

CITATION

SICCAR POINT
SITE OF SPECIAL SCIENTIFIC INTEREST
Scottish Borders

Site code: 1432

NATIONAL GRID REFERENCE: NT 811709

OS 1:50,000 SHEET NO: Landranger Series 67
1:25,000 SHEET NO: Explorer Series 346

AREA: 5.88 ha.

NOTIFIED NATURAL FEATURES

Geological:	Stratigraphy:	Non-marine Devonian
	Structural and metamorphic geology:	Caledonian Structures

DESCRIPTION

Siccar Point Site of Special Scientific Interest (SSSI) is located on the Berwickshire Coast, around 4 km south east from Cockburnspath. This nationally and internationally famous geological site is of great historical importance in the development of the science of geology. It is the locality at which Dr James Hutton, who published his findings in 1795, first appreciated the significance of unconformities in the geological record. An unconformity is a surface separating two strata representing an interval of time in which deposition stopped, erosion removed some rock, and then deposition resumed.

Siccar Point presents an impressive unconformity, with pale, horizontal Upper Old Red Sandstone lying on top of darker, older, vertical Silurian rocks of the Lower Palaeozoic period. The base of the younger rocks cuts across the bedding of the older rocks, showing that in the time interval between their formation, the older rocks were tilted and eroded. The site was used by Hutton to describe an unconformity and the cycle of deposition, folding, erosion, and further deposition. This is one of the most important localities in the development of geological principles and for the demonstration of a major break – a regional unconformity – in the geological column.

The Silurian Llandovery Series rocks consist of dark sandstones and shales. They are contorted by tight folds and cut by closely-spaced, parallel fractures produced by intense compressive stress imposed during the Caledonian mountain building episode (orogeny). The overlying Devonian Upper Old Red Sandstone, consisting of reddish breccias and sandstones, shows no such structures and displays only a gentle inclination produced during the much later and less intense Variscan orogeny. The unconformity separates rocks affected by the Caledonian orogeny (below) from rocks deposited after and not affected by the orogeny. This is the only well exposed example of this unconformity in the Southern Uplands and demonstrates clearly the contrasting effects of the Caledonian and Variscan orogenies.

NOTIFICATION HISTORY

First notified under the 1949 Act: 1956, 1961 and 1971

Re-notified under the 1981 Act: 4 June 1987 with an increase in area of 0.8 ha.

Notification reviewed under the 2004 Act: 24 March 2010

REMARKS

Measured area of site corrected (from 5.7 ha.)