags of [Sròn a' Bhealain](#). The distribution of the granites on [Marsco](#) is complex but revealed by the topography of the mountain.

At the southern end of [Glen Sligachan](#) is [Meall Dearg](#), a red hill composed of the Meall Dearg Granite on the upper slopes and the Ruadh Stac Granite beneath. Both intrusions are part of the Srath na Crèitheach Intrusive Centre. The irregular ridge of [Blà-bheinn](#) ('Blaven'),

marking the eastern margin of the Cuillin Intrusive Centre, can be seen in the far distance, SE of [Marsco](#).

Walk 3km south along the [Loch Coruisk path](#), which starts from the [Collie & Mackenzie sculpture](#), initially [parallel to the Allt Daraich](#), south of the two bridges on the old road, on the east side of the [River Sligachan](#). This river meanders through glacial moraines that generally obscure much of the underlying (bedrock) geology. Nevertheless, exposures of plateau lava and granite may be examined in the vicinity of the path *en route* to [Marsco](#).



Figure Red Hills 4.10: Hornfelsed amygdaloidal basalt lava, Glen Sligachan. Coin c. 24mm across.



Figure Red Hills 4.11: The meandering River Sligachan in Glen Sligachan. View is towards the NW from Marsco.

Locality 2 [NG 4953 2720]:

Where the [path crosses the Allt na Measarroch](#), proceed upstream and examine good exposures of the Glamaig Granite in the stream bed. This granite is composed of equigranular crystals of quartz, alkali feldspar and plagioclase, together with hornblende and biotite. It is readily distinguished from the other silicic intrusions within the Western Red Hills Intrusive Centre by the presence of numerous small (5–50mm), rounded, mafic inclusions, indicating the mingling and partial mixing of two compositionally-contrasting magmas. Alkali olivine dolerite dykes of the so-called Beinn Dearg Type intrude this granite and crop out further upstream (c. 400–500m). These dykes may also be examined when traversing the [Coire Dubh Measarroch](#), upon returning from the summit of [Marsco](#) (Locality 6).



Figure Red Hills 4.12: Typical Glamaig Granite, with rounded mafic inclusions. Coin c. 24mm across.



Figure Red Hills 4.13: Late-stage alkali olivine dolerite dyke (Beinn Dearg Type) intruded into the Glamaig Granite in the Allt na Measarroch. View is towards the SE, with Marsco in the distance. Iain Allison for scale.

Return to the [Loch Coruisk footpath](#) and continue to [Clach na Craoibhe Chaoruinn](#) (Rowan Tree Stone; a cluster of large boulders adjacent to the west side of the path, at one time with a single rowan tree growing within a fissure in one of the boulders).



Figure Red Hills 4.14: Clach na Craoibhe Chaoruinn, adjacent to the Sligachan-Loch Coruisk path. View is towards the north.

Locality 3 [\[NG 4954 2693\]](#):

In the path at this point (and for approximately 200m beyond), good exposures of the marginal facies of the Glamaig Granite (with the plateau lavas) can be examined. This rock is a pale green, porphyritic felsite, with a distinct foliation that parallels the steeply-dipping, outer margin of the intrusion.



Figure Red Hills 4.15: Marginal facies of the Glamaig Granite, comprising a pale green, porphyritic felsite, with a distinct foliation that parallels the steeply-dipping, outer margin of the intrusion. Pole c. 1m long.

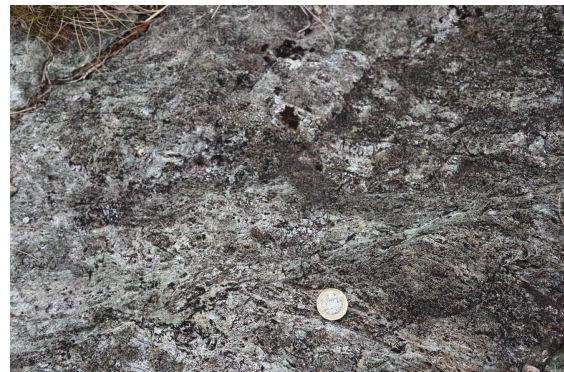


Figure Red Hills 4.16: Detail of marginal facies of the Glamaig Granite, comprising a pale green, porphyritic felsite, with a distinct foliation that parallels the steeply-dipping, outer margin of the intrusion. Coin c. 24mm across.

