

GLA 79 Buckthorne Cutting, Candidate LIGS

London Borough of Lewisham, TQ 362 746 (site access)

Ownership: Network Rail (north half), property developer AA Homes and Housing (south half). Managed by Buckthorne Cutting Nature Reserve.

This section of the New Cross to Brighton line was opened in 1839 as the London and Croydon Railway. At Eddystone Road the railway is in a deep cutting into the London Clay. Further north at the New Cross Gate (Brockley) Nature Reserve there was a famous landslide in 1841, two years after the railway opened (SGI 17). At this point the railway follows the same route as the earlier Croydon Canal of which there is an 1805 description of a line of septarian nodules. These were rediscovered whilst cutting a path through the recently-designated Buckthorne Cutting Nature Reserve, and also observed in the cutting on the south side of Eddystone Road. Permanently exposed septaria in London are rare and the site provides opportunities for research and education both of the septaria and the London Clay itself

The ground elevation at the top of the cutting is c.40 m OD and was cut exactly beneath the old canal cutting for which we have a description. The canal cutting itself was 20 feet (6 m) below the top. The railway was dug down a further 50 feet (c.15 m) so that the cutting is 70 feet (c.21 m) at this point. We hope that more septaria can be exposed along at least one horizontal line. On the south side of the bridge fragments of septaria are evident along the horizontal path and were marked by white poles when visited. The *in situ* septaria must be just above the path at those locations and excavation for them will be carried out. Reeds at the top of the embankment are rather enigmatic and do not seem to relate to a spring line, although small gullies in the hillside may prove to come from a line of septaria (see location map of septaria below).

Access

The locked gate to the Nature Reserve is situated off Eddystone Road footbridge, Eddystone Road, Brockley, London SE4 2DB. Contact the Buckthorne Cutting Nature Reserve, www.fourthreserve.org.uk for access. Open days are held periodically. Short walk from Crofton Park Station.

Reference

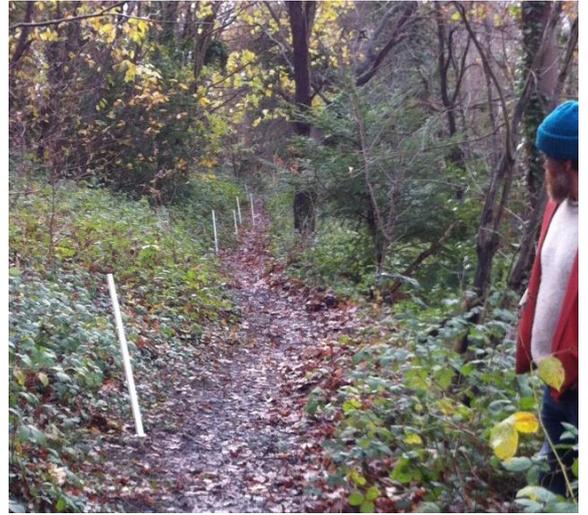
1805 quotation re-septaria from "*London; being an accurate history and description of the British Metropolis and its Neighbourhood, to Thirty Miles Extent, from an actual perambulation*", David Hughson (pen name of Edward Pugh), LL.D. Vol 2 1805. Link to whole book: <https://tinyurl.com/c4wb7mt8>

On page 81-82: *The ground begins to rise up towards Brockley Green, and the first thing observable is the newly cut banks, is a very curious stratum, of a yard thick, or more, consisting entirely of small bivalve shells, and long slender screw shells:...In ascending the hill, it appears that a stratum of reddish coarse sand, of several feet thick, crops out above these shells; then a clay of considerable thickness is seen and then a slight spring of mineral water, very highly charged with iron, as appears by its ochre deposit; this was apprehended to proceed from a layer of **ludus helmantii**;...there is a thick stratum of yellow loamy clay, or brick earth. This thick stratum of yellow clay is succeeded by two layers, one about a yard above the other, of large and curious **ludus helmantii**, or clay ball, very compact, containing but few **septana**, and those mostly close filled with wax-coloured spar; but, on the sides of some of these sparry joints, but partly filled, pointed and small crystals were so thickly and uniformly set all over the surface, as to give the appearance of a rich piece of velvet.*

This 1805 description is along the old Croydon Canal cutting that pre-dated the railway cutting, which utilised the same cutting at this point, although at a higher level. The description relates to Brockley Green. Brockley Green would have been right here on Buckthorne Road SE4 2DG - grid reference TQ 36366 74424. A little further north, the Lambeth Group is shown on the BGS map at the base of the cutting and in the quote above, the Woolwich Shell bed (top Lambeth Group in this area) is described by its contained shells. Above that the 'stratum of reddish coarse sand' probably relates to the basal Thames Group, Harwich Formation, beneath the London Clay. 'Reddish coarse sand' is not typical of the Blackheath beds but that does not rule it out. We now call the 'ludus helmantii' septarian nodules and this is the main focus for this site.



