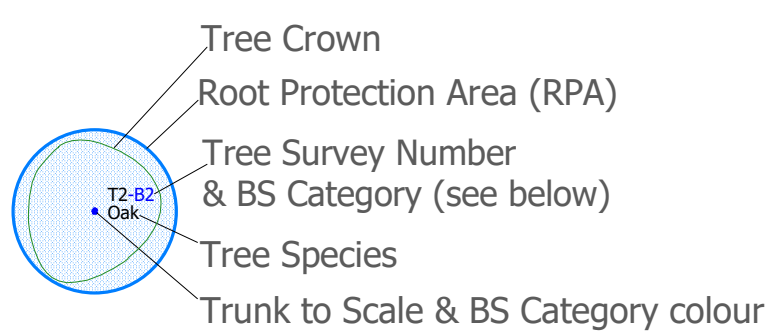




0 5m 10m 15m 20m 25m 30m 35m 40m 45m 50m



BS 5837 Category
(see report for full details)

Category A - Green Category Letter
Tree of high quality and value

Category B - Blue Category Letter
Tree of moderate quality and value

Category C - Grey Category Letter
Tree of low quality and value

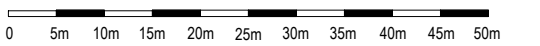
Category U - Red Category Letter
Tree of poor quality and value



Rev	Description	Date	Drawn
 Underhill Tree Consultancy			
Elizabeth House, 28 Baddow Road, Chelmsford, CM2 0DG 01245 209928 mail@underhilltc.co.uk www.underhilltc.co.uk			
Project Down Lane Park, Haringey			
Title Tree Constraints Plan			
Drawing Number UTC-0705-P02-TCP	Scale 1:800 @ A1	Date 07.08.2022	
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Tree Work Specification	
Tree Works	
Only works specified on this plan or accompanying report will be carried out. Any variation or uncertainty must be clarified with the project arboricultural consultant or local authority before continuing.	
All tree works to be in accordance with BS 3998: 2010 Recommendations for tree works, or industry best practice.	
Tree works have the potential to cause harm to wildlife and some wildlife which use trees is legally protected. It is the responsibility of the main contractor and tree surgery contractor to ensure no protected species are harmed whilst carrying out site clearance or tree surgery works.	
Tree Number & Species	Tree Works
T8 - Wild cherry	Remove
T14 - Whitebeam	Remove
T31 - Field maple	Remove
T32 - Field maple	Remove
T165 - Fastigate hornbeam - dead	Remove
T173 - Field maple	Remove
T302 - Fastigate hornbeam - dead	Remove
T303 - Japanese cherry	Remove
T335 - Cherry plum	Remove
T365 - Cherry plum	Remove
T376 - Cherry plum	Remove
T379 - Cherry plum	Remove
T389 - Japanese cherry	Remove
T397 - Japanese cherry	Remove
T398 - Japanese cherry	Remove
T416 - Japanese cherry	Remove
T419 - Japanese cherry	Remove
T422 - Japanese cherry	Remove
T432 - Ash	Remove
T443 - Goat willow	Remove
T445 - Goat willow	Remove
T480 - Rowan	Remove
T481 - Rowan	Remove
T482 - Rowan	Remove
T506 - Goat willow	Remove
T508 - Goat willow	Remove
T551 - Goat willow	Remove
T552 - Goat willow	Remove
G1 - Hornbeam	Remove
G3 - Hornbeam	Remove



Rev

Description

Date

Drawn



Underhill
Tree Consultancy

01245 209928 mail@underhilltc.co.uk www.underhilltc.co.uk

Project
Downs Lane Park, Haringey

Title
Tree Removal Plan

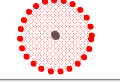
Drawing Number
UTC-0705-TRP

Scale
1:800 @ A1

Date
15.08.2023

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 Tree to be retained

 Tree to be removed



ARBORICULTURAL METHOD STATEMENT (HEADS OF TERMS)

British Standards 5837:2012

This method statement follows the principles of BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations, which provides a methodology for the assessment and protection of trees on development sites.

Tree Works

Only tree works specified on this plan or in the associated report shall be carried and should be before any plant and machinery arrives on site. Any variation or uncertainty must be clarified with the project arboricultural consultant or local authority before commencing.

All tree works to be in accordance with BS 3998:2010 Recommendations for tree works, or industry best practice.

Tree works have the potential to cause harm to wildlife and some wildlife which use trees is legally protected. It is the responsibility of the main contractor and tree surgery contractor to ensure no protected species are harmed whilst carrying out site clearance or tree surgery works.

Monitoring & Supervision

The project arboricultural consultant's role includes monitoring compliance with tree protection. Once tree protection is in place, the project arboriculturalist will be notified and a site visit will take place to approve the protection is fit for purpose. All works within Root Protection Areas (RPAs), and any other works with the potential to impact retained trees, shall be monitored or supervised by the arboricultural consultant. Site visits shall be limited to cover key activities, and/or at timing agreed by planning condition or at the pre-commencement site meeting.

