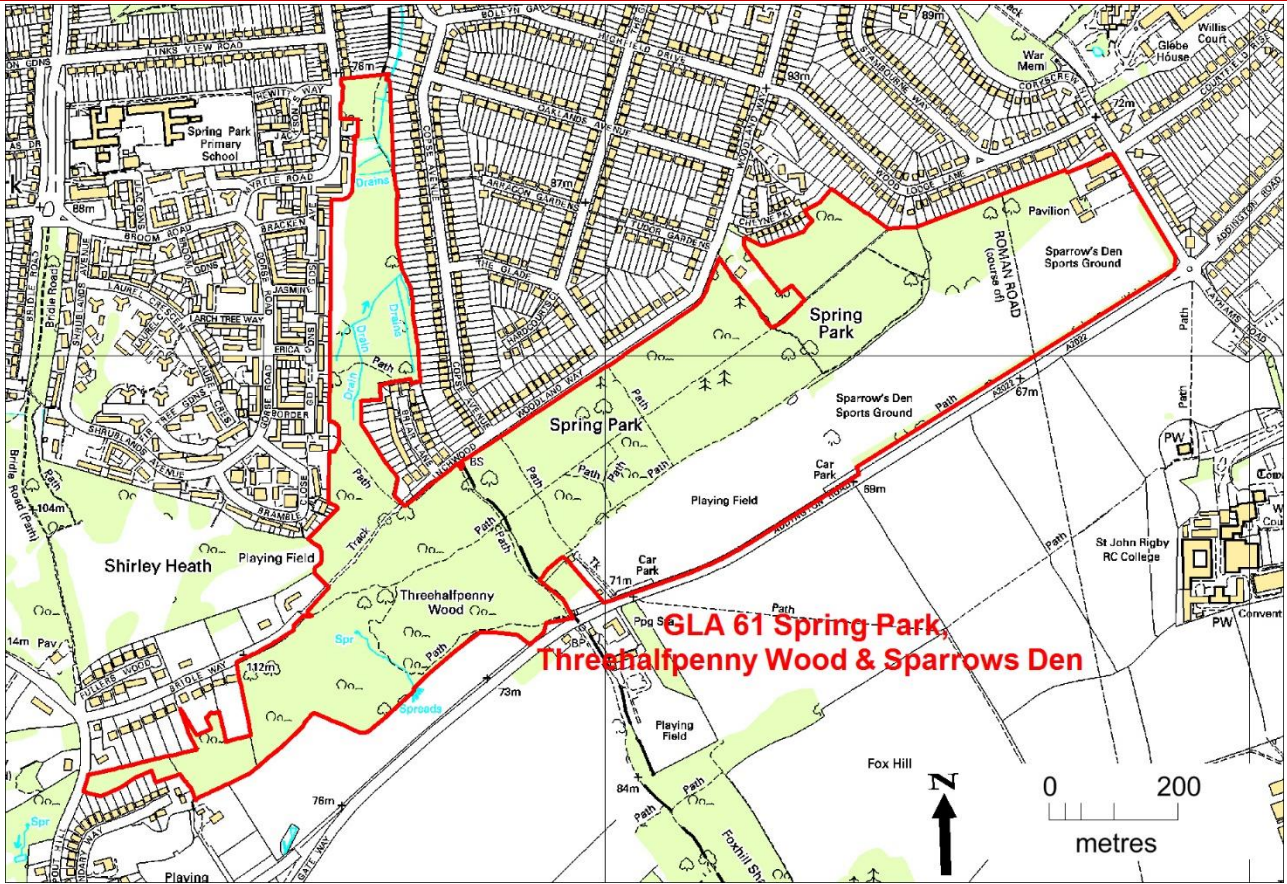


GLA 61 Spring Park, Threehalfpenny Wood & Sparrows Den	
Grid Reference: TQ 381 649	Site Type: Natural exposures on scarp slope, springs & sinks
Site Area (hectares): 52.31	Current use: Recreational
Site ownership: Spring Park: City of London Corporation; Threehalfpenny Wood, London Borough of Croydon; Sparrows Den Playing Fields: London Borough of Bromley.	Boroughs: Bromley (Spring Park & Sparrows Den), Croydon (Threehalfpenny Wood)
Field surveyor: Paul Rainey Last visited: Paul Rainey, Diana Clements and Laurie Baker	Date: February 2014 Date: May 2018
Current geological designation: Recommended by Partnership as a RIGS	Other designation: All woodland is a Metropolitan SINC (Shirley Heath, Spring Park and Threehalfpenny Wood)
Site Map	OS Topography © Crown Copyright
	
