

**Site Name**

**New Trees Quarry, near Heath & Reach**

**BEDFORDSHIRE LOCAL GEOLOGICAL SITE DESIGNATION FORM**

**SITE LOCATION, ACCESS, OWNERSHIP, STATUS & SUITABILITY**

(1) **Name of site:** New Trees Quarry, near Heath & Reach, Bedfordshire

(2) **National grid reference:** SP 931 275

(3) **Unitary authority:** Central Bedfordshire

**(4) Site access and local amenities**

North of Shenley Hill Road, 1km SE of Heath & Reach. Parking not possible outside gates, but possible inside quarry entrance if gates are open. Visits must be arranged in advance and are accompanied. No facilities on site (nearest amenities are in Leighton Buzzard).

(5) **Site ownership:** Sibelco UK Ltd

(6) **Mineral rights ownership:** Sibelco UK Ltd

(7) **Is permission needed to access the site?**

a. No

b. Yes ✓

**If yes, from whom?**

Quarry Manager  
Tony Pigeon  
Double Arches Quarry  
Eastern Way  
Heath & Reach  
Bedfordshire  
LU7 9LF

Tel: 01525 234 200

(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 ✓

**Site Name****New Trees Quarry, near Heath & Reach**

SITE DESCRIPTION		
(12) <b>Exposure type:</b>	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) <b>Dimensions of exposure of interest:</b> 300m length face		
(14) <b>Main interest(s):</b> a. Structural	b. Geomorphological	c. Mineralogical
d. Palaeontological ✓	e. Petrological ✓	f. Stratigraphical
g. Other: Sedimentological ✓		
<b>(15) Summary description and reason for designation</b> A good section through the Lower Cretaceous Woburn Sands Formation ('Silver Sands') and a rare opportunity to see the 'Carstone Conglomerate' at the base of the Gault Clay Formation.		
<b>(16) What threats exist for the site?</b> The site will be lost when the pit is backfilled and restored.		
<b>(17) What additional work is required to enhance the site?</b> The quarry has not been active for several years and the exposure is deteriorating. Because of access difficulties and pending restoration plans it is unlikely that this site will remain a viable Local Geological Site and therefore an interpretation board is not justified. However, an archive exercise involving logging the current exposures, taking sand peels, photographic records and collecting the Gault fauna would be useful.		
<b>(18) Published/unpublished references to the site and wider area</b> Bristow, C. R. 1963. <i>Upper Jurassic and Lower Cretaceous rocks in the areas between Aylesbury (Bucks) and Leighton Buzzard (Beds)</i> . Unpublished PhD Thesis, University of London. Buck, S. 1991. <i>A 3-D view of shallow marine tidal sands: the Lower Cretaceous Woburn Sands at Leighton Buzzard</i> . PESGB Field excursion booklet. Evers, J. 1991. The influence of tectonics on early Cretaceous sedimentation in Bedfordshire, England. <i>Journal of the Geological Society of London</i> , <b>148</b> , 405-414. Evers, J. 1992. <i>Lithostratigraphy of the Lower Greensand and Gault (Lower Cretaceous) of the Bedfordshire Province, England</i> . Unpublished PhD Thesis, Open University. Evers, J. 1995. Correlation of the Lower Greensand (Woburn Sands and Carstone) of the Bedfordshire Province, England. <i>Cretaceous Research</i> <b>16</b> , 385-413. Owen, H. G. 1972. The Gault and its junction with the Woburn Sands in the Leighton Buzzard area, Bedfordshire and Buckinghamshire. <i>Proceedings of the Geologists' Association</i> , <b>83</b> , 287-312. Shephard-Thorn, E. R. <i>et al.</i> 1986. An outline study of the Lower Greensand of parts of south-east England. <i>Technical Report of the British Geological Survey</i> , WF/MN/86/1. Shephard-Thorn, E. R. <i>et al.</i> 1994. <i>Geology of the country around Leighton Buzzard</i> . Memoir for the 1:50 000 geological sheet 220 (England and Wales), London, HMSO. Smart, P.J. 2007. Anacoracid shark teeth (Chondrichthyes, Vertebrata) from the early Cretaceous Albian sediments of Leighton Buzzard, south-central England. <i>Proc. of the Geologists' Association</i> , <b>118</b> , 375-380.		

**Site Name****New Trees Quarry, near Heath & Reach****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
(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: Gault Clay fossils of the <i>spathi</i> (early Middle Albian) to <i>cristatum</i> (early Upper Albian) Subzones.		

**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
(25) Full description of site and its significance Shephard-Thorn <i>et al.</i> (1994, page 48 and Plate 4) record up to 9m of fine- to coarse-grained, slightly pebbly 'Silver Sands' with sedimentary structures such as planar cross-bedding, ripple cross-sets and bioturbation. The overlying 'Carstone Conglomerate' comprises 'boxstone' nodules and fragments of 'carstone' in a greenish ochreous sandy clay matrix. Above that, up to 4m of blue-grey calcareous mudstone with phosphatic nodules characterises the Gault Clay.		

**RECORDER'S DETAILS**

(26) Name: Dr Jill Eyers	(27) Organisation: Consultant geologist working on behalf of B&LGG
(28) Date of designation: January 2007	

**CURRENT SITE CONDITION**

(29) Site condition at February 2009 is POOR DECLINING; assessed by Jill Eyers.
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**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
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