
EDC 26: Craigangawn Quarry

Grid reference: [NS 52440 76916]

Site type: Artificial quarry works

Site ownership: Not known

Current use: Disused

Field surveyor: Sarah Arkley & Mike Browne

Current geological designations: None

Date visited: 2nd April 2009

Site map

(Figure 26) Craigangawn Quarry Location Map

Summary description

Disused igneous and agglomerate quarry, formerly used for roadstone. Located towards the eastern end of the Kilpatrick Hills

Lower Carboniferous volcanic vent. Many of the volcanic vents in the Kilpatrick Hills and Campsie Fells are demonstrably sources of the local Clyde Plateau Volcanic Formation lavas (Hall, 1998). The vent exposed in the old quarry face at Craigangawn Quarry displays an upward-opening funnel geometry, the vent is filled with coarse agglomerate and cuts through deposits of fine ash, all of which are visible.

Adjacent outcrops display excellent examples of columnar jointing in basaltic intrusions.

The site has good access and the floor of the quarry is largely grassed. However, care should be taken close to the main quarry face exposing the vent as loose material falls on a regular basis.

Good views of lava trap topography can be seen from here on the Kilpatrick Hills and on a clear day the Campsie Fells.

EDC 26: Stratigraphy and rock types

Age: Lower Carboniferous Formation: Clyde Plateau Volcanic Formation

Rock type: Tuff and agglomerate

Age: Lower Carboniferous Formation: Southern Scotland Dinantian Plugs and Vents Suite

Rock type: Agglomerate

Age: Lower Carboniferous Formation: Southern Scotland Dinantian Plugs and Vents Suite

Rock type: Plagioclase-olivine-clinopyroxene-macrophyric basalt

Age: Lower Carboniferous Formation: Southern Scotland Dinantian Plugs and Vents Suite

Rock type: Plagioclase-macrophyric basaltic rock

Assessment of site value

Access and safety

Aspect/Description

Road access and parking Parking for 1 car in a small layby on the road to the northeast of the quarry. Cross a barbed wire fence to enter the disused quarry

Safety of access Quarry floor is grassy, wet in places but faces are generally very accessible, a few trees in front of the main face which obscure the view a bit

Safety of exposure As with all quarries, assess each face before approaching. The main face particularly is weathering continuously and small pieces of material fall regularly down the face.

Permission to visit No permission sought although shepherd passed by with a wave.

Current condition Good

Current conflicting activities None

Restricting conditions None known

Nature of exposure Sub vertical quarry faces

Culture, heritage & economic

Historic, archaeological & literary associations

None known. Rating: 0.

Aesthetic landscape Pleasant with good view across to the Campsie Fells. Rating: 3.

History of earth sciences None known. Rating: 0.

Economic geology Worked for aggregate, disused for at least 30 years. Rating: 3.

EDC 26: Geoscientific merit

EDC 26: Craigangawn Quarry, High Craigton. Geoscientific merit.

Total Geoscientific merit score 31

Current site value

Community. Rating: 5.

Education. Rating: 7.

Fragility and potential use of the site

Fragility Weathering/Erosion

Potential use Research, Higher/Further Education, School, Multidisciplinary

Geodiversity value

This site displays excellent sections through a number of igneous intrusions, revealing not only their composition, but also their structure and geometry. Most importantly it exposes sections in one of the few volcanic vents in East Dunbartonshire. The quality of these exposures would be difficult to match regionally. Rating: 6.

Photographs

(Photo 157) View looking WSW towards the main quarry face which displays a complete section through the neck of a volcanic vent. The vent, of Lower Carboniferous age, may have been a source of the local Clyde Plateau Volcanic Formation lavas and cuts through fine ash and basaltic rocks of a similar age. This site is of particular importance as it not only displays the material found both within and outside the vent, but also illustrates the geometry of the vent. The educational value of the site would be greatly enhanced by the removal of the trees at the base of the section which obscure the best views (such as the one above) of the funnel-shaped neck of the vent. Otherwise the site is accessible and remarkably well exposed.

(Photo 158) View looking ENE from the top of the main quarry face showing the safe and accessible nature of the site. From here views can be seen across Strath Blane to the hills beyond, and of the 'trap' topography in the Clyde plateau Volcanic Formation lavas behind the site, on the lower slopes of the Kilpatrick Hills.

(Photo 159) View looking NNW across the main quarry face which exposes the agglomerate within the volcanic vent. In the distance, to the right of the picture, a basaltic plug displays well-developed columnar jointing.

(Photo 160) Outcrops of porphyritic basalt which are thought to represent a volcanic plug adjacent to the main vent. Looking NNE.

