

CITATION

NORTH ESK VALLEY SITE OF SPECIAL SCIENTIFIC INTEREST

Midlothian
Scottish Borders

Site code: 1233

NATIONAL GRID REFERENCE: NT 154582

OS 1:50,000 SHEET NO: Landranger Series 65
1:25,000 SHEET NO: Explorer Series 344

AREA: 43.59 hectares

NOTIFIED NATURAL FEATURES

Geological	: Stratigraphy	: Llandoverly
	: Palaeontology	: Arthropoda
Biological	: Lowland grassland	: Lowland acid grassland
	: Fens	: Valley fen

DESCRIPTION

North Esk Valley Site of Special Scientific Interest (SSSI) is located on the extreme southern edge of the Pentland Hills Regional Park, and lies immediately north of Carlops. This composite site in two parts comprises a 4 km long north-south stretch of the River North Esk and its tributary, the Gutterford Burn, and encompasses a large portion of the North Esk Reservoir. This site is of geological and botanical interest.

Rock sections in this valley provide a representative Lower Silurian (Llandoverly) sedimentological sequence of the Pentland Hills. These include the type section for part of the Reservoir Formation which dates from around 440 million years ago and contains characteristic endemic fossils. The Pentlands area was physically or ecologically isolated from the other parts of southern Scotland during the early Silurian but retained marine connections with Balto-Scandinavia. This site is therefore important for studies of early Silurian palaeogeography and for investigations of the tectonic evolution of southern Scotland.

This is a key site for studies of Silurian aged arthropods in several respects. It has a diverse eurypterid fauna with some twelve species known from here and the site represents the type locality for all of these species. These include a particularly rich stylonuroid eurypterid fauna, unusual stilt-legged walking forms (as opposed to normal swimming eurypterids). The site is also the type and only known locality for one of the earliest synziphosurine chelicerates and one of the earliest scorpions. The site is also a key historical locality with respect to fossil arthropod investigations, particularly those undertaken in the late 19th century.

The North Esk Valley is botanically one of the richest valleys in the Pentland Hills, and represents a scarce habitat type in this area. The lowland acid grassland and valley fen habitats present on the site are of national importance. The river valley sides are largely covered by species-poor acid grassland with extensive areas of flush communities along the valley floor, including an area of valley fen immediately below the reservoir dam. These areas are largely dominated by sharp-flowered rush *Juncus acutiflorus* and meadowsweet *Filipendula ulmaria* but also contain a wide variety of flowering plants. Small, shaded cliffs on the sides of the river meanders of the River North Esk have developed low growing tree cover and a diverse ground flora. Further diversity of the flora is provided by rocky outcrops along the length of the river. These include both dry sections and areas with surface water seepage over base-rich rocks supporting plants such as grass of Parnassus *Parnassia palustris*, common butterwort *Pinguicula vulgaris* and common rock-rose *Helianthemum nummularium*. An area of wet ground, rich in sedge species has developed on the Fairlie Hope Burn at the confluence of several small burns.

Several species uncommon within Midlothian and the Scottish Borders occur here including; few flowered spike-rush *Eleocharis quinqueflora*, fragrant orchid *Gymnadenia conopsea*, globeflower *Trollius europaeus*, pale sedge *Carex pallescens* and mountain everlasting *Antennaria dioica*.

NOTIFICATION HISTORY

First notified under the 1949 Act: 1952 and 1975 as part of the North Esk Reservoir Area SSSI.

Re-notified under the 1981 Act: 21 October 1988 as North Esk Valley SSSI

Notification reviewed under the 2004 Act: 10 February 2011

REMARKS

Measured area of site corrected (from 40.1 ha).