

West Skye 1:

Neist Point and Oisgill Bay



The prow of An t-Aigeach (the stallion) and Rubha na h-Eist (Neist Point) jutting westwards on the Duirinish peninsula into the Little Minch. The headland is dominated by a dolerite sill of the Paleocene Little Minch Sill Complex intruded into Middle Jurassic strata. Near the Point is the lighthouse designed by David Alan Stevenson, first lit on 1st November 1909, and automated in 1990. A place for spectacular sunsets with a backdrop of South Uist, Benbecula and North Uist.

Aspects covered: the Paleocene Neist Point Sill and the Biod Bàn Sill – Middle Jurassic strata – thermal alteration (formation of hornfels) by sills – Paleocene plateau lavas of the Ramasaig Formation – dykes of the Paleocene regional swarm - landslide in Moonen Bay.

Route: [End of public road](#) – [Camas nan Sidhean](#) (west of the [Allt na h-Uamha](#)) - [Neist Fhiadhaich](#) – [Neist Point](#) (Rubha na h-Eist) - [An t-Aigeach](#) - (return [Neist Fhiadhaich](#)) – [cliff top west of Mointeach nan Tarbh](#) – [view to Biod Bàn \(Oisgill Bay\)](#) (- [return end of public road](#)).

Distance: 6 kilometres.

Time: 6-7 hours.

General comments: A spectacular coastal location with wonderful examples of dolerite sills intruded into Middle Jurassic strata, magnificent sections of Paleocene lavas, and a classic coastal landslip.

The road journey out to [Neist](#) is significant and time spent there should include sunset if possible, when lighting on the prow of [An t-Aigeach](#) is at its best. Although this is a coastal location, tides are not relevant, as much of the geology is viewed from the crags around the peninsula.

[Neist](#) is located on the far west side of [Duirinish](#), 33 miles (53km) east of [Portree](#), which involves a vehicle journey of at least 1 hour, possibly much more during busy tourist months. From [Portree](#), take the Dunvegan (A87) road to [Borve](#) and then the Dunvegan (A850) road to [Dunvegan](#). From [Dunvegan](#), take the Glendale (Gleann Dail) (B884) road at [Lonmore](#) to the end of the public road at [Neist](#).

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Although there is good parking at the end of the public road, this can be a very popular and busy location.

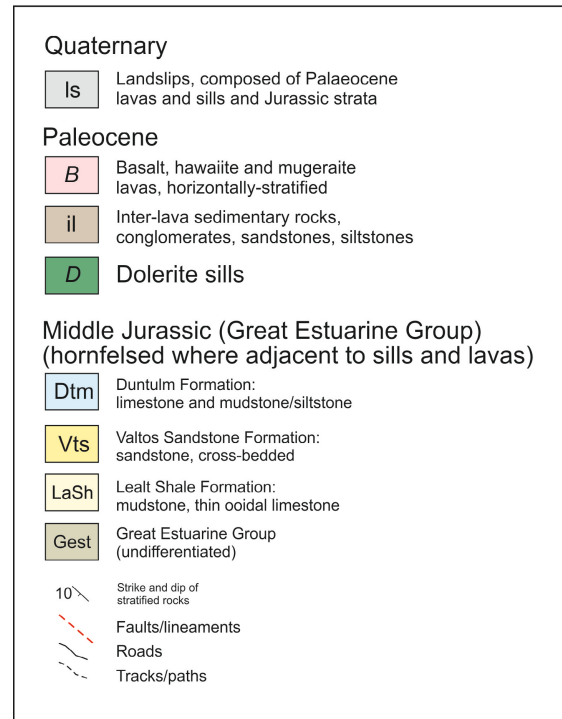
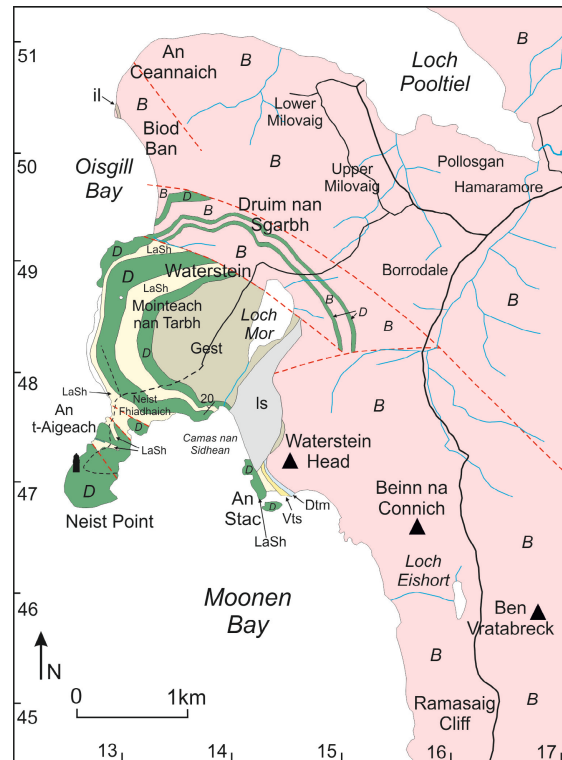


