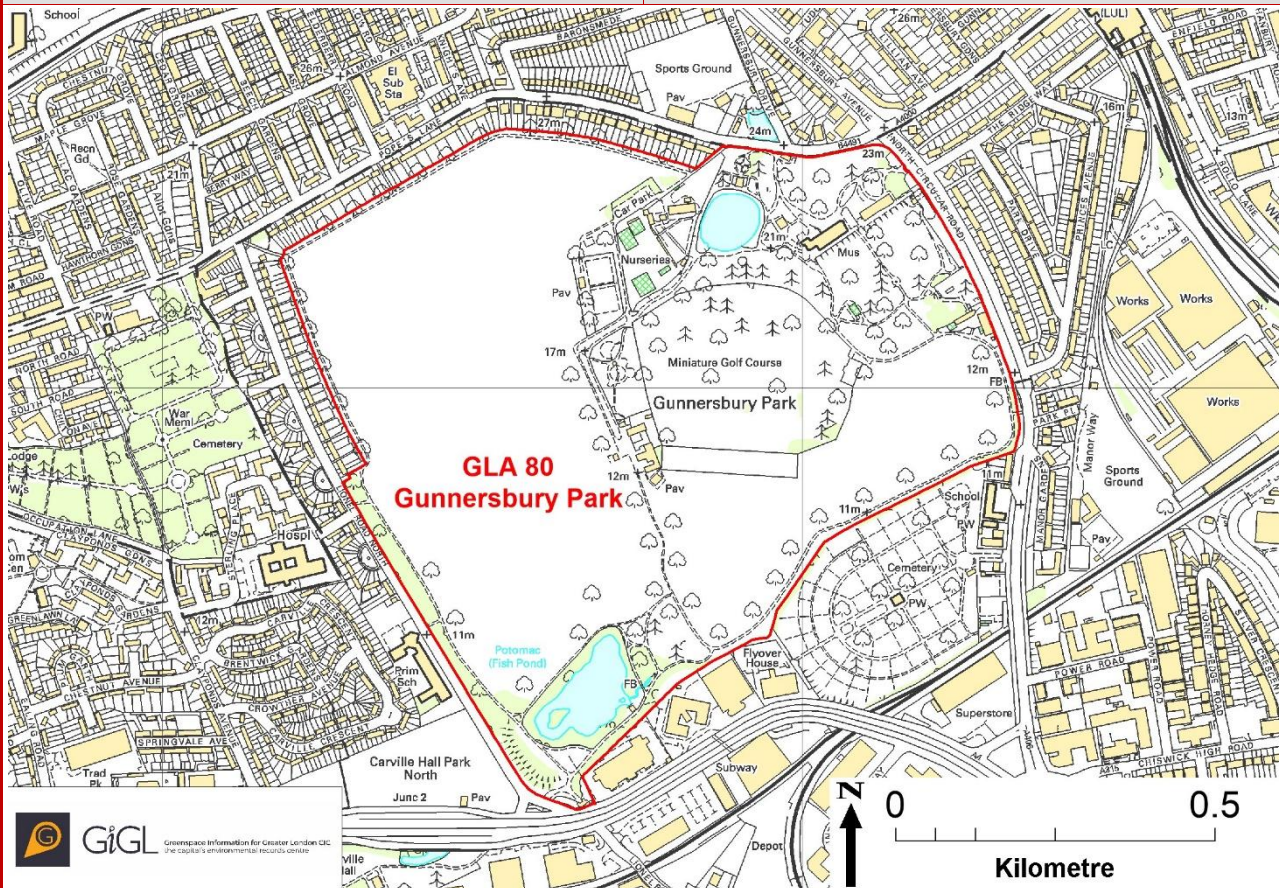


GLA 80 Gunnersbury Park

Grid Reference TQ 190 792 (Museum) W5 4NH	Site Type: Largely sand and gravel with silt areas.
Site Area (hectares): 75.39 ha	Current use: recreational: public park with sports ground, public events and museum.
Site ownership: London Boroughs of Hounslow & Ealing who set up the 'Gunnersbury Museum and Park Development Trust'	Borough: London Borough of Hounslow
Field surveyor: Allan Wheeler	Date: August 2022
Current geological designations: Recommended by Partnership as a LIGS	Other scientific: Borough Grade II SINC (Gunnersbury Park).
Site Map	OS Topography © Crown Copyright



Stratigraphy and Rock Types

Time Unit: Quaternary	Rock unit: Langley Silt Member, Maidenhead Formation
Rock Type:	Details: Fine-grained silt suitable for making bricks
Time Unit: Quaternary	Rock unit: Kempton Park Gravel Member, Maidenhead Formation
Rock Type:	Details: Sand and gravel, locally with lenses of silt, clay or peat
Time Unit: Quaternary	Rock unit: Taplow Gravel Member, Maidenhead Formation
Rock Type:	Details: Sand and pebbles (mostly flint), Bunter pebbles, vein quartz and Lower Greensand Chert
Time Unit: Quaternary	Rock unit: Lynch Hill Gravel Member, Maidenhead Formation
Rock Type:	Details: Sand and gravel, locally with lenses of silt, clay or peat.
Time Unit: Eocene	Rock Unit: London Clay Formation, Thames Group
Rock Type:	Details: Fine, sandy, silty clay/ clayey silt, clay.