Protective Barriers & Ground Protection

Tree protection must be in place before any works, including site clearance or demolition, begin, and stay in place as long as a risk of damage remains.

The position of protection is shown on this plan. The minimum distance of protective barriers measured from the tree trunk is shown on the plan and in the Tree Survey Sheet. The tree crown MUST NOT be used to indicate the position of protective barriers except where the crown extends beyond the RPA. Signs shall be fixed on every third panel stating it is a Tree Protection Area – see example on this plan.

Services

Underground services will avoid RPAs, but where this is unavoidable and agreed with the local authority, the installation or alteration of services will follow the guidance within BS 5837 or NISG Volume 4: Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees. All manholes must avoid RPAs entirely.

Excavation & Root Pruning

The default position is that no excavation is carried out within RPAs. Only where agreed in advance with the local authority and supervised by the project arboricultural consultant, can this occur. The use of hand tools will be required. Excavated roots >25mm diameter will be cut cleanly with sharp tools. Root larger than 25mm diameter are to be retained unless agreed with the project arboriculturalist. Great care must be taken to not damage the bark of the roots and any exposed roots must be wrapped in wet hessian to prevent drying. Services should be routed around the retained roots.

No-Dig Surfacing

Where no-dig construction is specified on its drawing the design and construction will retain existing ground levels. No-dig involves building up levels on top of existing ground or removing an existing surface and sub-base and building up from there. No scraping or reducing of existing soil surfaces, other than the removal of turf or surface vegetation, will be undertaken.

General Tree Protection Measures

No changes in soil level within RPAs without prior consent of the local authority.

No vehicles, machinery, plant or personnel will be permitted within RPAs at any time without the prior consent of the project arboricultural consultant.

No fire will be permitted within 20m of the crown of any tree.

No materials or liquids which will contaminate soil (e.g. cement, diesel, vehicle washings, chemical solvents etc.) must not be permitted within, or close to RPAs of retained trees. Consideration must be given to sloping ground to ensure contamination will not occur in the event of a spillage.

Procedure for Incidents

Any breach of the approved tree protection measures occur:

The site manager must be informed immediately.

The Local Authority Tree Officer or other Planning Officer and the Project Arboriculturalist must be informed at the earliest opportunity.

Immediate action must be taken to halt the breach and prevent any further breaches.

All preventative action and details of agreed remedial works must be recorded and reported to the LPA.

Issues relevant to this site and requiring more detailed consideration once approved, include:

Who is responsible for protecting the trees on site? Usually the site manager – to be agreed at the pre-commencement meeting.

Available system of arboricultural site monitoring, including a schedule of specific site visits requiring input on supervision and how problems will be reported and solved.

Tree works pre-development and any facilitation planning to allow for site access.

Site clearance, demolition including the removal of hard surfaces.

Installation of tree protection barriers and any ground protection.

Details of soil and archaeological investigations, contaminated soil removal, Japanese knotweed control and other works requiring excavation, if near trees.

Site handling, temporary services, site facilities, parking, storage of materials and plant and welfare.

Cane access, location and movement.

Details of changes in soil levels, grading, mounding and removal of spoil and details of retaining structures where permanent changes of soil level are proposed.

Measures to control dust, concrete washings and wheel washings near trees.

Any excavations within RPAs.

Specialist foundations, including details of piling operations.

Installation of new hard surfacing.

Preserve services locations, including methods of installation near trees where unavoidable.

Landscaping works, including removal of tree protection.

Post construction remediation where required.

NO-DIG HARD SURFACING

Conventional hard surfacing using a sub-base requiring excavation, is damaging to tree roots and is not acceptable within RPAs. Above ground, or no-dig principles, using permeable materials, will be followed. This usually results in higher finished levels and this must be considered during design.

Cellular confinement systems (CCS) are constructed using a three-dimensional grid of plastic cells filled with no-fines angular aggregate. The system transfers vertical loads horizontally, thereby reducing ground pressure. The cells prevent sideways displacement of the aggregate.

No-dig CCS result in higher finished levels than conventional construction by as much as 300mm.

It is important to ensure that a rated finished level can be incorporated into the development.

Existing road levels and existing and proposed building thresholds are shown on this plan.

Hard surfacing or similar can sometimes be used to disperse changes in level between trees.

Speed surfacing must finish no closer than 500mm from the base of the trunk of any retained tree. This is to allow for incremental growth and minimise the risk of distortion to the hard surface.

Several manufacturers produce CCS (see below). Celluwall® Geosynthesists recommend a grid depth of:

100mm for domestic vehicles.

150mm for refuse vehicles, fire engines etc.

200mm for heavy construction vehicles.

