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## Walk 6: Ordovician granodiorite at Castle Hill and quarry, Mountsorrel

**Ascent:** about 30–40 m

**Distance:** 2.5km

**Difficulty:** fairly easy on paths and heathland

**Start:** grid reference [SK 5830 1473]

This walk features excellent exposures in Ordovician igneous rocks belonging to the Mountsorrel *granodiorite*. Castle Hill is also a local landmark, with bold crags and a fine view over Mountsorrel village to the floodplain of the River Soar beyond.

There is limited parking around the small village green off Leicester Road, from where you can walk up Castle Hill Lane. On the crags around the hill (1) [SK 58200 14846], observe the texture formed by the silicate crystals in these rocks — they are coarse-grained and the crystals are not all of the same size (inequigranular). This is because the granodiorite magma crystallised slowly at depth, allowing some crystals to grow large, but then it began to cool, forming the smaller crystals. The large, white to pink crystals are of plagioclase feldspar; these are surrounded by aggregates of smaller crystals including quartz as grey, ‘glassy’ areas. The scattered, small, black shiny crystals are of biotite, a mica mineral rich in iron and magnesium.

On paths below the War Memorial (2) [SK 58232 14903], further *granodiorite* exposures show narrow, cross-cutting sheets and veinlets of very fine-grained pink granitic rock, called aplite.

To visit the Castle Hill Quarry SSSI (Site of Special Scientific Interest), return to the road, turning right, then walk northwards along Crown Lane.

At the corner where the lane goes down into Mountsorrel keep straight on, along the road owned by the quarry. Take the left turn, about 200m farther along, and enter the former Castle Hill Quarry, which at present is a landfill site undergoing restoration. Bear right on the gravel track, but first register your presence at the site office on your left. you will now need to wear a hard hat. Keep on up the incline to view rocks at the SSSI (3) [SK 57597 14962]. There is more Mountsorrel granodiorite to see, but the main feature is a narrow, near-vertical igneous intrusion, called a ‘dyke’, consisting of basalt. This rock is very dark grey, partly because it has a high content of silicate minerals, such as pyroxene, that are rich in iron and magnesium. you can also see plagioclase feldspar as tiny pale grey needles or laths. This dyke intrudes the Mountsorrel granodiorite and therefore belongs to a much younger igneous event, thought to be of Carboniferous age.

### Figures

(Figure 97) Walk 6: Ordovician granodiorite at Castle Hill and quarry, Mountsorrel. Map

(Figure 59) Castle Hill crags, overlooking Mountsorrel.

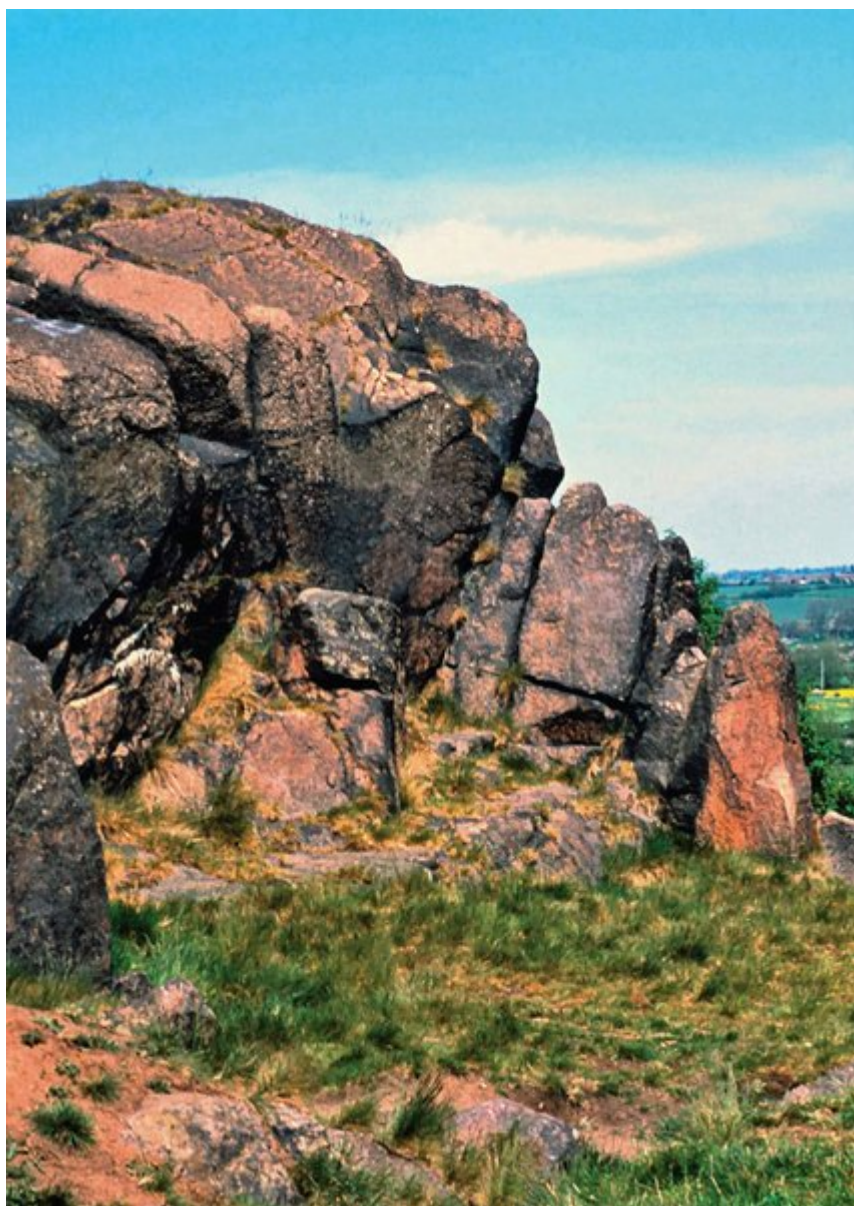
(Figure 60) Close up of a polished granodiorite slab.

(Figure 61) The same granodiorite with a thin vein of pink aplite.

(Figure 62) Basalt dyke at Castle Hill Quarry. Its contact with granodiorite is shown by the white line.



*National Forest — Forest walks.*



*Castle Hill crags, overlooking Mountsorrel.*



*Close up of a polished granodiorite slab.*



*The same granodiorite with a thin vein of pink aplite.*



*Basalt dyke at Castle Hill Quarry. Its contact with granodiorite is shown by the white line.*