

Site Name

Quest Pit, Stewartby

BEDFORDSHIRE LOCAL GEOLOGICAL SITE DESIGNATION FORM

SITE LOCATION, ACCESS, OWNERSHIP, STATUS & SUITABILITY

(1) **Name of site:** Quest Pit, Stewartby, Bedfordshire

(2) **National grid reference:** TL 031 426

(3) **Unitary authority:** Bedford

(4) Site access and local amenities

The site is only accessible with the permission of Hanson Brick. It is no longer an active pit and its future is uncertain. One possible use of the site is as a visitor centre, based on a fresh water aquarium and research facility.

(5) **Site ownership:** Hanson Brick

(6) **Mineral rights ownership:** Hanson Brick

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

a. No

b. Yes ✓

If yes, from whom?

Hanson Brick
Stewartby
Bedford
Bedfordshire
MK43 9LZ

Tel: 08705 258 258

(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 exposure of interest: Rapidly degrading face about 100 x 6m		
(14) Main interest(s): a. Structural	b. Geomorphological	c. Mineralogical
d. Palaeontological ✓	e. Petrological	f. Stratigraphical ✓
(15) Summary description and reason for designation This quarry opened in 1983 and it was the last active brick pit in Bedfordshire, ceasing operations in 2008. It provides access to the highly fossiliferous lower and middle parts of the Oxford Clay succession and drainage trenches allow occasional access to the underlying Callovian Kellaways Beds.		
(16) What threats exist for the site? Degradation of the remaining clay faces and flooding of the quarry floor reduces the value of this site significantly. Plans are being discussed to turn it into a version of the Eden project for aquatic organisms.		
(17) What additional work is required to enhance the site? None other than monitoring the future use of the site since this will determine whether its continued designation as a Local Geological Site is appropriate.		
(18) Published/unpublished references to the site and wider area Page, K.N. 1988. <i>The stratigraphy and ammonites of the British Lower Callovian</i> . Unpublished PhD Thesis, University College London, University of London. <i>Bedfordshire's sea monsters!</i> B&LGG information leaflet. www.bedsrigns.org.uk <i>Bedfordshire's geological industries – Brickmaking.</i> B&LGG information leaflet. www.bedsrigns.org.uk <i>Jurassic Clays: Marston Vale.</i> B&LGG information leaflet. www.bedsrigns.org.uk		

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: See below		

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>Quest pit was the last remaining active brickworks in Bedfordshire extracting Oxford Clay. Historically the industry has been of immense importance to the county and the Stewartby works was at one point the largest brickworks in the world. The Marston Vale area once boasted around 111 chimneys. The village of Stewartby was named after the company director Sir Malcolm Stewart, and was designed as a works village. Hanson Brick has inherited the photographic records of the London Brick Company which provides extensive documentation of the industry, the pits and its workers. The Forest of Marston Vale Centre also contains many records in the form of recorded oral histories from brickyard workers.</p> <p>The pit has produced the partial skeletons of several species of marine reptiles including <i>Muraenosaurus</i>, <i>Cryptoclidus</i>, <i>Ophthalmosaurus</i> and <i>Pelenoustes philarchus</i>. It has also provided odd bones and teeth from the larger pliosaurs such as <i>Liopleurodon</i> and <i>Simolestes</i>. Bones from the marine crocodile <i>Metriorhynchus</i> can be found as well as much rarer bones from <i>Steneosaurus</i>. Some bones show interesting features in the form of bite marks or repaired injuries. Fish remains are also recovered, including parts of <i>Lepidotes</i> and <i>Caturus</i>. Fin spines and teeth of <i>Hybodus</i> and <i>Asteracanthus</i> represent sharks. Recently an amateur collector discovered a partial dinosaur skeleton. This consisted of a large part of the rear of the animal, including most of the back legs, vertebrae, scutes and part of the pelvis. Dr David Martill identified this specimen as <i>Sarcolestes leedsi</i>. This is the only instance of the dinosaur outside Peterborough, the first dinosaur remains from the Oxford Clay of Bedfordshire and the only dinosaur found in the Oxford Clay for about the last 150 years.</p> <p>As well as vertebrate remains the site also produces invertebrate fossils including well-preserved ammonites, which makes the site stratigraphically valuable. Variation in sedimentation rate has produced well-defined pyrite-rich shell beds sandwiched between layers of laminated clays. These are especially visible on weathered areas of the face where the shell beds are picked out in orange. These different environments and the fauna can also be studied.</p>		

RECORDER'S DETAILS	
(26) Name: Chris Andrew	(27) Organisation: Bedford Museum
(28) Date of designation: April 2006	

CURRENT SITE CONDITION
(29) Site condition at March 2009 is POOR DECLINING; assessed by Martin Whiteley.

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