

GLA 42: Kenwood House Quarry, Hampstead Heath, Potential RIGS

London Borough of Camden, TQ 2685 8745

Ownership: English Heritage, Permission needed from owner at Kenwood House for proposed conservation site but the old quarry can readily be seen from the driveway to the house from the car park (paying). Sandy Heath has open access.

Bagshot Sand

The Bagshot Sand is the youngest of the 'solid' rocks in the London area. It is of Eocene age, dated at about 50 million years. As the London Clay sea became shallow, so the sediments deposited became coarser with fine sand appearing in the clay of the Claygate Beds at the top of the London Clay, and less clay and coarser sand in the Bagshot Sand above that. The Bagshot Sand is interpreted as a near-shore marine and estuarine deposit but because it lacks fossils it has been very difficult to be sure of its environment of deposition (BGS Special Memoir, pp.50-51). What it does contain is grains of tourmaline that suggest the sand originated in the West Country where tourmaline is a common constituent of the granites. In the Hampshire Basin tidal influence has been recorded. Bagshot Sand is, in any case, very variable, containing pebbles, sand (often iron-rich) and very pure pipeclay in places. The name comes from the original description in Bagshot, Surrey where outcrops are extensive but in the London area outcrops are rare, only occurring on Hampstead Heath and Harrow-on-the-Hill. On the Epping Forest ridge and in Essex further outcrops are found. At one time the sand probably extended over the whole area but in the intervening 50 million years it has mostly been eroded in the London area. Hampstead Heath is the highest hill in London at 134 m with a current maximum thickness of 18 m of Bagshot Sand. At Harrow-on-the-Hill, maximum height 124 m, the outcrop is thinner and less extensive.

Quarrying on the Heath

The Bagshot Sand is not pure enough to be used for most building purposes but is useful in foundations. Quarries on Sandy Heath were exploited in the 1860s by Sir Thomas Maryon Wilson for the building of the railway out of St. Pancras station. It was further exploited in the building of Kenwood House. The face of the former quarry close to Kenwood House at TQ 2685 8745 can still be made out behind a wooden fence on the west drive and would make an ideal location to create a conserved face. A section of the slope was stripped bare in the 1987 storm but has since been re-planted. There is a second quarry within the gardeners' compound. The small exposures on Sandy Heath around the natural ponds provide an opportunity to study the Bagshot Sand at close quarters. It is unclear whether the numerous pebbles covering the ground have come from the sand or are residual from a much younger deposit, known as the Stanmore Gravel, now eroded from the Heath except for two very small patches (see GLA 18, the SSSI at Harrow Weald for good exposure). The ponds are purportedly floored by an iron pan layer from within the Bagshot Sand.

Springs

A spring line occurs at the base of the Bagshot Sand at the junction with the underlying Claygate Beds at the top of the London Clay Formation. A lower spring line occurs at the base of the Claygate Beds. These springs give rise to the Fleet, Westbourne and Tyburn Rivers flowing into the Thames and the Mutton Hall Brook flowing into the River Brent. By looking at the topography, plants and spring lines it is possible to make out the junctions of these various lithologies on Hampstead Heath.

Access

Hampstead Heath can be accessed at many points (www.cityoflondon.gov.uk/things-to-do/green-spaces/hampstead-heath/visitor-information/Pages/default.aspx). Bagshot Sand can best be seen on Sandy Heath at the top of the Heath. The old quarry is found within the grounds of Kenwood House. A geological walk around the Heath including both stops is detailed in GA Guide 68, pp. 39-56 (Stops 2 and 5).

Kenwood House Quarry (Source: Geoff Swann)

Sandy Heath exposures of Bagshot Sand (Source: Diana Clements)



Source: London's foundations, page 198

Site Map

OS Topography © Crown Copyright

Source: London's foundations, page 195

