The Geology of Rum (NW Scotland) is not only mafic igneous layering.

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The varying igneous rock types observed and described from the Isle of Rum have greatly contributed to the development of modern views not only on the magmatic, as well as the temporal and structural evolution of the British Palaeogene Igneous Province but also on some fundamental igneous petrological processes. Rum is located on the Hebridean Terrane in NW Scotland. The igneous centre of Rum was emplaced at around 60.5 Ma (Hamilton et al., 1998), most likely in a relatively short period of time (ca. 500 000 years) (Troll et al., 2008). An elliptical ring fault, 12km across, bounds the igneous centre. Major volcanic activity on the Isle of Rum started with the eruption of felsic magmas consisting of extrusive rhyodacitic ignimbrites, and various dacitic to rhyolitic shallow-level intrusions that are all located close to the ring fault. The units of this early felsic phase of activity are cross-cut by basic and ultrabasic layered intrusions (gabbroic and peridotitic rocks) that form the famous Rum Layered Suite. Small picritic dykes (Meyer et al. 2009) intrude this system at a late stage in the evolution of the Rum basic-ultrabasic complex.

The Palaeogene volcanic and sub-volcanic rocks of Rum intrude an Archaean Lewisian gneiss basement overlain by Torridonian and Mesozoic sediments (Emeleus, 1997). The Archaean Lewisian gneiss complex has experienced several episodes of high-grade metamorphism producing, in this part of Scotland, geochemically distinct lower crustal granulite-facies and upper crustal amphibolite-facies gneisses during its long and often complex geological history. The Lewisian gneiss occurrences on Rum are confined to small outcrops within the Main Ring Fault zone. Compared to the mainland banded Lewisian gneisses, most of the gneisses on Rum have undergone intense thermal metamorphism as a consequence of the Palaeocene magmatism (Tilley, 1944).