

**Site Name**

**Broom Quarry, near Biggleswade**

**BEDFORDSHIRE LOCAL GEOLOGICAL SITE DESIGNATION FORM**

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

(1) **Name of site:** Broom Quarry, near Biggleswade, Bedfordshire

(2) **National grid reference:** TL 172 441

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

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

Site access is via the main works with a member of staff accompanying visitors at all times. There are toilets and changing facilities in the main site office, but these are some distance from the working faces. The gate to the quarry is located off the A1 Biggleswade roundabout, past the discount store and next left signed 'Broom'. The site entrance is immediately on the right.

(5) **Site ownership:** Tarmac Ltd.

(6) **Mineral rights ownership:** Tarmac Ltd.

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

a. No

b. Yes ✓

**If yes, from whom?**

Quarry Manager  
David Saunders  
Gypsy Lane  
Nr Biggleswade  
SG18 9AT

Tel: 09456 044 449

(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> Highly variable, depending on the state of the workings.		
(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> A sequence of Quaternary glaciofluvial sands and gravels, including a fossiliferous organic layer, cryoturbated horizons and a wide variety of sedimentary structures.		
(16) <b>What threats exist for the site?</b> Restoration work (lake creation and backfilling) as each phase of sand and gravel extraction is completed. In general this site is not suitable for long term public access because the restoration plan calls for any remaining sand faces to be safely graded and planted.		
(17) <b>What additional work is required to enhance the site?</b> Researchers periodically visit the site but no detailed account of the sediments has yet been published. The transient nature of the exposures makes this a difficult site to document.		
(18) <b>Published/unpublished references to the site and wider area</b> Gao, C. <i>et al.</i> 1998. Middle Devensian deposits of the Ivel valley at Sandy, Bedfordshire, England. <i>Proceedings of the Geologists' Association</i> , <b>109</b> , 127-137. Moorlock, B.S.P. <i>et al.</i> 2003. Geology of the Biggleswade district – a brief explanation of the geological map Sheet 204 Biggleswade. Keyworth, Nottingham: British Geological Survey. <i>Ice Age sand and gravel – the basics</i> . B&LGG information leaflet. <a href="http://www.bedsrigns.org.uk">www.bedsrigns.org.uk</a> Friend, P. 2008. <i>Southern Britain</i> . HarperCollins Publishers. 414 pages.		
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> Plant and mollusc remains occur in the organic layers.		

**Site Name****Broom Quarry, near Biggleswade****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**

These thick and extensive sand and gravel deposits have not been studied in detail. They are dominated by poorly sorted flint gravels, assumed to be outwash from the Anglian ice sheet some 400,000 years ago (Moorlock *et al.*, 2003). However, parts of the succession may have been reworked as river terrace deposits by the ancestral River Ivel and could be much younger. For example, Gao *et al.* (1998) have described palaeontological remains from braided river deposits preserved in the lowest Ivel terrace near Sandy that indicate a harsh tundra climate and a Middle Devensian age (about 30-25,000 years ago).

**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 GOOD DECLINING; assessed by Martin Whiteley. It is anticipated that this site will cease production and be fully restored within the next few years. Planning permission was granted in 2008 to extract sand and gravel from a new site to the south of Broom village.

**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