'No Dig' Surfacing

Trees can be affect by construction within the RPAs either through the direct damage caused by the removal of roots, compaction of the rooting environment or secondary damage such as poisoning through leaks and spills (oils, fuels, etc.) or through de-icing (road salt, etc.).

Proposed hard surfacing within the RPAs of retained trees is to be designed so that it can be situated above the existing soil level and to minimise any adverse impact upon the tree RPAs, as the use of traditional foundations can result in excessive root loss through direct removal of roots during excavation and by compaction of the soil beneath the excavation, as such this 'traditional' type of foundation should be avoided.
When designing hard surfacing that is to be situated within RPAs, the design team need to pay particular attention to the proposed usage (pedestrian, domestic traffic, delivery vans, Emergency vehicles, HGVs etc.); the existing and proposed levels of hard surfacing and finished floor levels, edging types and details, proximity to tree trunks and surface rooting, contamination capture, SUDs, etc.

Possible sub-bases (foundations systems) for hard surfacing situated within the RPAs of retained trees could include:

- A proprietary system such as a multi-dimensional confinement system (Cellweb TRP or similar);
- Engineered solution such as a road deck, bridge, etc.

An engineered solution is likely require a level of excavation for site specific investigations to locate roots to aid in foundation design so that a suitable foundation can be designed to avoid roots and for the installation the structure.

NB: The use of a multi-dimensional confinement systems and or an engineered solution will affect the finished level of the hard surfacing by raising the levels and needs to be taken into consideration when designing foundations and setting the finished floor levels of adjacent buildings.

Utility apparatus

Underground utility apparatus
Mechanical trenching for the installation of underground apparatus and drainage severs any roots present and can change the local hydrology in a way that adversely affects the health of the tree. For this reason, particular care should be taken in the rout and methods of installation of all underground apparatus. Wherever possible, apparatus should be routed outside of RPAs. Where this is not possible, it is preferable to keep apparatus together in common ducts, all inspection chambers should be sited outside of the RPAs.
Where underground apparatus is to pass within the RPAs, detailed plans showing the proposed route should be drawn up in conjunction with the project arboriculturist. In such cases trenchless insertion methods should be used with entry and retrieval pits being located outside of the RPAs. If this option is not feasible and providing roots can be retained and protected excavations should be undertaken using hand held tools (air-spade, forks, shovels) or a combination of trenchless and manual excavation (broken trench).
Any design and installation should be undertaken in accordance with the National Joint Utilities Guidelines (NJUG).
Above-ground utility apparatus
Above-ground apparatus(including CCTV cameras and lighting) should be sited to avoid the need for detrimental tree pruning, as such the current and future crown size of the tree should be assessed.
Tree branches can be pruned back with care to provide space, though it is not appropriate for repetitive and significant tree work to bean initial design solution unless this is a suitable management outcome for the tree. Any pruning should be undertaken in accordance with BS3998:2010

Arboricultural Impacts

Impacts	Nos. of trees
Trees to be removed	4
Groups / Hedges to be removed (Partial removal of groups)	0 (0)
Trees with proposed incursions into RPAs	2
Groups / Hedges with proposed incursions into RPAs	0
Trees that will require pruning	3
Groups / Hedges that will require pruning	2
Trees to be transplanted	0
Groups / Hedges to be transplanted	0

No.	Species	Proposed structure	Incursion
T09	Scots Pine	Hard surfacing	RPA
T10	Mountain Ash	Fencing	RPA
T11	Wild Cherry	Hard surfacing/ cycle store	RPA
T11	Wild Cherry	Fencing	RPA

Arboricultural Impacts - RPAs (Area)

No.	Species	RPA (m²)	Incursion (m²)	Incursion (%)
T09	Scots Pine	72.4	10.4	14.4
T10	Mountain Ash	25.4	Negligible	0.0
T11	Wild Cherry	222.9	3	1.3
T11	Wild Cherry	222.9	Negligible	0.0

Tree Work Schedule

No.	Species	Works	Category
T10	Mountain Ash	Prune, to facilitate fence installation.This will be achieved by pruning of second order or further sub-ordinate branches only.	U
T11	Wild Cherry	Prune, crown lift south crown to 3m to facilitate fence installation.	C1
T14	Norway Maple	Prune, crown lift north crown to 3.5m to facilitate plant room installation.	B1
T30	Hornbeam	Fell to ground level, remove stump.	C1
T31	Hornbeam	Fell to ground level, remove stump.	C1
T36	Hornbeam	Fell to ground level, remove stump.	C1
T37	Hornbeam	Fell to ground level, remove stump.	C1
G08	Common Ash	Prune, crown lift to 3m above sports pitches	C1/2
G09	Various	Prune, crown lift to 3m above sports pitches	C1/2

All tree work is to be undertaken in accordance with British Standard BS 3998:2010 Tree work - Recommendations.
All arising's are to be removed and the site is to be left as found.
Care is to be taken of the ground around retained trees to make sure that it does not become compacted as a result of tree surgery operations. No equipment or vehicles such as timber lorries, tractors, excavators or cranes shall be parked or driven beneath the crowns of any retained trees, to prevent subsequent compaction and root death.

No. of individual trees to be removed

U	A	B	C
0	0	0	4

No. of groups / hedges to be removed

U	A	B	C
0 (0)	0 (0)	0 (0)	0 (0)

( ) = Partial removal of a groups

Arboricultural Method Statement

All tree work is to be undertaken in accordance with British Standard Please refer to Arbtech Consulting Ltd. Tree Schedule, Arboricultural Method Statement and Tree Protection Plan, for full details of all surveyed trees and how all aspects of the development maybe implemented without detriment to retained trees.

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Project:
Rosedale College,
Wood End Green Road,
Hayes,
Middlesex,
UB3 2SE

Client:
Bouygues UK Ltd

Drawing:
Arboricultural Impact Assessment

Based on:
SRP1077-NVB-SW-XX-MM2-L-2900 Rev P06-S2

Drawing No: Arbtech AIA 01
Rev:

Date: August 2023
Scale: 1:500 @ A0
Drawn: EK

Key:
Tree Nos.: T1
Tree Canopies:
Trunks:
RPAs:
Category 'U' trees:
Category 'A' trees:
Category 'B' trees:
Category 'B' groups:
Category 'C' trees:
Category 'C' groups:
Trees to be removed: T30
Existing Site. (Topo):
Proposed Site:
Incursion - Hard surfacing:
Incursion - Fences: