

Site Name**Barton Hills, near Barton-le-Clay****BEDFORDSHIRE LOCAL GEOLOGICAL SITE DESIGNATION FORM****SITE LOCATION, ACCESS, OWNERSHIP, STATUS & SUITABILITY**(1) **Name of site:** Barton Hills, near Barton-le-Clay, Bedfordshire(2) **National grid reference:** TL 090 298(3) **Unitary authority:** Central Bedfordshire**(4) Site access and local amenities**

The site is accessed from the A6 by turning into Hexton Road and then right into Church Road. Parking for about six cars is available near St Nicholas' church (TL 085 304). Parking beyond the church is not permitted. The site is reached on foot past the church where it passes into a public footpath. Follow the footpath straight on – not the bridleway to the left.

The site is also a National Nature Reserve and SSSI for unimproved chalk grassland. It enjoys full public access and is managed by Natural England. There are no facilities on site, although there are shops and pubs in Barton-le-Clay.

(5) **Site ownership:** Leased and managed by Natural England.(6) **Mineral rights ownership:** N/A(7) **Is permission needed to access the site?**

a. No ✓

b. Yes

(8) **Site status:** Active

Disused

Historical

Managed ✓

Restored

New

Other

(9) **Suitable for visits by:**

a. General public ✓

b. Small parties ✓

c. Large parties ✓

d. Primary school ✓

e. National Curriculum ✓

f. AS/A-Level ✓

g. Adult ✓

h. Undergraduate teaching ✓

i. Research ✓

(10) **Site suitable for frequent visits by parties?**

a. No

b. Yes ✓

(11) **Should collecting and hammering be encouraged at the site?**

a. No ✓

b. Yes

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SITE DESCRIPTION		
(12) Exposure type:	a. Inland natural outcrop ✓	b. Road cutting
c. Railway cutting	d. Active quarry/pit	e. Disused quarry/pit
f. Old mine workings	g. Mine dump	h. Active mine
(13) Dimensions of area of interest: 47 hectares (116 acres)		
(14) Main interest(s): a. Structural	b. Geomorphological ✓	c. Mineralogical
d. Palaeontological	e. Petrological ✓	f. Stratigraphical ✓
g. Other: Hydrological - natural spring ✓		
(15) Summary description and reason for designation An evocative scenery displaying excellent chalk landscape features including a dramatic coombe, dry valleys, soil creep, frost shattering, small natural exposures of Lower and Middle Chalk and a natural spring which forms a small stream from source.		
(16) What threats exist for the site? Any development or overuse of the site that damages the spring (e.g. children damming the stream) or geomorphological features (e.g. trees, fencing, buildings, etc.). These threats are low due to its management by Natural England as chalk grassland, with minor woodland nearer the valley bottom and stream area.		
(17) What additional work is required to enhance the site? The old chalk quarry located on the B&LGG leaflet should be investigated as it might be possible to clear a section in order to view the Chalk at outcrop. However, as the quarry lies within the Nature Reserve this would have to be negotiated with a well-defined plan and funding in mind. An interpretation board would also enhance the site to visitors. Depending on Natural England's policy on boards, a suitable location would be near or just inside the gate of the reserve. Scientific research, particularly addressing palaeo-environmental changes, could be undertaken in the coombe deposits. Although some of this type of research has been done in Buckinghamshire, around Ivinghoe Beacon, it has not been extended into this area. This site could be incorporated as one of the 'Chiltern Trails' if funding by the Chilterns Area of Outstanding Natural Beauty (AONB) was available.		
(18) Published/unpublished references to the site and wider area Friend, P. 2008. <i>Southern Britain</i> . HarperCollins Publishers. 414 pages. Shephard-Thorn, E.R. <i>et al.</i> 1994. <i>Geology of the country around Leighton Buzzard - Memoir for 1:50 000 geological map Sheet 220 (England and Wales)</i> . HMSO, London. <i>Barton Hills SSSI notification</i> . 1985. English Nature. www.english-nature.org.uk <i>Cretaceous Chalk: Barton Hills</i> . B&LGG information leaflet. www.bedsrigs.org.uk <i>Discover the Chilterns</i> . www.chilternsaonb.org		

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SCIENTIFIC SIGNIFICANCE		
(19) Does the site exhibit features of local/regional importance?	a. No	b. Yes ✓
(20) Is the site already a designated SSSI?	a. No	b. Yes ✓ (Biological)
(21) Collector interest: a. Rare species	b. Common species	c. Local significance
	d. Regional significance	e. National significance
(22) List of confirmed fossils, minerals, etc: N/A		

HISTORICAL/AESTHETIC VALUE		
(23) Does the site have important historical associations?	a. No ✓	b. Yes
(24) Does the site form a key part of an attractive or evocative landscape?	a. No	b. Yes ✓
<p>(25) Full description of site and its significance</p> <p>The Barton Hills National Nature Reserve lies within the Chilterns AONB. It is an evocative landscape that displays excellent chalk-related geomorphological features, including a dramatic coombe, dry valleys, soil creep, frost shattering, and a natural spring.</p> <p>The coombe is a particularly well-developed example with very steep sides. It contains a thick sequence of deposits in the valley floor that will have preserved environmental evidence (e.g. pollen and snails) for climate changes during the Ice Age. These deposits are of crucial importance to future research.</p> <p>Features associated with soil creep are invaluable for training or teaching. The soil creep 'benches' are very well developed at this site, as are small scars associated with mass movement and gravitational failure.</p> <p>The natural spring is a very interesting feature, particularly as it is the only example of a highly visible spring on public land in Bedfordshire. The spring emerges at the junction between the Middle Chalk and the less permeable, clay-rich Lower Chalk. It is therefore a good stratigraphical marker as well.</p> <p>The site is already an SSSI for chalk grassland; there is a good link between rock type, soil type and the associated plant and animal communities.</p>		

RECORDER'S DETAILS	
(26) Name: Dr Jill Eyers	(27) Organisation: Consultant geologist working on behalf of B&LGG
(28) Date of designation: April 2006	

CURRENT SITE CONDITION
(29) Site condition at February 2009 is GOOD; assessed by Malcolm Oliver.

NOTES
(30) Form revised and updated by Dr Martin Whiteley, B&LGG Local Geological Site Manager, November 2009. For further details contact Anne Williams: annew36@hotmail.com