

SITE

Name: Leusdon Common

Parish: Widecombe in the Moor

Local Authority: Dartmoor National Park

National Grid Ref: SX 705729

OS Sheets: 1:50k 191 1:10k SX 77 SW

Locality Description: Located in Dartmoor National Park, the nearest town to the site is

Nature and Status of Site: The site is designated as a [Site of Special Scientific Interest](#) (SSSI).

Summary of Geological / Geomorphological Interest: Scattered outcrops and abundant boulders of contact metamorphosed country rocks and their contact with the Dartmoor Granite are exposed on Leusdon Common. They are interpreted as representing the nature of the uppermost wall and lower roof of this intrusion of Permo-Carboniferous age.

Safety Considerations: The area is open and gently slopes, high bracken and gorse cover is extensive. There are no high rock faces and the contact rocks are seen mainly as boulders embedded in the ground.

Educational Age Groups: AS/A2 Level/College Students, Undergraduate University research, professional or amateur geologist.

Parking and Access: There are a number of buses running to Ashburton from Exeter and Plymouth. For bus and train timetables, visit www.traveline.org.uk. The site lies within Dartmoor National Park. Alternatively there are a number of footpaths in the area leading to the common. Parking is limited.

References:

Brammall, A. and Harwood, H.F. 1932. The Dartmoor granites: their genetic relationships. Quarterly Journal of the Geological Society of London 88, 171-237.

Dearman, W.R. 1962. Dartmoor – the North-West margin and other selected areas. Geologist's Association Guide 33, Benham and Co., Colchester.

Floyd, P. A, et al. 1993. Igneous Rocks of South-West England. GCR Series No.5, Joint Nature Conservation Committee, Peterborough, and Chapman and Hall, 256pp.

Reid, C., Barrow, G., Sherlock, R.L., Macalister, D.A., Dewey, H. and Bromehead, C.N. 1912. Memoirs of the Geological Survey, England and Wales, Explanation of Sheet 338, HMSO, London, 102pp.

Online References:

For further information on the geology and geomorphology of Dartmoor go to: www.dartmoor-npa.gov.uk/

A report of the site is available via: www.jncc.gov.uk

Detailed Geology: A striking feature of the site is its demonstration of xenoliths of the country rock, showing all stages of assimilation and typically enclosed within a granite host. These xenoliths originated by the 'stoping' or spalling off of solid fragments of country rock at their contact with the granite, and their incorporation into the molten granite magma through a process of migmatitisation - a process requiring a high temperatures, pressures and, crucially, a high volatile content (especially water).

Across the common different granite/ country rock relationships can be seen. The granite and country rocks are intimately interleaved – a feature which reflects repeated injection of molten granite magma and the response of the solid country rocks by plastic deformation. The latter sometimes showing remarkable swirling patterns.

Leusdon Common is the best site in the south-west England to study these complex processes, which are unusual for a relatively high level and therefore relatively 'cool' granite body. Although a unique site, very little has been published on the remarkable geology exposed.