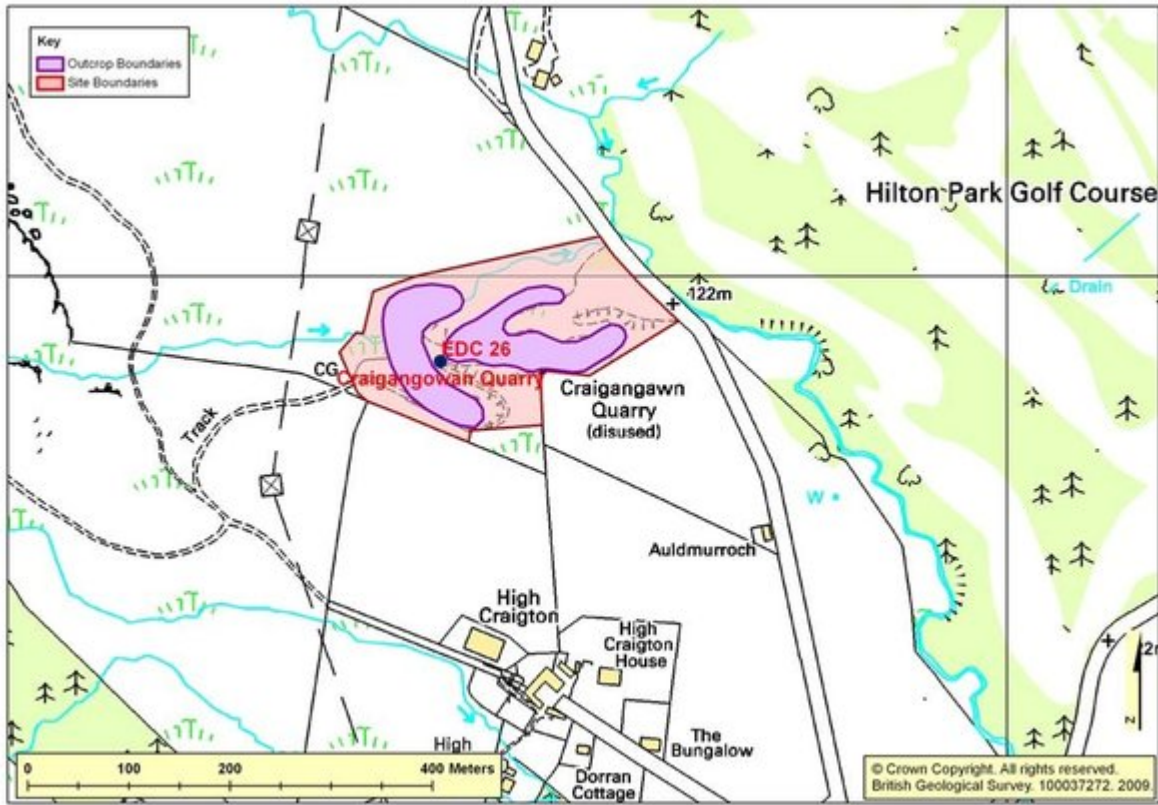
(Photo 161) Well developed, curved columnar jointing in the porphyritic basalt forming the volcanic plug. The fractures form as the hot magma internally contracts on cooling. The joints generally develop perpendicular to the top of the magma body. Looking NNE.

(Photo 162) Close-up the porphyritic basalt making up the volcanic plug. The very dark grey surface is freshly exposed and shows the true nature of the rock. The lighter brown surfaces are characteristic of a weathered basic igneous rock, as the iron- and magnesium-rich minerals in the rock oxidise.

(Photo 163) View of the main quarry face, displaying the agglomerate which infills the volcanic vent. The vent material is not well cemented and is constantly falling. Care should be taken close to the face.

(Photo 164) Close-up of the poorly sorted vent agglomerate, containing boulders up to 2 m in size.

[Bibliography](#)



(Figure 26) Craigangawn Quarry location map.

GeoScientific Merit	Rarity	Quality	Literature/ Collections	1st
Litho Stratigraphy	4	4	2	<input type="checkbox"/>
Sedimentology	0	0	0	<input type="checkbox"/>
Igneous/Mineral/ Metamorphic Geology	5	6	6	<input checked="" type="checkbox"/>
Structural Geology	0	0	0	<input type="checkbox"/>
Palaeontology	0	0	0	<input type="checkbox"/>
Geomorphology	2	2	0	<input type="checkbox"/>

EDC 26: Craigangawn Quarry, High Craighton. Geoscientific merit.



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(Photo 160) Outcrops of porphyritic basalt which are thought to represent a volcanic plug adjacent to the main vent. Looking NNE.



(Photo 161) Well developed, curved columnar jointing in the porphyritic basalt forming the volcanic plug. The fractures form as the hot magma internally contracts on cooling. The joints generally develop perpendicular to the top of the magma body. Looking NNE.



(Photo 162) Close-up the porphyritic basalt making up the volcanic plug. The very dark grey surface is freshly exposed and shows the true nature of the rock. The lighter brown surfaces are characteristic of a weathered basic igneous rock, as the iron- and magnesium-rich minerals in the rock oxidise.



(Photo 163) View of the main quarry face, displaying the agglomerate which infills the volcanic vent. The vent material is not well cemented and is constantly falling. Care should be taken close to the face.



(Photo 164) Close-up of the poorly sorted vent agglomerate, containing boulders up to 2 m in size.