

Effective tree protection unlocks planning consent and letting success at the Angel Building Islington, London, England

Tree protection



TDAG Case Study

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October 2010

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BAM Construction
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Local Authority: London
Borough of Islington

Further information:
Project case study
by Allford Hall
Monaghan Morris:
<https://www.ahmm.co.uk/projectDetails/61/Angel-Building?image=1>
Project case study
by J & L Gibbons:
<http://jlg-london.com/project.cfm?id=5>

Retaining existing trees
provided continuity,
solar shading to the
building and pavements
and unlocked planning

Image: Sarah Blee, J & L Gibbons



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The Angel Building, a 260,000sqft office development by Derwent in Clerkenwell, in central London, was completed in 2010. In spite of a poor economic climate, two thirds of the building was let before completion, and full occupancy was reached very soon after opening. For Johanna Gibbons, landscape architect for the project, *"there is no doubt that the environmental quality afforded through the successful retention of mature trees all around the building was a key differentiator for this infill development."*

A tree constraints plan was developed early and became a primary driver for the design. The curved building façade on St John Street was positioned and shaped in response to the location of the root protection area. The strategy was to retain groups of trees, primarily limes (*Tilia spp.*) and Caucasian wingnuts (*Pterocarya fraxinifolia*), at the corner of the project so as to create a microclimate facilitating building ventilation and energy conservation as well as the establishment of new tree and soft landscape around the scheme.

Spatial constraints were such that the access road for construction had to encroach upon the root protection area and deliveries needed to be conducted on a daily basis. To enable this, the Tree Protection Plan (TPP) and Arboricultural Method Statement (AMS), developed by appointed tree specialist JCA, in coordination with the project landscape architect and the council tree officer, proposed the use of a porous load-spreading cellular confinement system (Geoweb) braced with timber frames. Waiting areas for delivery trucks were marked, and equipped with oil trays to avoid leakage of any potential pollutants into the ground. The 80-ton crane used for construction was set outside the root protection area, on a temporary concrete raft, which also helped to avoid compaction and contamination of the soils below. The trees to be retained were pruned prior to construction starting to avoid branches being inadvertently clipped by machinery and

to help the trees conserve energy. All existing trees were irrigated during the two-year construction period following a sporadic pattern imitating rain. Because irrigation was fed with calcium-rich London tap water, the system was fitted with filters to avoid increasing the soil pH. Once the temporary access road was removed, and prior to final surfacing or landscaping being installed, earthworms were used to aerate the soils and help mix-in imported organic matter, without causing any disruption to tree roots.

Philip Wood, then tree officer for the council, emphasises that *"monitoring, and monitoring of the monitoring"* were critical to the project success. Soil compaction testing using a penetrometer was conducted before works started, mid-way through and after project completion to check that ground protection measures were effective. As Philip explains *"this showed that no significant changes had occurred in soil compaction in the RPA where the council had allowed for incursions to occur - but if deterioration had been detected, this approach would have enabled us to take corrective action"*. Further to this, the TPP required the tree consultant to submit monthly reports with photographs. Council officers had allocated time to review the reports, ask questions when needed, and conduct some site visits. This not only ensured the TPP was thoroughly adhered to, but also allowed for day-to-day issues to find easy (tree friendly) resolutions.

The new London plane trees (*Platanus x hispanica*) planted in front of the building entrance were ordered well in advance and hand-picked from the supplying nursery. To ensure good integration with existing bus traffic on St John Street, the specification required that a five-metre clear stem be achieved at least 18 months prior to planting. Below-ground conditions were optimised by integrating arboricultural advice prior to locating the main utility corridor - so as to retain an adequate rooting area for the new trees.



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A new area of cobbles shaded with high clear-stemmed semi mature London Planes creates a leafy environment between building and street for outdoor sitting

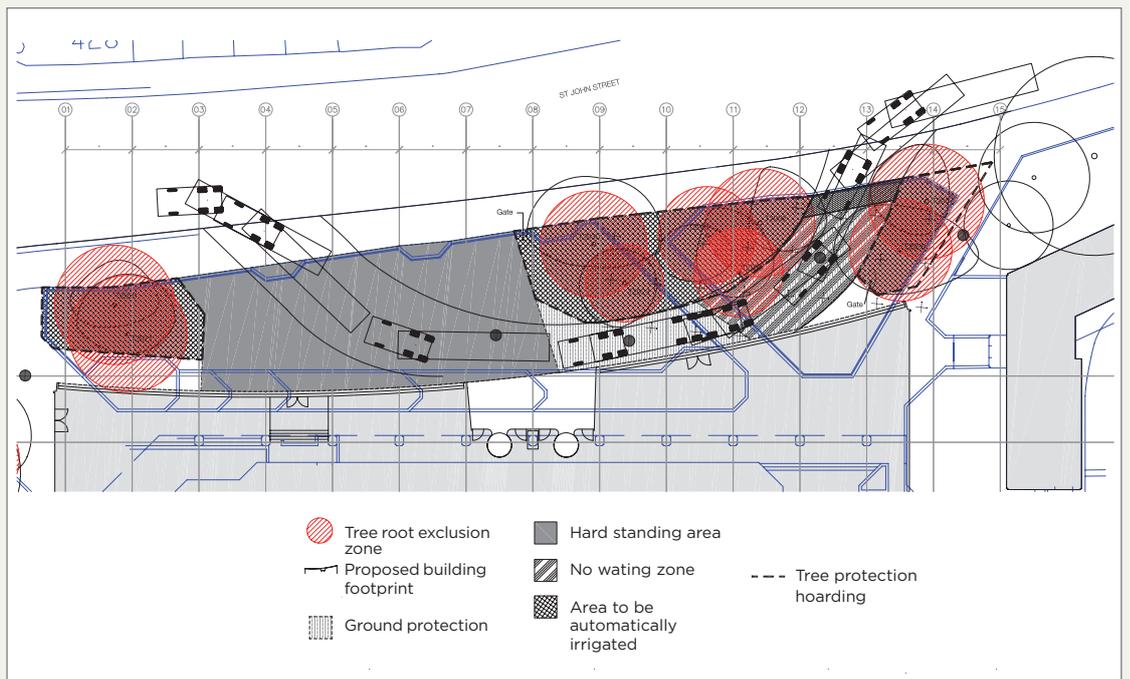
Image: Sarah Blee, J & L Gibbons

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Tree constraints plan for the Angel Building

Image: J & L Gibbons



About this Case Study

In 2012, TDAG identified 12 good practice principles for urban trees. The project described in this case study illustrates the principles highlighted below:

- 1/ Know your Tree Resource
- 2/ Have a Comprehensive Tree Strategy
- 3/ Embed Trees into Policy and Other Plans
- 4/ **Make Tree-friendly Places**
- 5/ **Pick the Right Trees**
- 6/ **Seek Multiple Benefits**
- 7/ **Procure a Healthy Tree**
- 8/ **Provide Soil, Air and Water**
- 9/ Create Stakeholders
- 10/ Take an Asset Management Approach
- 11/ Be Risk Aware (Rather than Risk Averse)
- 12/ **Adjust Management to Needs**

For more about the 12 principles, see [*Trees in the Townscape: A Guide for Decision Makers*](#)

Keywords

Tree protection, Cooling, Newbuild, High street, Raft system.

Author and sources

This case study was drafted by Anne Jaluzot, based on interviews with Johanna Gibbons (Landscape Architect, J & L Gibbons) and Philip Wood (Planning Tree Officer, London Borough of Islington).

Version 1.1

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