Other than removal of surface vegetation and filling of ground irregularities with sharp sand, there is to be no preparation of the soil beneath the CCS with NO COMPACTION of soil by vehicles or plate compactors.

Between the soil and the CCS, a geotextile such as Treeram™ is laid. Apart from separating the soil from the aggregate, Treeram™ minimises the movement of oil pollution into the root zone beneath.

A general geotextile such as Terram™, is not suitable.

The CCS cells are filled with a no-fines angular aggregate, such as Type 4/20 or Type 20/40. MOT Type 1 or Type 3 MUST NOT BE USED. The fine particles in these products prevents air and water diffusion.

The CCS edges can be retained by several methods, such as filling the outermost cells with concrete, mounding with soil, or by using railway sleepers or timber board edging. These methods can also be used to retain the wearing surface, or a system using aluminium edging, such as AluDeck™ or similar, can be fixed into the concrete in the outermost cells.

The wearing surface must be permeable such as SuDS block paving using grit between blocks, permeable Bitmac, permeable resin-bound gravel using a permeable binder course, loose gravel, or a proprietary product such as Golep System infilled with gravel, or SuDScape.

1. Permeable geotextile (see below)

2. Geotextile (see below)

3. H&H geotextile (see below)

4. Base geotextile (see below)

5. Existing subgrade

!

TREE PROTECTION AREA
KEEP OUT

Incursion into the protected area without agreement of the local authority or arboricultural consultant can result in prosecution or Stop Notices.

Contact us on 01245 209928

Underhill

Example of sign to be affixed to tree barrier

PROTECTION BARRIERS

Tree protection measures must be in place before any works, including site clearance or demolition, begin, and stay in place for as long as a risk of damage remains. The location and specification of protection is shown on the Tree Protection Plan together with the RPA (root protection radius) which is the minimum distance protection barriers or ground protection are to be positioned from the trunks of retained trees, NOT the crown spread of the trees.

Default Barriers

Barriers must be fit for the purpose of excluding construction activity. They shall be a minimum 2 m high. It shall consist of a vertical and horizontal scaffold framework, well braced to resist impacts as illustrated below. The vertical tubes should be spaced at a minimum interval of 3 m and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed.

1 Standard scaffold poles

2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels

3 Panels secured to uprights and cross members with wire ties

4 Ground level

5 Uprights driven into the ground until secure (minimum depth 0.6 m)

6 Standard scaffold clamps

a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block stay

Specialist methods of landscaping

Specialist methods of construction

Tree protection barrier - default specification
- indicative position

Tree protection barrier - lower specification
- indicative position

Crown spread of individual tree

Crown spread of group or hedge

RPA - root protection area

T1-A Oak Category A - moderate quality and value

T1-B Oak Category B - moderate quality and value

T1-C Oak Category C - moderate quality and value

T1-U Oak Category U - moderate quality and value

Lower Specification Barriers

Barriers shall be a minimum 2 m high. It shall consist of a vertical and horizontal scaffold framework, well braced to resist impacts, as illustrated below. The vertical tubes should be spaced at a minimum interval of 3 m and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed.

In any areas where there is a risk of construction site machinery or site operatives entering root protection areas of retained trees, the default BS 5837 specification barriers shown above must be used. On some sites, particularly large sites, it can sometimes be acceptable to install a lower specification barrier to act as a visual barrier where trees are a considerable distance away from the main development area. Where necessary, it is important that the site manager ensures the barriers are not breached. If site conditions change and pressure is likely to occur in the area of the barrier, it must be upgraded to the default BS 5837 specification.

Where the lower specification barrier is proposed this must only be used where it is clearly annotated on the tree protection plan and agreed with the project arboriculturalist.

Plastic mesh barrier, chestnut-paling, chain-link or similar fencing supported on posts can be acceptable.

Example of lower specification barrier

TEMPORARY GROUND PROTECTION

This method statement follows the principles of BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations, which provides a methodology for the assessment and protection of trees on development sites.

Ground protection can be used to protect the RPAs of trees where access is still required. The purpose of the ground protection is to prevent compaction of the soil structure beneath. Ground protection must be fit for the purpose of supporting the expected loading without distorting or compacting the underlying soil.

Various approaches can be used, including retaining existing hard surfaces where possible. It might comprise one of the following:

for pedestrian movements or the erection of scaffolding within the RPA the installation of ground protection in the form of a single thickness of scaffold boards either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip laid onto a geotextile);

for pedestrian-operated plant up to a gross weight of 2t, proprietary, inter-linked ground protection boards or panels placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane; or

for wheeled or tracked construction traffic exceeding 2t gross weight, an alternative system (e.g. proprietary panel systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.

Ground protection will be installed at the locations shown on the Tree Protection Plan before any works begin on site and will remain in place until there is no risk of harm from development. Its location will not be changed or removed without consulting the project arboriculturalist.