Figure West Skye 1.1: Summary map of the Neist Point area.



Figure West Skye 1.2: Annotated Google Earth® image of the Neist Point area.



Figure West Skye 1.3: Annotated oblique Google Earth® image of the Neist Point area.



Figure West Skye 1.4: Neist viewed towards the SW, with the Stevenson designed lighthouse.

From the parking area, walk ESE for c. 500m to the top of the cliff, west of where the [Allt na h-Uamha](#) forms a waterfall into [Camas nan Sidhean](#).

Locality 1 [NG 1375 4759]:

From here, there is a superb view, SE across [Moonen Bay](#) towards the cliffs of [Waterstein Head](#) and the [Ramasaig Cliff](#), dominated by flat-lying Paleocene plateau lavas. Most of this coastal section cannot be safely accessed, therefore the main points made here are described such that they can be viewed from afar.

The section at the [Ramasaig Cliff](#) is the type-section for the formation of that name and is dominated by multi-layered ('thin-bedded') compound (pahoehoe) basaltic lavas, together with some thicker simple (sheet) lavas (basaltic, although more evolved compositions are likely) with crudely developed prismatic joints. Many of the lavas have a distinctive orange-red lateritic top, formed by weathering during hiatuses in the volcanism. In the section through the lavas provided by these cliffs, there is a paucity of dykes of the NW-SE -trending regional swarm that would indicate the location of fissure feeder conduits.



Figure West Skye 1.5: Palaeocene lavas of the Ramasaig Formation on Waterstein Head and (in the distance) the Ramasaig Cliff. View is SE across Moonen Bay.

Two (rare) adjacent examples of such dykes, possibly linked at depth, are in this cliff section, due east, where it is set back from the coastline by a landslide that has developed in relatively recent (post-glacial) times. Both dykes have well-developed cooling joints and dip at steep angles, although not vertical. To the south of these dykes, the top of one of the prismatic-jointed lavas shows a significant amount of (palaeo-topographic) relief.



Figure West Skye 1.6: Lava section north of Waterstein Head, with examples of cross-cutting dykes. The coastal landslip is beyond where the inclined Middle Jurassic Lealt Shale Formation strata are exposed on the coast.



Figure West Skye 1.7: Detail of the dykes cutting the lavas north of Waterstein Head.

At the base of the [Waterstein Head](#) cliff, on the far side of [Camas nan Sidhean](#), the promontory of [Sgeir nan Sidhean](#) and the sea-stack of [An Stac](#), beyond, comprise a dolerite sill intruded into the upper part of the Middle Jurassic Great Estuarine Group. Only the strata overlying the sills are seen, the Valtos Formation and the Duntulm Formation.



