

## SGI 27 Tooting Bec Common fossilised tree

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London Borough of Wandsworth

**Tooting Bec Common fossilised tree**, centre of Tooting Bec Common beside the pond

Grid reference: TQ 2910 7215

### Geology of Tooting Bec Common

Tooting Common is underlain by Lynch Hill Gravel, one of the terraces of Thames Gravels dating from about 250,000 years ago. This in turn is underlain by London Clay dated at between 55 and 50 million years ago. In other words, not the location where you would expect to find a fossilised tree of Jurassic Age. Indeed, the tree is not from here but was transported, from the Isle of Portland, and displayed in the grounds of Bedford Hill House until the 1890s when the land was bought up and developed for housing by the Victorian developer Alfred Heaver. The Bedford Hill estate was in the area immediately NW of the common roughly within the area bounded by Balham High Road, Bedford Hill, Elmbourne Road and Tooting Bec Road. Bedford Hill house was approximately on the site of Veronica Road (c. TQ 288 726) with its gardens to the south west. Wandsworth Council was responsible for placing the fossilised tree near the lake, in Tooting Bec Common in 1898. This much we learn from the plaque attached to the tree.

*Fossilised remains of a large trunk from the Lower Purbeck Bed, Portland*

*Moved from Bedford Hill Park by the Balham Antiquarian and Natural History Society and placed here by the permission of the London County Council*

*Wandsworth Council*

### Origin of the fossil tree

It was not uncommon for spectacular fossil tree trunks such as this one from the Isle of Portland or Lulworth Cove in Dorset to find their way into the grounds of wealthy land-owners. As a result they are now rare in the strata that they came from. The tree is about 145 million years old, considerably older than the London Clay, and comes from right at the end of the Jurassic Period, officially the Tithonian (formerly subdivided into the Portlandian), from the Purbeck Limestone Group, of which this would be from the lowest part of the Lulworth Formation, or the lowest Purbeck Beds as stated on the plaque. This was at a time when the near shore Portland Limestone seas were shrinking and saline lagoons were forming. There seems to have been a forest of conifers bordering the lagoonal areas. As the waters rose the conifers became swamped and stromatolites built up around the bases. Silica from the saline lagoon impregnated the wood, preserving it in silica. Without making thin sections of the tree it is difficult to say exactly what sort of conifer it is but a cone from a similar tree was described by researchers in the Natural History Museum and was published as Open Access in 2014 (see link below).

Rocks of approximately this age are more familiar to us in the building stones of London. The oolitic limestone of the Portland seas has been used since the 1600s to build many of London's prestigious buildings, of which St. Paul's and Buckingham Palace are probably the most famous.

### Access:

Tooting Bec Common is area of 62 hectares with open access. The area with the pond is bounded by Tooting Bec Road, Doctor Johnson Avenue, Bedford Hill and Garrad's Road. The Capital Ring passes close to the northeast edge of the pond and on the west side it is close to Chestnut Avenue Cycle Path. Buses 249 and 319 go along Tooting Bec Road and the 315 goes along Bedford Hill; the nearest station is Tooting Bec on the Northern Line and Streatham on services from Victoria.

*With thanks to Paul Kenrick, Researcher of Fossil plants, Natural History Museum for informing us about this tree and assisting us with the text.*



Photos: D. Clements 2015

## References

- Cope J.C.W. 2008. Drawing the line; the history of the Jurassic-Cretaceous boundary. *Proceedings of the Geologists' Association* **119**: 105-117.
- Stear D.C, Spencer A.R.T, Garwood R.J, Hilton J, Munt M.C, Needham J, Kenrick P. (2014) X-ray Synchrotron Microtomography of a silicified Jurassic Cheirolepidiaceae (Conifer) cone: histology and morphology of *Pararaucaria collinsonae* sp. nov. *Peer J* 2:e624 <https://doi.org/10.7717/peerj.624>