Continue along the path over hummocky ground, noting sporadic exposures of the Glen Sligachan Granite (phenocrysts of quartz and clouded alkali feldspar, granophyric groundmass), past the northern end of [Marsco](#) to the base of the large gully on the NW side of the hill. This is colloquially referred to as Harker's Gully, in honour of Alfred Harker, doyen of igneous geology at the beginning of the 20th Century, who elucidated much of the complex geology of this area. At the [base of the gully is a grass-covered outwash fan](#). The grass is bright green and luxuriant due to the calcium- and phosphorus-rich run-off water which drains from the ferrodiorite intrusion that crops out in the gully. Leave the path at the stream draining the gully and walk uphill to the lowest exposures at the beginning of the gully.

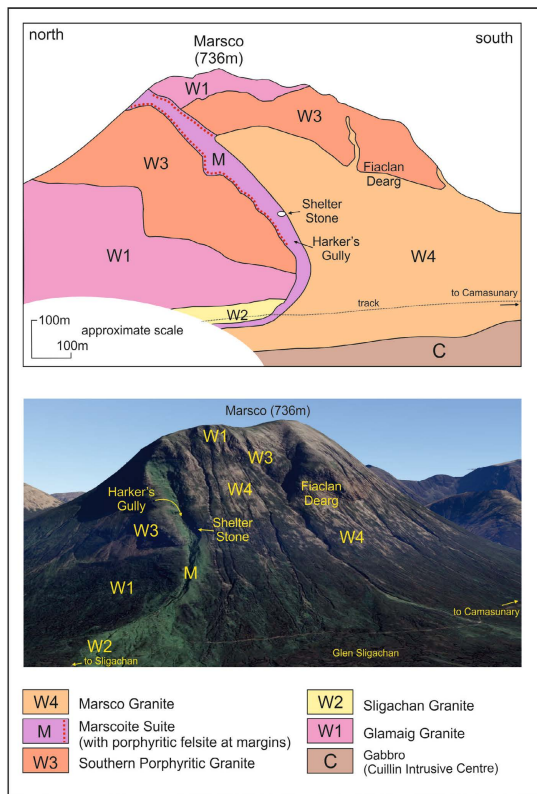


Figure Red Hills 4.17: Schematic representation of the various intrusions that crop out on Marsco and an annotated oblique Google Earth® image of Marsco. View is towards the east.

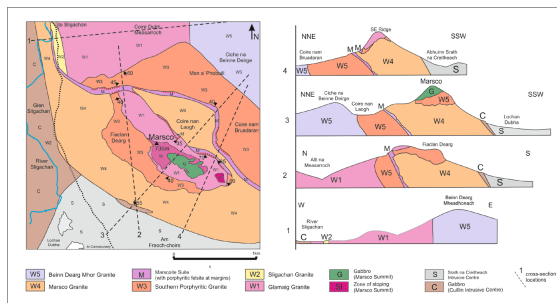


Figure Red Hills 4.18: Cross-sections for the Marsco area.

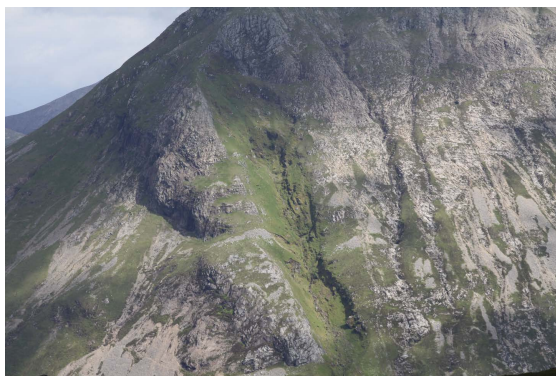


Figure Red Hills 4.19: Harker's Gully on the NW side of Marsco, defining the outcrop of the Marscoite Suite Ring-dyke.



