GLA 81 Evolution Garden Natural History Museum

Grid Reference: TQ 267 790 NHM Cromwell Road , SW7 5BD	Site Type: garden in front of NHM ?ex-quarry
Site Area (hectares): 0.54	Current use: public amenity
Site ownership: NHM	Borough: Royal Borough of Kensington & Chelsea
Field surveyor: D. Clements, L. Baker, G. Dickerson, A. Davidson, A. Wheeler, B. Towner	Date: 12 July 2024
Current geological designations: none	Other scientific: garden of national collections

Site Map

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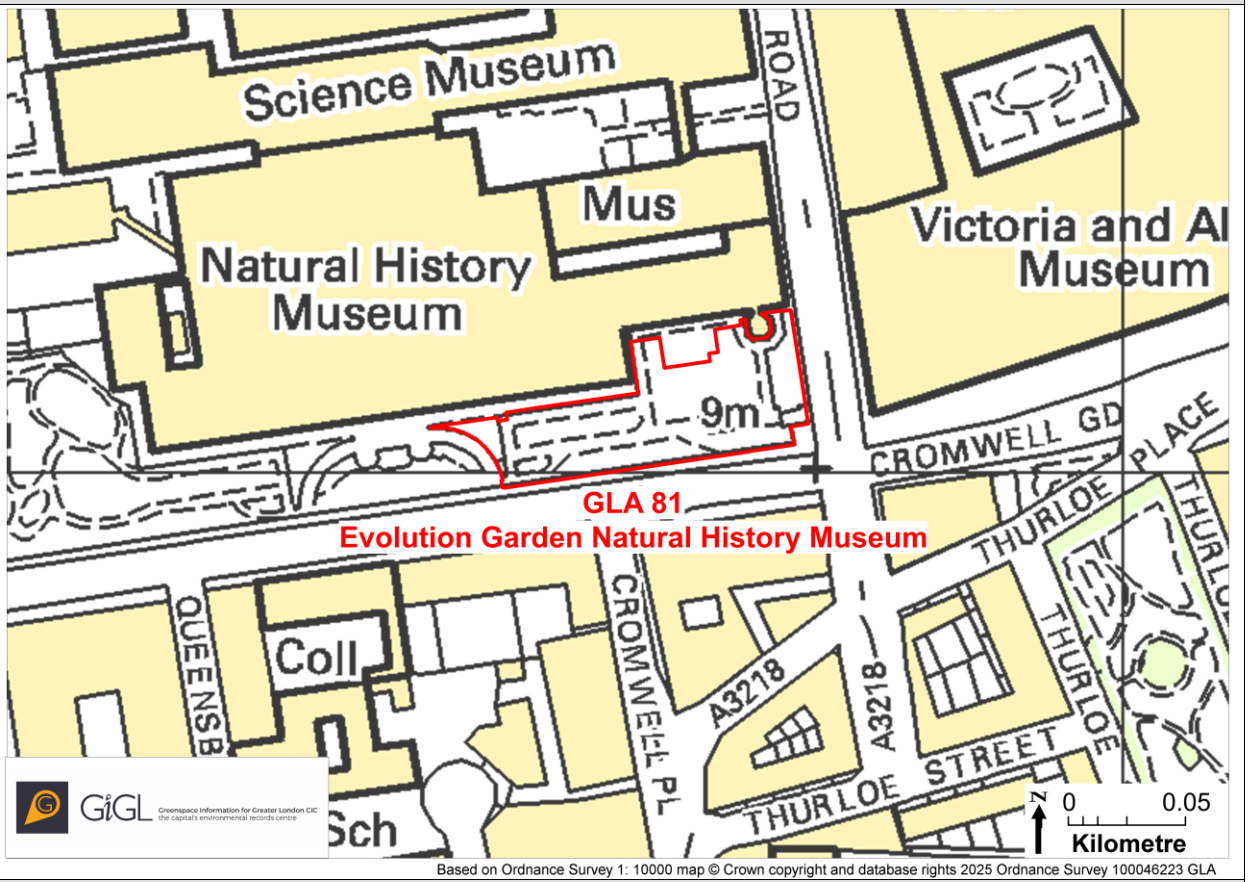

Stratigraphy and Rock Types

Time Unit: Archaen-present	47 different rock types – oldest 3,000 Ma Lewisian Gneiss, youngest Anthropocene glass in the terrazio paving
Rock Type: large variety	Details: also includes some fossils and some models of animals Appropriate Evoluntionary planting
Time unit: ?Paleocene/Eocene boundary reworked to Quaternary	Sarsen stone – silcrete. Found within the Kempton Park Gravel whilst excavating for the Victoria & Albert Museum opposite

Site Description

The Evolution Garden arguably contains the largest number of different rock types on display in one place in Greater London. It extends the gallery space within the museum to the exterior. The majority of the rocks are placed to follow a Timeline Wall beginning in the Archaen and finishing with the Anthropocene. Pre-Cambrian rocks line the ramp from the tunnel from South Kensington Underground Station in a ravine; thereafter, the Phanerozoic is marked out roughly in scale with 1 m = 5 million years. The Timeline continues through the gardens, parallel to Exhibition Road, lined by boulders representing the different geological eras. In all, 26 different rock types have been accumulated, all but two from the UK. The 2 foreigners are both from Iceland: red scoria, marking the end Permian extinction and columnar basalt marking the opening of the Atlantic and the beginning of ‘Tropical London’. Not unsurprisingly, UK rocks from the Giant’s Causeway in Northern Ireland and Staffa in Scotland were unavailable.

