

Recommended Locally Important Geological Site

(suggested by London Geodiversity Partnership)

Site Reference: GLA 80

Site Name: Gunnersbury Park

Site Type: Largely sand and gravel with silt areas

Summary: Public park and museum with Quaternary and Eocene formations with five different lithologies, including the unusual combination of three Thames Terraces on a single site.

Grid ref: TQ1873978973

Area (ha): 75.39

Borough(s): London Borough of Hounslow

Ownership: London Borough of Hounslow and London Borough of Ealing

Access: Open access is from several entrances. The Main gate on Popes Lane leads to Gunnersbury House (museum) as does the top gate from Gunnersbury Avenue gates. The gate at the southwest corner off Lionel Road North is close to Potomac Lake. The park is open daily 7am – dusk. The museum Tuesday – Sunday 10am - 4.30pm. Free entry.

Site Description: Gunnersbury Park covers two geological Formations, one in both the Eocene and Quaternary. The Quaternary Formation has four Members. The youngest Members was quarried for making bricks. Although no permanent exposures can be seen, some can be inferred from topography and other observations. The Lynch Hill Gravel Member occurs in the north, creating what may be a modest landscape feature (gentle slope) visible from Gunnersbury House towards the main gate. The central part lies on the Taplow Gravel Member, and the Kempton Park Gravel Member occurs in the south, along the southernmost perimeter. There is no significant exposure, only scattered pebbles in places in the topsoil. The London Clay occurs at the surface along a narrow strip between the Lynch Hill and Taplow Gravels at Gunnersbury House and north of the Sports Hub building. The Langley Silt (Brick Earth) at southwest corner was dug for brickmaking and pottery (Potomac Lake is a former pit) and sand from the terrace gravels was used 'for civil defence purposes' (sandbags?) in the Second World War. Both the Round Pond at the top and the Horseshoe Pond in the middle probably were dug to sufficient depth that the water is retained by the underlying London Clay. The artificial stone 'Pulhamite', can be seen in the small stream flowing from Potomac Lake as well as in the Gothic Tower within the lake site. Ornamental Stone is used to good effect within the public rooms attached to the Museum.

Stratigraphy and Rock Types:

Time Unit: Quaternary	Rock Unit: Langley Silt Member, Maidenhead Formation
Rock Type: Silt	Details: Fine-grained silt suitable for making bricks
Time Unit: Quaternary	Rock Unit: Kempton Park Gravel Member, Maidenhead Formation
Rock Type: Sand and gravel	Details: With lenses of silt, clay or peat
Time Unit: Quaternary	Rock Unit: Taplow Gravel Member, Maidenhead Formation
Rock Type: Sand and pebbles	Details: Mostly flint, Bunter pebbles, vein quartz and Lower Greensand Chert
Time Unit: Quaternary	Rock Unit: Lynch Hill Gravel Member, Maidenhead Formation
Rock Type: Sand and gravel	Details: With lenses of silt, clay or peat

Time Unit: Eocene
Rock Type: Clay and silt

Rock Unit: London Clay Formation, Thames Group
Details: Fine, sandy, silty clay/ clayey silt, clay.

Geodiversity Topic: Lithostratigraphy, sedimentology; geomorphology

Geodiversity Value: The five different lithologies, including the 3 Thames Terraces on 1 site are unusual. The historic quarrying at the Potomac Lake makes an interesting feature as does the use of Pulhamite in that area. The Museum has a few points of geological interest and the use of ornamental stone in Gunnersbury House is an added attraction.

Date of Last Survey: 01/08/2022