Figure Red Hills 4.20: Detail of the lower part of Harker's Gully on the NW side of Marsco, defining the outcrop of the Marscoite Suite Ring-dyke. The large projecting rock (the Shelter Stone) on the south (right) side of the gully is composed of ferrodiorite of the Marscoite Suite.

Locality 4 [NG 4991 2587]:

On the north face of the gully, a few metres uphill from the lowest exposures, a large (at least 3m x 2m) xenolith of Lewisian Gneiss crops out. It is a well-banded, amphibolite-facies leucogneiss that has been thermally-metamorphosed by the ferrodiorite intrusion that encloses it. Under the microscope, this thermal metamorphism is evidenced by patches of quartz and alkali feldspar in a granophyric intergrowth, together with the development of pyroxene hornfels facies mineral assemblages within the more mafic portions.

Leave the gully and walk up the south side (over poorly exposed Marsco Granite) to the overhanging [Shelter Stone](#) that projects from the south wall of the gully. *En route*, note the prominent joints within the Southern Porphyritic Felsite above the north wall of the gully.

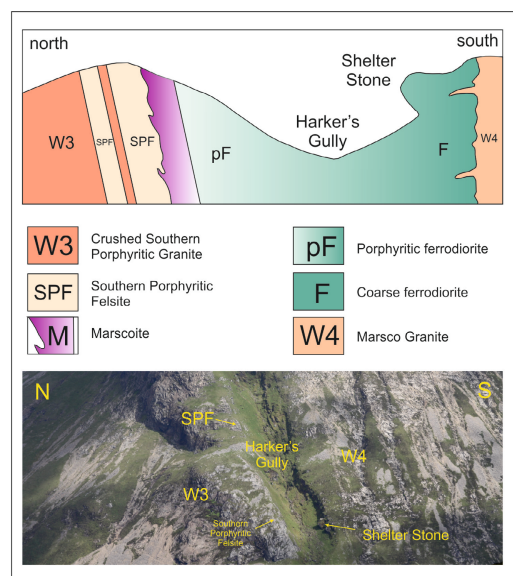


Figure Red Hills 4.21: Schematic cross-section of Harker's Gully at the level of the Shelter Stone and an annotated image of the area. View is towards the east.



Figure Red Hills 4.22: Typical equigranular Marsco Granite in an exposure south of Harker's Gully at the height of the Shelter Stone. Coin c.24mm across.

Locality 5 [NG 5010 2579]:

At the level of, and above, the [Shelter Stone](#), members of the Marscoite Suite are clearly exposed.



Figure Red Hills 4.23: The Shelter Stone in Harker's Gully, composed of non-porphyritic ferrodiorite. View is towards the south, across the gully.

The complete section across the gully is c. 80m wide and includes (from south to north): porphyritic and non-porphyritic (coarse-grained) ferrodiorite; marscoite; and, Southern Porphyritic Felsite.

In a south-to-north traverse of the gully, the following features should be noted:

1. The gradational contact between the coarse-grained, non-porphyritic ferrodiorite and the Marsco Granite, best seen in the gully c. 100m up from the [Shelter Stone](#) in the south wall;
2. The coarse-grained, non-porphyritic ferrodiorite on the south side of the gully (the Shelter Stone is composed of this variety of ferrodiorite), which shows onion-skin (or doleritic or spheroidal) weathering characteristics and the development of a dark brown soil;



Figure Red Hills 4.24: Typical non-porphyritic ferrodiorite. Coin c. 24mm across.



Figure Red Hills 4.25: Typical weathered ferrodiorite, with onion skin/doleritic/spheroidal (weathering) characteristics. Pole c. 1m long.



Figure Red Hills 4.26: Detail of ferrodiorite with onion skin/doleritic/spheroidal weathering characteristics. Coin c. 24mm across.

