
Site no.: B35

Site name: Loch Avon

Grid reference: [NJ 02257 02519]

Locality: N & W slopes of Beinn Mheadhoin to the SE shore of Loch Avon

GCR Status: Confirmed

GCR No.: 708

Type: Natural exposures

Description: The Cairngorm Pluton is composed of a main and three subordinate phases. Although the Loch Avon area lies entirely within the Main Granite, it is underlain by three distinct varieties. Two of these are rich in microgranite and granite pegmatite veins that typically occupy vertical or steeply inclined joints in the host granite, and range in width from a few centimetres to several metres. The pegmatites are very coarse grained (up to 15 cm), comprising aggregates of quartz, alkali feldspar, muscovite and occasional biotite. Spectacular graphic intergrowths of quartz and orthoclase may be present, ranging from micropegmatite to coarse graphic granite. The quartz is dark in colour and includes smoky, citrine and cairngorm varieties, with distinctly euhedral crystals resulting from growth into open cavities. Cairngorm crystals are not confined to pegmatites, being also present in miarolitic cavities in the Main Granite, and in the crags on the east side of Loch Avon, according to Heddle (1901), are accompanied by topaz $\text{Al}_2\text{SiO}_4(\text{F}, \text{OH})_2$. Heddle (1901) also recorded that small crystals of beryl ($\text{Be}_3\text{Al}_2\text{Si}_6\text{O}_{18}$) are imbedded in cairngorms in the Loch Avon area, and describes a fist-sized mass of blue topaz in an old stream course of the River Avon.

The GCR volume 'Mineralogy of Scotland' (Smith and Livingstone, in prep) contains a full description of the site.

Justification: Granite pegmatites in the Loch Avon area of the Cairngorms are an established source of gem-quality cairngorm and beryl. Moreover, this is one of the few locations in the United Kingdom to yield blue topaz. Although the gemstones were the basis of an important 19th century industry in the district, precise locations of the workings in the Loch Avon area are not recorded. Rolled cairngorm, topaz and beryl crystals in the gravels of the River Avon, almost certainly derived from the Loch Avon area, now represent the most accessible source of material for research.

[References](#)