Stratigraphy and Rock Types	
Time Unit: Eocene	Rock Unit: Blackheath Member, Harwich Formation, Thames Group
Rock Type: Sand and gravel	Details: Sand and pebbles (mostly round, black), with a fragile brackish marine fauna locally. Calcitic conglomerate found at certain horizons.
Time Unit: Paleocene-Eocene	Rock Unit: Upnor, Woolwich and Reading Formations, Lambeth Group
Rock Type: Clay, silt, sand	Details: Glauconitic sands overlain by a unit of blue-grey sand followed by interbedded grey clays and sands with a well-preserved brackish mollusc fauna. Marine Upnor sand at base.
Time Unit: Paleocene	Rock Unit: Thanet Formation
Rock Type: Clay, silt, sand	Details: Pale yellow-brown fine-grained sand
Time Unit : Late Cretaceous	Rock Unit: White Chalk Subgroup (not seen, but inferred from sinks)
Rock Type: Chalk	Details: Chalk with flints (not seen)

Site Description		
<p>Spring Park Wood and Threehalfpenny Wood are adjacent sections of a south east facing scarp slope formed by Paleocene strata overlying the Chalk. Paths in the highest part of Spring Park Wood, towards its NE border, are dominated by Harwich Formation pebbles. The steepest part of the slope is formed of the clayey strata of the Lambeth Group. Thanks to many mole hills the lowest less steep parts of the slope reveal the fine sand of the Thanet Formation.</p> <p>Groundwater emerges as springs from the base of the Harwich Formation, flows as shallow streams over the Lambeth Group and then sinks into the Thanet Sand. In Spring Park many streams have been artificially joined to fill a pond just below the lower edge of the wood. In Threehalfpenny wood a more natural sink is still visible. Sparrows Den and the lowest part of Spring Park are mainly on the flat valley bottom with gravelly alluvium. In exceptionally wet years (e.g. 2001, 2014) much of Sparrows Den is covered by a spectacular lake formed from springs in the Chalk on the south (Addington Road) side of the site. This is a bourne of the Ravensbourne and was much visited and studied in 1904 and 1916 by the Geologists' Association and others. Addington Road Pumping Station – a Thames Water Chalk borehole with galleries – is immediately to the south of the site.</p>		
Assessment of Site Value		
Geodiversity topic: geomorphology and groundwater processes		
Access and Safety		
Aspect	Description	
Road access	Entrance to Spring Park from Addington Road is adjacent to the TfL bus stop "Addington Road Pumping Station" served by buses 314 and 353. Free parking is available.	
Safety of access	Paths through wood	
Safety of exposure	Ancient woodland, steep slopes, seasonally muddy	
Permission to visit	Open access, managed by City of London Corporation, Croydon & Bromley	
Current condition	Gravel, sandy and muddy footpaths	
Current conflicting activities	none	
Restricting conditions	none	
Nature of exposure	Small exposures in woodland, visible spring lines & sink holes	
Culture, Heritage & Economic		
Aspect	Description	Rating
Historic, archaeological & literary associations		3
Aesthetic landscape	Attractive woods (rare lime), meadow. Views	5
History of Earth Sciences	Described by Lucas and other pioneers of British Hydrogeology	6
Economic geology	Value/cost of springs, bournes, floods.	4
GeoScientific Merit		
Geomorphology	Springs arising from beneath Harwich pebbles, flowing over Lambeth Group and then sinking into Thanet Sands: the Bourne of the Ravensbourne	5-6
Sedimentology	Daily use by people and moles helps to keep footpaths clear and to reveal geology	2
Palaeontology	None seen	0
Igneous/mineral/ Metamorphic Geology	None	0
Structural Geology		0
Lithostratigraphy	Harwich Formation, Blackheath Member, Lambeth Group, Thanet Formation.	5-6
Potential use	Points of Interest on London Loop; add geological interest to City of London map	
Fragility	Natural overgrowing, reducing temporary exposures	
Current Site Value		
Community	Local interpretation; London Loop	10

Education	Potential for geomorphology & hydrology study	6
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Geodiversity value

Recommended by Partnership as a RIGS: exposures, also springs.	Three lithologies, which can be seen in temporary	6
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GLA 61 Spring Park, Threehalfpenny Wood & Sparrows Den



Crest of steep slope

View downhill showing Harwich pebbles in foreground and springs on Lambeth Group in distance



Sparrows Den lake on 15 February 2014. Spring Park Wood forms horizon

Photos: Paul Rainey