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

Assessment of Site Value

Geodiversity topic: lithostratigraphy, sedimentology; geomorphology

Access and Safety

Aspect	Description
Safety of access	Access is from several entrances. The Main gate on Popes Lane (B4491) leads to Gunnersbury House (museum) as does the top gate from Gunnersbury Avenue (A406) gates. The gate at the southwest corner off Lionel Road North is close to Potomac Lake
Safety of exposure	There are no actual exposures but paths run through the park. Over-burnt bricks at the end of the Horseshoe Bridge provide clues of the former brick-making in the area of Potomac Lake.
Permission to visit	Open access. The park is open daily 7am – dusk. The museum Tuesday – Sunday 10am - 4.30pm. Free entry.
Current condition	Recent restoration of park and its features which are well-maintained by Gunnersbury Park Trust. Potomac Lake is largely obscured by trees and fenced off with gates padlocked (private angling access only for members of Barnes & Mortlake Angling and Preservation Society). The Round Pond (within the Lynch Hill Gravels) has recently been renovated with puddled London Clay from excavations for the Victoria & Albert Museum extension in Exhibition Road, South Kensington.
Current conflicting activities	The fence surrounding Potomac Lake which is run by the local fishing club. Any exposures around the edge are not available for inspection.
Restricting conditions	Lack of exposures
Nature of exposure	A stream running from Potomac Lake has been lined with artificial stone 'Pulhamite'. The Gothic Tower (old boathouse) is also constructed using Pulhamite.

Culture, Heritage & Economic

Aspect	Description	Rating
Historic, archaeological & literary associations	The Gunnersbury Museum and Park Development Trust has a website (https://www.visitgunnersbury.org/about-us/) detailing the history of the site and local area. It is built on the site of an estate owned by the Bishops of London, was created in the C17, and developed in the C19 as the grounds of one and later two mansions. The Large Mansion and The Small Mansion were in separate ownership until the Rothschild family reunited the site in 1889. The gothic-style folly tower used as a boathouse on Potomac Lake was built as a conversion from the brick/pottery kiln. Clay extraction ceased between 1861 and c.1890. The lake was stocked with fish for angling. The booklet <i>Gunnersbury Park</i> used sources provided by local historians, the Rothschild Archive, Hounslow Local History & Archives, Gunnersbury Park Museum including its former curator,	8

	and the former Park Manager at Gunnersbury. Reference: <i>Gunnersbury Park, the Place and the People</i> , by Val Bott & James Wisdom, 2018. Friends of Gunnersbury Park and Museum.	
Aesthetic landscape	Good views of the grounds from Gunnersbury House Footpaths through the wood used by local community and as a teaching asset for Primary School Children. There is an interpretation board for the biodiversity at the entrance.	8
History of Earth Sciences	None known but an interesting map of the site in the Museum features geological sections round the edge, plus engraving of a tusk and tooth of a hippopotamus found in Coles Hole.	2
Economic geology	The clay pit may have been used to supply bricks for the mansions and other buildings. Sand dug for 'civil defence purposes' in WW2 must have been sourced from the terrace gravels but where is unknown	6
GeoScientific Merit		
Geomorphology	Gunnersbury Park lies on a slope towards the Thames and contains 3 different levels of Thames Terraces plus the overlying Langley Silt near the bottom. They rest on London Clay bedrock. The drop in height is from 25m to 15m OD	4
Sedimentology	Exposures are poor but it is unusual to find 3 different Thames terraces plus Brick Earth at one site even if they cannot be seen.	3
Palaeontology	There is an engraving of hippopotamus tusks and teeth found at Coles Hole. They probably came out of the underlying Kempton Park Gravel as that is the only strata known for hippos. Engraving by James Basire © The Royal Society, 1813.	2
Igneous/mineral/ Metamorphic Geology	Ornamental stone within Gunnersbury House	3
Structural Geology	n/a	0
Lithostratigraphy	Thames terrace gravels (Lynch Hill, Taplow, Kempton Park) on London Clay. Langley Silt cover on Kempton Park Gravel along S. boundary. No significant exposures.	4
Potential use	Education; there is a potential to provide a leaflet on the geology. A geotrail to include the Museum & house is also possible.	
Fragility	Well maintained by the Trust but the lithology is not normally exposed	
Current Site Value		
Community	Much used park in an urban setting with excellent sports facilities. The park has the added advantage of the Museum	7
Education	Potential for a leaflet detailing the geology of the park, the use of ornamental stone in Gunnersbury House and details of the former clay pit of Coles Hole, now Potomac Lake. A guided Geotrail may also be possible	6
Geodiversity value		
Recommended by Partnership as a LIGS: 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.		4

GLA 80 Gunnersbury Park

Gunnersbury House and Museum (Large Mansion – Small beyond). The slope is artificial and enhanced the view from them, 18.9.2019.



Potomac Lake (former clay pit) in the SW corner of the park, 11.8.2022.



Gothic style tower used as boathouse on Potomac Lake, built on the foundations of a kiln, 11.8.2022

Photos: Allan Wheeler