3. Coarse-grained, cognate xenoliths of pale andesinite (typically less than 2cm across) within the ferrodiorite and best examined in boulders within the stream bed just above the level of the [Shelter Stone](#);
4. The gradational contact between grey marscoite on the north side of the gully and porphyritic ferrodiorite in the middle of the gully;
5. The bulbous, irregular contact between grey chilled marscoite and pale Southern Porphyritic Felsite sporadically along their mutual boundary on the top of

the northern wall of the gully (indicating that the marscoite magma was emplaced after the Southern Porphyritic Felsite magma, but whilst the felsite magma was not completely crystallised);



Figure Red Hills 4.27: Boundary between the Southern Porphyritic Granite and the Southern Porphyritic Felsite, north (outside) Harker's Gully, c. 100m above the Shelter Stone. The boundary coincides with the change in joint pattern/spacing. Pole is c. 1m long and positioned at the boundary.



Figure Red Hills 4.28: Contact between marscoite (grey, right-hand side of exposure) and Southern Porphyritic Felsite (pale, left-hand side of exposure), c. 100m above the Shelter Stone, north of Harker's Gully. Pole c. 1m long.



Figure Red Hills 4.29: Detail of contact between marscoite (grey, right-hand side of exposure) and brecciated Southern Porphyritic Felsite (pale, left-hand side of exposure), c. 100m above the Shelter Stone, north of Harker's Gully. Coin c. 24mm across.



Figure Red Hills 4.30: Detail of contact between marscoite (grey) and Southern Porphyritic Felsite (pale), c. 100m above the Shelter Stone, north of Harker's Gully. The non-planar contact is interpreted as evidence for the interaction of the two as magmas. Coin c. 24mm across.



Figure Red Hills 4.31: Detail of contact between marscoite (grey) and Southern Porphyritic Felsite (pale), c. 100m above the Shelter Stone, north of Harker's Gully. The non-planar contact is interpreted as evidence for the interaction of the two as magmas. Coin c. 24mm across.



Figure Red Hills 4.32: Detail of contact between marscoite (grey) and Southern Porphyritic Felsite (pale), c. 100m above the Shelter Stone, north of Harker's Gully. The non-planar contact is interpreted as evidence for the interaction of the two as magmas. Coin c. 24mm across.



Figure Red Hills 4.33: Typical (grey) marscoite, with xenocrysts of plagioclase, alkali feldspar and quartz, formed by the mixing of Southern Porphyritic Felsite magma and porphyritic ferrodiorite magma. Coin c. 24mm across.

6. The sharp, but unchilled, contact between the 6m-wide Southern Porphyritic Felsite intrusion and the coarse-grained Southern Porphyritic Granite, just beyond (north of) the northern gully wall.

Having examined these rocks, **two options** are available:

1. to continue up [Marsco](#) to **Locality 6**, which will add a further 4/5 hours to the excursion; or, 2. to return to [Sligachan](#), reversing the route taken so far, downhill via the gully and thence north along the path to [Sligachan](#).

If 1 is chosen, two large xenoliths of Lewisian Gneiss, within the ferrodiorite intrusion, may be examined in the stream bed c. 80m below the level of the [Shelter Stone](#). They exhibit highly contorted foliations, are at least 6m x 2m and 3m x 2m, respectively, and have mineralogies similar to the xenolith described at Locality 4. Thereafter, go back to the footpath in the glen and return to [Sligachan](#).

For **Locality 6** (the summit area of [Marsco](#)), continue up the northern, steep but grass-covered, side of Harker's Gully, following the felsite-marscoite contact, until the gully terminates against the SSE-trending ridge of [Marsco](#) (at approximately 500m OD). From here, stay on the north side of the gully and carefully follow the summit ridge, to the SE, walking over Glamaig Granite containing abundant xenoliths of the Marsco Summit Gabbro in its upper part. Continue to the summit of [Marsco](#) along the broad, grassy ridge.