Other boulders are scattered through the gardens, some with smooth surfaces to provide benches, others just marking the edge of planted areas. Of particular interest is the sarsen stone that has lain, un-noticed behind a railing in the previous east garden. Researches found that it originated from the underlying Kempton Park Gravel and was discovered when the foundations for the adjacent Victoria and Albert Museum were being excavated.
The terrazzo flooring to the walk ways has key events marked along the route of the Timeline and the embedded gravel is appropriate to the time period, as is the gravel that boarders the terrazzo.
The Evolution Garden also features the evolution of animals and plants. All of the animals and some of the plants have small explanatory panels. The first animals that are encountered are at the end of the 'ravine', attached to the Cambrian Penrhyn slate. These are models of some of the earliest animals with hard parts, known from the c. 505 million year old Burgess Shale in Canada Further along, the large arthropod, *Arthropleura* is modelled, with an extremely large version embedded in the terrazzo. The highlight comes within the Mesozoic with a new cast of the much loved Dippy that used to reside in the Main Hall. The original cast was a gift from Andrew Carnegie to King Edward VII in 1905 but was removed in 2017 when the Main Hall was renovated to become the Hintze Hall, now dominated by the vast skeleton of the blue whale, known as Hope, the displays were redone to reflect some of the most endangered species. It is probable that many visitors, especially the younger ones, will be pleased to see the return of the Diplodocus, now slightly updated in its stance and named Fern by local school children. There is also a cast of a small dinosaur, *Hypsilophodon* and cleverly, the shapes of footprints of both animals are inlayed in the terrazzo. A model of the tiny early Cretaceous mammal, *Megazostrodon rudnerae* is close by. Inlaid into blocks of Portland Roach are images depicting the evolution of flight ending with the bat in the Cenozoic section. There are actual fossils as well. These can be seen particularly in the Silurian Wenlock Limestone, Early Carboniferous crinoidal Mondale Stone from the Peak District and the Portland Roach. Large ammonites from the Lias of Lyme Regis and Portland Stone are included as well as dinosaur footprints from the Early Cretaceous Wealden. The largest of the actual fossils is the Carboniferous tree from the Craigleath Sandstone that has remained in its original position in the east garden. Purbeck fossil tree fragments are also included.
Planting in the garden is intended to replicate as much as possible the evolution of plants. Bordering Exhibition Road bare lumps of rock signify a time before any land plants existed. This is followed by a band of mosses representing the earliest land plants before the main part of the garden is reached, dominated by tree ferns and other ferns and horsetails. Flowering plants appear at the end of the Cretaceous period.
The large number of different rocks in the Evolution Garden makes it a magnet for geologists and the added evolutionary messages will send a message to the wider public.

Assessment of Site Value

Geodiversity topic: Lithostratigraphy; palaeontology

Access and Safety

Aspect	**Description**
Safety of access	The gardens are open daily from 9.30 am (half an hour before NHM opens). No admittance after 5pm. Access best via ramp up from South Kensington Underground Station or down path down from the corner of Exhibition Road/Cromwell Road.
Safety of exposure	Weathering of the rocks and algae covering; also overgrowth of planting and ingress of weeds. Gardens attended to by volunteers
Permission to visit	Public access, no booking, no charge.
Current condition	The site was opened in July 2024 and when designate was in excellent condition
Current conflicting activities	Well used by public, children clambering or moving pebbles may be an issue.
Restricting conditions	Only open when NHM is open
Nature of exposure	Artificial display

Culture, Heritage & Economic

Aspect	**Description**	Rating
Historic, archaeological & literary associations	The garden is sunken but there is no evidence that it was dug forgravel. The original gardens were laid out when the NHM was constructed. Opened 188?. The sarsen from Kempton Park Gravel was 'in situ' at V&A	9
Aesthetic landscape	A most attractive space dominated by the gold Diplodocus and	10

	interesting planting	
History of Earth Sciences	Rock Timeline Walk; evolution of animals, plants and flight	9
Economic geology	?Gravel extraction prior to 1880s	0
GeoScientific Merit		
Geomorphology	Situated within the 'Flood Plain Gravel (Kempton Park) with the 'staircase' rising up Exhibition Road to Hyde Park	2
Sedimentology	Opportunity to investigate the properties of a large number of UK sedimentary rocks	6
Palaeontology	Evolution of mammals charted, mainly through models	0
Igneous/mineral/ Metamorphic Geology	UK Igneous and Metamorphic rocks displayed (plus red scoria and columnar basalt from Iceland)	6
Structural Geology	None.	0
Lithostratigraphy	Rocks are arranged in sequence	6
Potential use	Education; welcome space to walk and/or sit to eat lunch	
Fragility	Weathering/algae and over use by visitors	
Current Site Value		
Community	A valuable public amenity	10
Education	Huge potential but individual identification of the rocks would be a welcome addition	8
Geodiversity value		
The strength of the Evolution Garden is the 47 rock-types displayed in stratigraphical sequence providing huge education potential. It is worthy of RIGS status		6

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Entrance ramp from the tunnel, from the Underground with examples of Pre-Cambrian rocks relating to the oldest periods of UK geological history

The Carboniferous tree in its original location, surrounded by the recent tree ferns

The end Permian Extinction marked by red scoria from Iceland alongside red Permian Corncockle Sandstone

The Mesozoic Era. the small dinosaur: *Hypsilophodon foxii;* the legs of its large relative, Fern, can just be seen in the background

Columnar basalt from Ireland to mark the beginning of Tropical London

Boulders from the Cenozoic era: a) sarsen stone found in the Kempton Park Gravel whilst building the V&A

b) Hertfordshire Pudding Stone rescued when constructing the A10 through Hertfordshire

Anthropocene gravel in the terrazzo pathway. Fragments of polished glass and also the human foot print

Photo credit: Diana Clements 2024