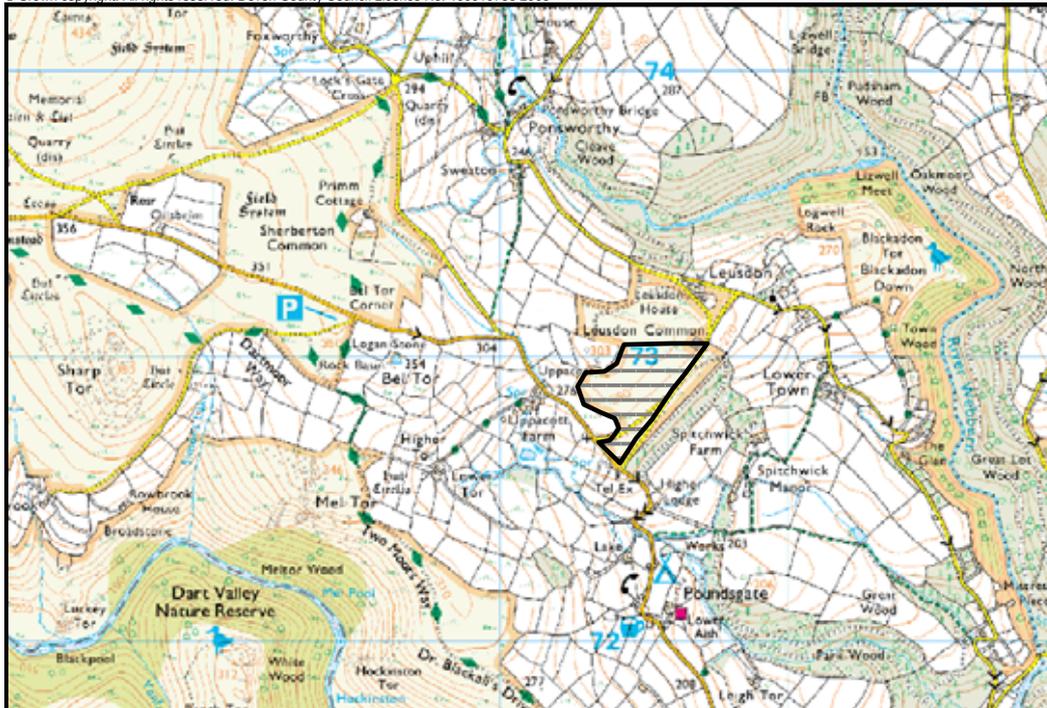
LOCATION PLAN

LEUSDON COMMON

WIDECOMBE IN THE MOOR, DARTMOOR NATIONAL PARK

National Grid Ref: SX 705729

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Scale 1:28000



Approx SSSI Boundary

Parking and Access

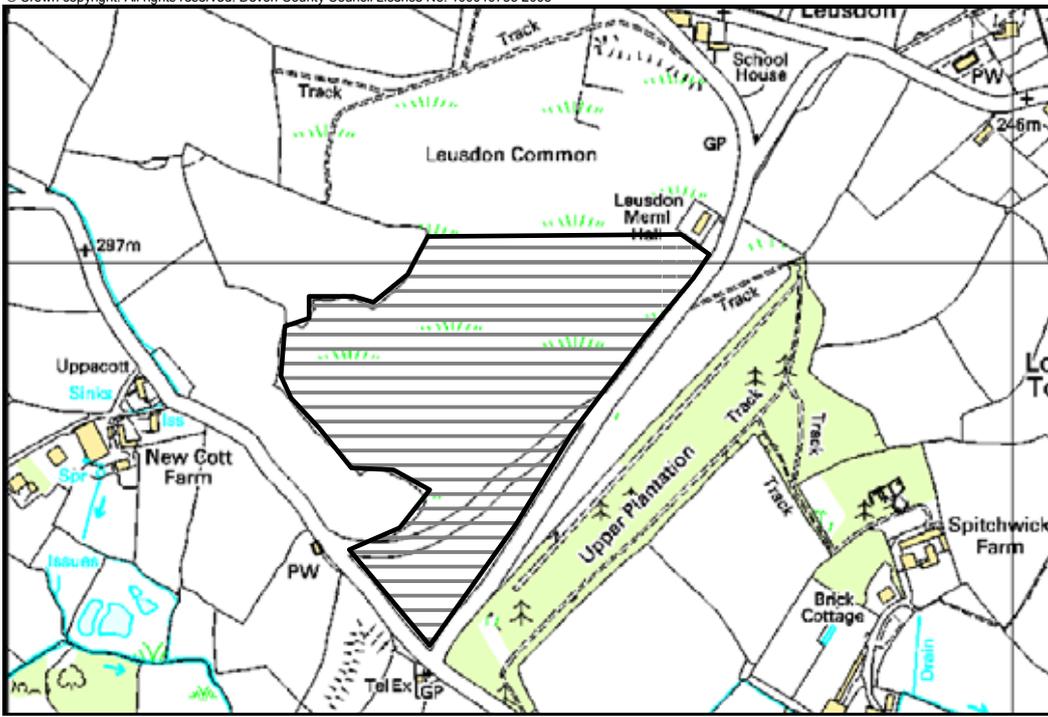
- There are a number of buses running to Ashburton from Exeter and Plymouth. For bus and train timetables, visit www.traveline.org.uk.
- Alternatively there are a number of footpaths in the area leading to the common. Parking is limited around the common.

SITE PLAN

LEUSDON COMMON WIDECOMBE IN THE MOOR, DARTMOOR NATIONAL PARK

National Grid Ref: SX 705729

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Scale 1:8000



Approx. SSSI
boundary

Main points of Interest

- The most important site in SW England for showing migmatitisation of country rocks as they were assimilated by a granite magma.