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## Camas Eilean Ghlais

[NB 967 157]

Potential GCR site

### Description

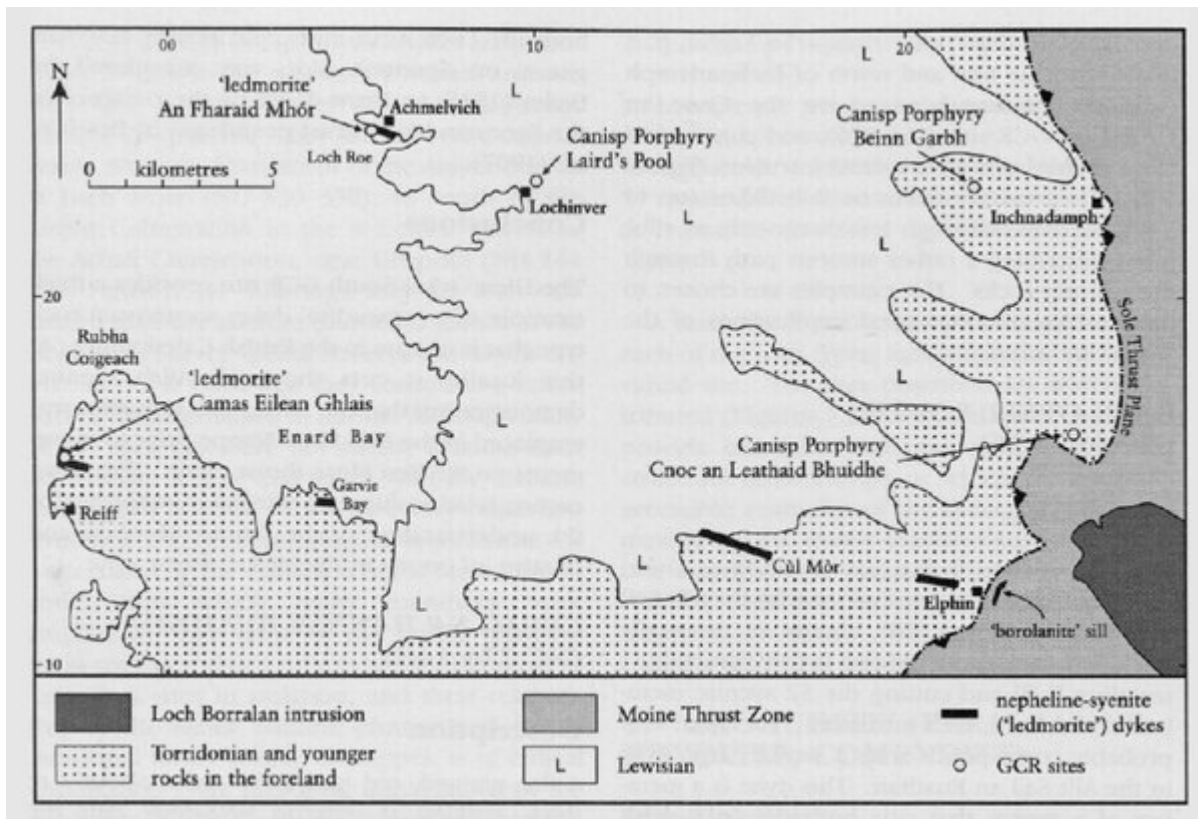
There are two sub-parallel dykes at Camas Eilean Ghlais (Figure 7.13), one presumably being a splay of its neighbour, striking approximately WNW. The larger can be found reasonably easily above the cliffs on the north side of this beautiful bay although, as a reddish-brown dyke cutting tilted Torridonian sandstones, it does not stand out very obviously. The presence of a high content of pink feldspars up to 2 mm in length is distinctive, however. Sabine (1953) provided a petrographical description and reported that the freshest specimens come from the more northern of the pair of dykes. An analysis was given by Horne and Teal (1892).

Sabine (1953) correlated the dykes at Camas Eilean Ghlais with a dyke at Garvie Bay [NC 039 139] and with a dyke that passes up through Lewisian into Torridonian on the NW flank of Cul Mor (shown on the Geological Survey special sheet for Assynt at [NC 140 129]) (Figure 7.13). The dyke can be traced almost to Elphin (to [NC 204 115]) where it is less than 1 km west of a sheet of 'borolanite', an outlier of the Loch Borralan intrusion, in Durness Group carbonate rocks occurring above and to the east of the Sole Thrust. The dyke rock is very altered at this locality.

### Interpretation and conclusions

The exposures in the Camas Eilean Ghlais site are at the western extremity of one of the two nepheline-syenite dykes that occur in the Foreland. These exposures of a unique dyke rock, here cutting Torridonian sandstone, demonstrate the spatial extent of the alkaline province, and tie the silica-undersaturated magmatism in Assynt firmly to the Foreland and the underlying mantle. The dyke can be traced sporadically to within 3 km of the main part of the Loch Borralan intrusion, in which it closely matches rocks of the 'ledmorite' type. Although continuity with the Loch Borralan intrusion cannot be proved directly, the alignment of this petrographically distinctive dyke with compositionally similar rocks east of the Sole Thrust, places important restrictions on the scale of displacements on this plane subsequent to the emplacement of the silica-undersaturated alkaline rocks.

### [References](#)



(Figure 7.13) Map of western Assynt showing distribution of nepheline-syenite ('ledmorite') dykes in the Foreland and their relationship to the Loch Borralan nepheline-syenites in the Moine thrust zone. GCR sites exemplifying the 'ledmorite' dykes and the Canisp Porphyry are also shown. The full extent of the Canisp Porphyry around Beinn Garbh is shown on Figure 7.15.