Figure West Skye 1.8: The promontory of Sgeir nan Sidhean and the sea-stack of An Stac, composed of a Paleocene dolerite sill intruded into Middle Jurassic strata.

Along the coastline, on the near side of the landslip, Lealt Shale Formation strata of the Middle Jurassic Great Estuarine Group crop out from sea-level up to the level of the gently dipping platform of this locality. Interbedded with these strata is a sill at sea-level (see below) and a sill just below the level of the gently dipping platform. The dip of the Lealt Shale Formation increases to the north, gently dipping at sea-level to the south and steeper to the north, although the line of section that can be viewed makes it difficult to determine why, with one possibility being the proximity of a fault.

The sequence comprises weakly thermally metamorphosed interbedded dark shales and paler siltstones and impure limestones. Some bedding surfaces

are crowded with complete and broken bivalve shells. Locally discordant to the inclined bedding of the Lealt Shale Formation is a brown-red -weathering dolerite sill with poorly developed vertical cooling joints. Spheroidal (onion skin) weathering is locally present.



Figure West Skye 1.9: Inclined Lealt Shale Formation strata on the east side of Camas nan Sidhean, with landslip beyond.



Figure West Skye 1.10: Accessible inclined Lealt Shale Formation strata on the north side of Camas nan Sidhean. Iain Allison for scale.



Figure West Skye 1.11: Detail of a shale bed within the Lealt Shale Formation strata on the north side of Camas nan Sidhean. Pole c. 1m long.



Figure West Skye 1.12: Detail of a bedding surface of a siltstone within the Lealt Shale Formation crowded with complete and fragmented bivalve shells, north side of Camas nan Sidhean. Coin c. 20mm across.



Figure West Skye 1.13: Contact between a red-weathering dolerite sill intruded into inclined Lealt Shale Formation strata, north side of Camas nan Sidhean. Pole c. 1m long.



Figure West Skye 1.14: Detail of spheroidal weathering of the dolerite sill on north side of Camas nan Sidhean. Hammer c. 30cm long.

Return towards the parking area and descend the path, with some long steps, towards the lighthouse.

Locality 2 [NG 1316 4758]:

At [Neist Fhaidhaich](#), the view east towards [Camas nan Sidhean](#) reveals the dolerite sill at sea-level, below the Lealt Shale Formation. It is this sill that forms most of the [Neist peninsula](#). It has well developed prismatic joints

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and, overall, is bedding-parallel to the host sedimentary sequence (Lealt Shale Formation).



Figure West Skye 1.15: Dolerite sill below inclined Lealt Shale Formation on the north side of Camas nan Sidhean. View is towards the east from Neist Fhaidhaich.

The path continues down to the automated [lighthouse](#) and is worth visiting if time permits. The [rocky crags](#) at the end of the peninsula [\[NG 1268 4683\]](#) are accessible at low tide and enable a more detailed examine of this rather homogeneous dolerite.



Figure West Skye 1.16: The Stevenson-designed Neist Point lighthouse, viewed towards the south from An t-Aigeach.

Proceed, with care, to the top of the 80m OD hill, [An t-Aigeach](#) ('The Stallion'), on the west side of the peninsula.

Locality 3 [NG 1291 4747]:

Here, the sill crops out from sea-level to the top of the cliff and therefore is at least 80m thick. This vantage point offers excellent 360° views. Return to the path and safely regain the cliff-top on the west side of [Neist Fhaidhaich](#) at [\[NG 1301 4768\]](#), SW of where an old stone wall ends.

Locality 4 [NG 1301 4768]:

From here, it can be observed that the Lealt Shale Formation roof to the sill is preserved and, therefore, it is likely that the sill is considerably thinner, although it is possible that this is just an artifact and that the base of the sill is much deeper here relative to [An t-Aigeach](#). Irrespective, the complexity of the sill-country-rock contact is evident, with clearly discordant (i.e. not

bedding parallel) portions. Thermal alteration is locally significant, although it is not safe to examine these rocks and the cliff edge should not be approached.



