

Site Name

Deepdale Quarry, Potton

**BEDFORDSHIRE LOCAL GEOLOGICAL SITE DESIGNATION FORM**

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

(1) **Name of site:** Deepdale Quarry, Potton, Bedfordshire

(2) **National grid reference:** TL 212 487

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

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

Access is off Carthagera Road which is to the SW of Potton. There is a wide, gated entrance to the site and plenty of parking spaces inside. Planning application to turn this former quarry into a camping ground has been submitted recently with the aim of making the site accessible in 2010-11. Meanwhile, contact the site owner in writing to arrange visits.

(5) **Site ownership:** Not known

(6) **Mineral rights ownership:** N/A

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

a. No

b. Yes ✓

**If yes, from whom?**

(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) <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> Main N-S trending face is about 100m long and 7m high.  |                              |                      |
| (14) <b>Main interest(s):</b>   | a. Structural                | b. Geomorphological  |
|   | c. Mineralogical             |                      |
|   | d. Palaeontological          | e. Petrological ✓    |
|   | f. Stratigraphical           |                      |
|   | g. Other: Sedimentological ✓ |                      |
| (15) <b>Summary description and reason for designation</b><br>This former quarry has been partially landscaped and planning permission is being sought to turn it into a camping ground. The principal exposure is a long, N-S trending cliff developed in the Lower Cretaceous Woburn Sands Formation. An excellent variety of sedimentological features are preserved and access is both safe and easy, making this an ideal Local Geological Site.   |                              |                      |
| (16) <b>What threats exist for the site?</b><br>None envisaged at present.  |                              |                      |
| (17) <b>What additional work is required to enhance the site?</b><br>An information board and/or leaflet would enhance its educational value. Large fallen slabs of cemented sandstone could be removed from the base of the cliff and placed in a more accessible position.  |                              |                      |
| (18) <b>Published/unpublished references to the site and wider area</b><br>Allen, J. R. L. 1981. Lower Cretaceous tides revealed by cross-bedding with mud-drapes. <i>Nature</i> , <b>289</b> , 579-581.<br>Eyers, J. 1991. The influence of tectonics on early Cretaceous sedimentation in Bedfordshire, England. <i>Journal of the Geological Society of London</i> , <b>49</b> , 405-414.<br>Moorlock, B.S.P. et al. 2003. <i>Geology of the Biggleswade district – a brief explanation of the geological map Sheet 204 Biggleswade (England and Wales)</i> . B&B Press Ltd, Rotherham.<br>Shephard-Thorn, E. R. et al. 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.<br><i>The Lower Greensand – for geologists</i> . B&LGG information leaflet. www.bedsrigs.org.uk |                              |                      |

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

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| <b>HISTORICAL/AESTHETIC VALUE</b>  |         |        |
|--|---------|--------|
| (23) <b>Does the site have important historical associations?</b>  | a. No ✓ | b. Yes |
| (24) <b>Does the site form a key part of an attractive or evocative landscape?</b>   | a. No ✓ | b. Yes |
| (25) <b>Full description of site and its significance</b><br>The site provides a good exposure of the Lower Cretaceous Woburn Sands Formation in a near-continuous low cliff face that is partially obscured by recent slumping. Vivid orange-brown sands and sandstones arranged in multi-storey, tabular cross-beds predominate. A wide variety of other features are present, such as ripples, clay drapes, channels, slumps, pale leached horizons, pebble beds and 'boxstone' concretions. Spectacular trace fossils are well preserved, as are complex patterns of iron staining caused by the mobilisation of iron-rich fluids. An ecological succession can be demonstrated in various parts of the quarry as the bare rock becomes progressively colonized by plants. |         |        |

| <b>RECORDER'S DETAILS</b>                     |   |
|---|---|
| (26) <b>Name:</b> Dr Jill Evers               | (27) <b>Organisation:</b> Consultant geologist working on behalf of B&LGG |
| (28) <b>Date of designation:</b> January 2007 |   |

| <b>CURRENT SITE CONDITION</b>  |
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| (29) Site condition at February 2009 is GOOD DECLINING; assessed by Martin Whiteley. |

| <b>NOTES</b>   |
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| (30) Form revised and updated by Dr Martin Whiteley, B&LGG Local Geological Site Manager, November 2009. For further details contact Anne Williams: <a href="mailto:annew36@hotmail.com">annew36@hotmail.com</a> |