From the summit area is a spectacular geological panorama. To the north, in the distance, the Paleocene plateau lava sequence of north Skye dips at a shallow angle to the west. The landslipped pinnacle of the [Old Man of Storr](#) can be observed on the steep scarp slope on the east part of the lava pile. Due north, in the immediate area, are the prominent red hills of [Glamaig](#) and [Beinn Dearg Mhór](#). Note the numerous alkali olivine dolerite dykes of the Beinn Dearg Type cutting the granite on [Beinn Dearg Mheadhonach](#). To the NE is [Loch Ainort](#), beyond which is the island of [Scalpay](#). To the east are the granites of the Eastern Red Hills Intrusive Centre. Dissecting the ridge of [Druim Eadar Dà Choire](#) is a prominent, linear, grass-covered feature marking the continuation of the Marscoite Suite Ring-dyke. To the SE is the irregular ridge of [Blà-bheinn](#) ('Blaven'), marking the eastern margin of the Cuillin Intrusive Centre. Beyond is [Strathaird](#), consisting of Jurassic strata capped by Paleocene plateau lavas. Between [Blà-bheinn](#) and [Marsco](#) is the red hill, [Ruadh Stac](#), composed of Meall Dearg Granite on the upper part and Ruadh Stac Granite below, both of the Srath na Crèitheach Intrusive Centre. To the south, beyond [Loch na Crèitheach](#), is [Camasunary Bay](#), which is separated from the head of [Loch Scavaig](#) by the peninsula of [Sgùrr na Stri](#) composed of layered basic rocks of the Cuillin Intrusive Centre. Beyond, from east to west, are the islands of Eigg, Muck, and part of Rum. To the SW is the main Cuillin ridge, composed of layered basic and ultrabasic rocks of the Cuillin Intrusive Centre, cut by cone-sheets and dykes of the regional swarm. In the foreground, on the other (SW) side of Glen Sligachan, is the red hill of [Meall Dearg](#), separated from the [Sgùrr na h-Uamha](#) and [Sgùrr nan Gilleann](#) group of peaks at the northern end of the Cuillin Hills by [Harta Corrie](#).

Proceed 200m SE along a much narrower ridge, until it broadens out once more.



Figure Red Hills 4.34: The summit of Marsco, looking SE towards Garbh-bheinn (left) and Blà-bheinn ('Blaven') (right). The Red Hill in the mid ground on the right-hand-side is Ruadh Stac.



Figure Red Hills 4.35: The summit of Marsco, looking NW towards Sgùrr nan Gilleann.

Locality 6 [NG 5074 2519]:

Here, the flat-lying contact relationship between the Marsco Summit Gabbro and the Glamaig Granite may be examined on the east side of the ridge, just below the summit ridge. In places, the granite net-veins the gabbro and xenoliths and xenocrysts derived from the gabbro occur within the granite. However, locally, the gabbro is chilled against the granite, suggesting that only a short period of time separated the emplacement of these two intrusions.

To leave the summit area, walk c. 400m SE, downhill, along the summit ridge to a prominent saddle. At this point, an [old deer fence](#), trending N-S, descends the steep but grassy slopes of [Coire nan Laogh](#) on the NE side of [Marsco](#). Follow the line of the fence into the corrie and proceed to the pass of [Màm a' Phobuill](#) between [Marsco](#) and [Ciche na Beinne Deirge](#). [Coire nan Laogh](#) was formed during the late-glacial readvance, which resulted in the scouring out of part of the Marsco Granite. The back (SW) wall of the corrie is composed of Glamaig Granite. Continue NW into [Coire Dubh Measarroch](#) to a path on the north side of the [Allt na Measarroch](#) and join the [Sligachan - Loch Coruisk](#) path at **Locality 2**. *En route*, note in the stream bed of the [Allt na Measarroch](#) good

exposures of the Glamaig Granite cut by alkali olivine dolerite dykes of the Beinn Dearg Type. On reaching **Locality 2**, follow the main path north to [Sligachan](#).



Figure Red Hills 4.36: Late-stage alkali olivine dolerite dykes intruded into the Beinn Dearg Mhór Granite on the SW side of Ciche na Beinne Deirge. View is towards the NE from Marsco.

Return to [Sligachan](#).

End of excursion. Time to enjoy a refreshment.