Figure West Skye 1.17: An t-Aigeach on the west side of the Neist peninsula, composed of c. 80m of a dolerite sill. Note the pale weathering Lealt Shale Formation above the sill in the middle ground. View is towards the SW.



Figure West Skye 1.18: Pale weathering Lealt Shale Formation strata above the Neist Point sill. Note discordant contact between the sill and the country-rock.

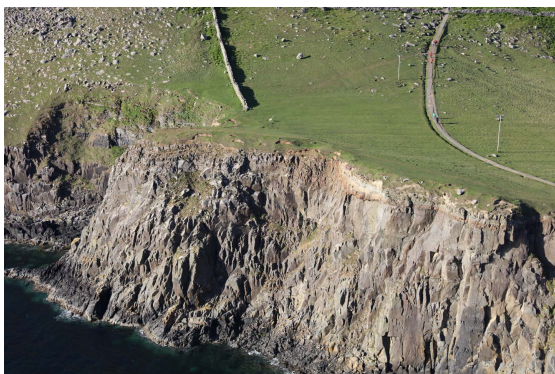


Figure West Skye 1.19: Pale weathering Lealt Shale Formation strata above the Neist Point sill, west of Neist Fhiadhaich. View is towards the NE from An t-Aigeach.

Return to the end of the public road (parking area) and follow the clifftop of [Mointeach nan Tarbh](#), initially towards the NW and then north. From here, the reward is the classic view of the Neist Peninsula, its dramatic cliff-lined west coast, and its lighthouse. It is best enjoyed

towards the end of the day, with a low sun over the Outer Hebrides.



Figure West Skye 1.20: An t-Aigeach and the Neist Point lighthouse, viewed towards the SW from the west coast of Mointeach nan Tarbh.

Follow the clifftop as it swings round to the NE, past a small (unnamed) [loch](#) to where a wonderful view across [Oisgill Bay](#) to the crags of [Biod Bàn](#) is revealed.

Locality 5 [\[NG 1319 4886\]](#):

Here, the Ramasaig Formation lavas are exposed in a c. 150m thick section. Careful examination reveals the presence of reddened tops to many of the lavas, palaeo-topographic relief to some of the lavas, lavas that are compound (i.e. of pahoehoe type, for example immediately above the middle of the section), and lavas that are single simple sheets (with more pronounced prismatic joints).

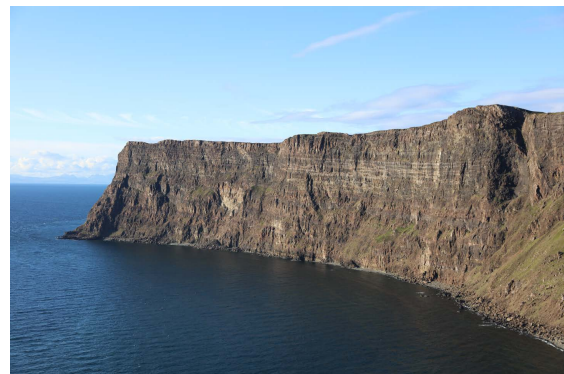


Figure West Skye 1.21: Biod Bàn cliffs in Oisgill Bay, composed of lavas of the Ramasaig Formation. Height of cliff is c. 150m. View is towards the NE.

In addition, there are sheets of dolerite, interpreted as part of the Little Minch Sill Complex, inclined towards the south, that cut the lavas. They are multiple, in that they are composed of more than one intrusion: the example that gives rise to the highest point on the skyline being the best. Here, the component sheets have mutual contacts with cooling joints orthogonal to their margins.



Figure West Skye 1.22: Inclined intrusions (sills) within the lava sequence forming the cliffs of Biod Bàn, Oisgill Bay.



Figure West Skye 1.23: Detail of Inclined intrusions (sills) within the lava sequence forming the cliffs of Biod Bàn, Oisgill Bay.

Return south across [Mointeach nan Tarbh](#) to the end of the public road.

End of excursion.