People are standing at the entrance gate in Eddystone Road



The white poles mark the row of septaria frags on the south side of the cutting



Exposure of *in situ* septaria beside the path



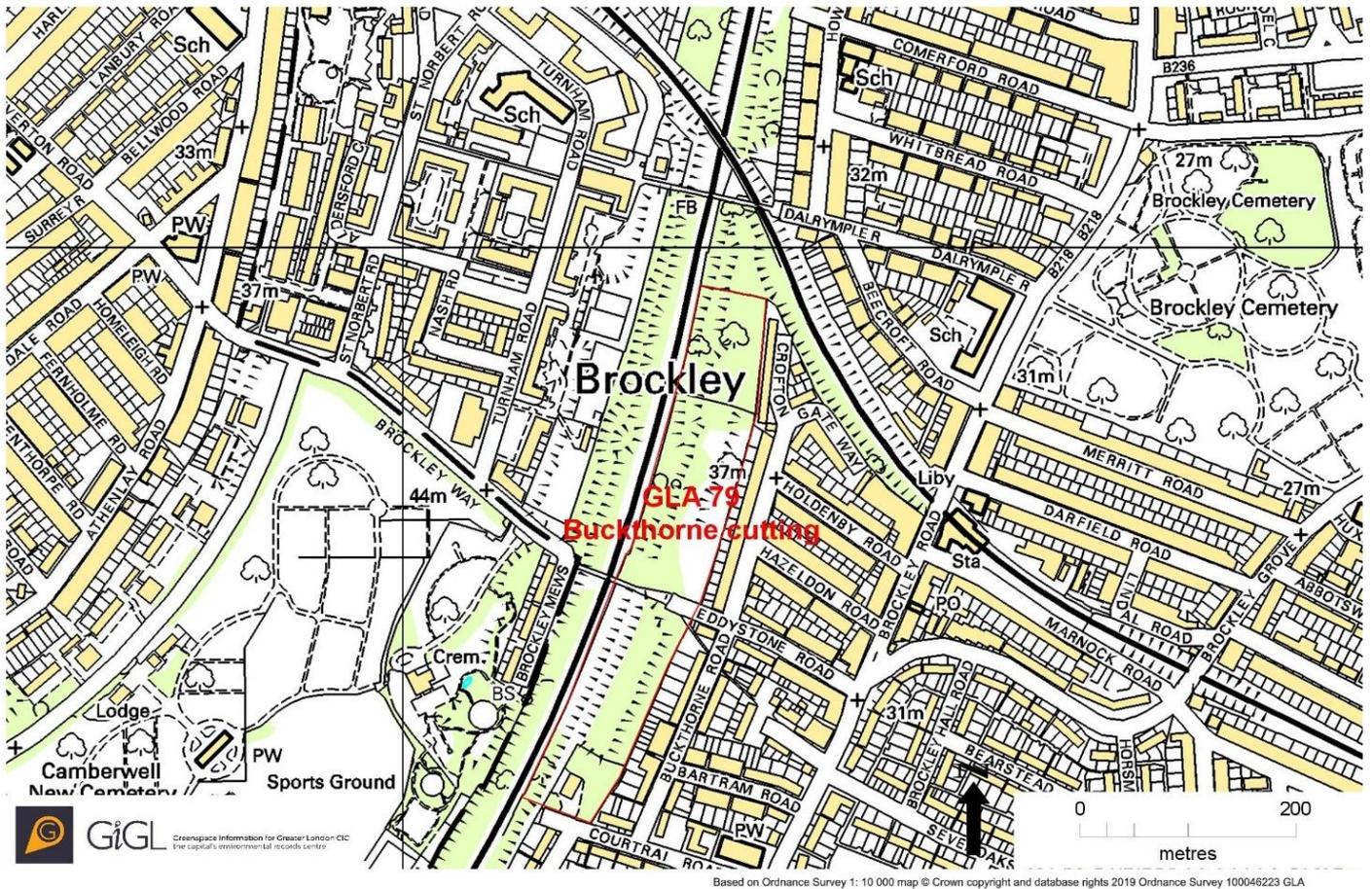
A loose septarian nodule



London Clay exposure: 'blue' (deep), beside pale (surface weathered)

Site Map

OS Topography © Crown Copyright



Location map of finds either side of Eddystone Road.
Note that the Buckthorne Cutting Nature Reserve is restricted to the north side of Eddystone Road.