

Tree Protection Plan

Site: Long Acre Pear Tree Lane Shorne DA12 3JT

Reference: GRS.12.23

Client: Mr. and Mrs. King

Local Planning Authority: Gravesham Borough Council



DATE OF REPORT 17TH FEBRUARY 2023

Authored by: Guy Stephens Fd.Sc M.Arbor.M
Tel; 01622 817516
Email guy@grstrees.co.uk
www.grstrees.co.uk



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1. APPENDICES

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Drawings: Tree Location Plan and Tree Protection Plan

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2. PURPOSE OF REPORT

2.1 To discharge condition 6 of planning permission 20221239 granted by Gravesham Borough Council on 30th January 2023 which states;

No retained tree shall be cut down, uprooted or destroyed, nor shall any retained tree be pruned other than in accordance with the approved plans and particulars. Any pruning approved shall be carried out in accordance with British Standard 3998 (Tree Work).

- a) If any retained tree is removed, uprooted or destroyed or dies, another tree shall be planted at the same place and that tree shall be of such size and species, and shall be planted at such time as may be specified in writing by the Local Planning Authority.
- b) The erection of fencing for the protection of any retained tree shall be undertaken in accordance with British Standard 5837:2012 and details submitted to and approved by the Local Planning Authority before any equipment, machinery or materials are brought on to the site for the purposes of demolition and development, and shall be maintained until all equipment, machinery and surplus materials have been removed from the site. Nothing shall be stored or placed in any area fenced in accordance with this Condition and the ground levels within those areas shall not be altered, nor shall any excavation be made without the written approval of the Local Planning Authority.

3. IMPLEMENTING THE PROPOSED LANDSCAPE SCHEME

3.1 Soft landscaping

3.2 Prior to implementing the landscape scheme, the soil within the designated area will be assessed to ensure the plants will be able to grow and thrive within their environment. If the soil is compacted or has poor structure, soil decompaction may be used but the project arboriculturist must be consulted beforehand.

Stages of planting within the RPA.

- No plant machinery must enter this area.
- Remove vegetation by hand, turf can be removed using a mechanical turf stripper.
- Do not level out any high spots.
- Use good quality top soil only and this must be brought in using a wheel barrow.
- Dig individual pits by hand, this includes hedging.
- Use imported mulch and this should be spread by hand.

4. CONSTRUCTION EXCLUSION ZONES

4.1 The protective fencing shall form the Construction Exclusion Zones ("CEZ's") and will restrict any access by people or machinery into these areas. These areas are based on the RPA's of the trees and the protective measures are designed to protect the soil within RPAs and the trees from damage or harm.

4.2 Where construction activity cannot be fully excluded from within the RPA's of trees to be retained the parts of the RPA's that are outside of the protective fencing shall be protected by appropriate ground protection.

4.3 The protected areas shall be regarded as sacrosanct, and, once installed, the protective fencing and the ground protection shall not be removed or altered without prior recommendation by the appointed arboricultural consultant.

4.4 No activity shall occur within the CEZ's; this means:

- No storage of equipment or materials.
- No access to people, plant or vehicles.
- The actions to be carried out within or directly adjacent to the CEZ's shall only be carried out in accordance with this method statement. Where specified these works shall only be carried out under the direct supervision of the arboricultural consultant.
- Provision shall be made to avoid the spillage of chemicals that are toxic to roots into the RPA. It is now standard practice to have emergency spillage kits made available. Liquid chemicals such as oil, bitumen, diesel, and cement shall not be stored, mixed or discharged onto the ground within 10 m of the trees.
- No notice boards, or above ground services, shall be attached to any of the trees. No fires shall be lit within the RPAs of the trees or near enough to the extent of the canopy that branches might be damaged.
- Planning of site operations shall take sufficient account of wide loads, tall loads and plant with booms, jibs and counterweights (including drilling rigs), in order that they can operate without coming into contact with retained trees. Such contact can result in serious damage to the trees and might make their safe retention impossible. Consequently, any transit or traverse of plant in proximity to trees shall be conducted under the supervision of a banksman, to ensure that adequate clearance from trees is maintained at all times.

- Unwanted vegetation shall be removed by hand or by using chemicals that do not damage the roots of the trees that are to be retained.

5. GLOSSARY OF TERMS

Arboricultural method statement ('AMS')	Methodology for the implementation of any aspect of development that is within the root protection area (RPA), or has the potential to result in loss of or damage to a tree to be retained.
Arboricultural consultant	Appointed person to oversee all tree related matters and who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction.
Tree protection plan ('TPP')	Scale drawing, informed by descriptive text where necessary, based upon the finalized proposals, showing trees for retention and illustrating the tree and landscape protection measures
Root Protection Area ('RPA')	The minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.
Construction Exclusion Zone ('CEZ')	Area based on the RPA from which access is prohibited for the duration of a project
Protective fencing	Temporary fencing that excludes potentially harmful demolition or construction activity adjacent to trees to be retained.
Ground protection	Ground protection within RPAs capable of supporting traffic entering or using the site without being distorted or causing compaction of underlying soil or damage to surface roots.
Arboricultural monitoring & supervision	Throughout the demolition and construction process the arboricultural consultant shall undertake regular site monitoring visits and supervise specific works adjacent to trees. All supervisory and monitoring visits will be formally confirmed in writing and circulated to all relevant parties.

Table 1 Glossary of terms

6. GENERAL ADVICE

Extent and form of the root system	Within a short distance of the stem, the roots are highly branched, so as to form a network of small-diameter woody roots, which can extend radially for a distance much greater than the height of the tree, except where impeded by unfavourable conditions. All parts of this system bear a mass of fine, non-woody absorptive roots, typically concentrated within the uppermost 600 mm of the soil.
Damage to roots	All parts of the root system, but especially the fine roots, are vulnerable to damage. Once roots are damaged, water and nutrient uptake is restricted until new ones have grown. Mature trees recover slowly, if at all, from damage to their woody roots.
Soil compaction	Soil that has been compacted will not provide suitable conditions for the survival and growth of vegetation, whether existing or new, and is a common cause of post-construction tree loss on development sites. Compacted soil will adversely affect drainage, gas exchange, nutrient uptake and organic content, and will seriously impede or restrict root growth.

Table 2 General advice

7. REFERENCES

AL Shigo (1991) 'Modern Arboriculture', Shigo and Trees Associates

BS 3998:2010 'Recommendations for Tree Work', British Standards Institution, London.

BS5837: 2012 'Trees in relation to design, demolition and construction – Recommendation', British Standards Institution, London.

D. Lonsdale (1999) 'Principles of Tree Assessment and Management' HMSO

Mattheck and Broeler (1994) 'The Body Language of Trees' HMSO

National Joint Utilities Group. Volume 4, GUIDELINES FOR THE PLANNING, INSTALLATION AND MAINTENANCE OF UTILITY APPARATUS IN PROXIMITY TO TREES", Issue 2: 16th November 2007

Strouts and Winter (1994) 'Diagnosis of Ill Health in Trees' HMSO

**Appendix A –Tree survey information - undertaken in accordance with section 4,
BS5837:2012 ‘Trees in relation to design, demolition and construction – Recommendations**

Tree no:	Sequential reference number of trees or groups of trees commencing at "1". Prefixed with a letter indicating type: T: Tree. G: Group. H: Hedge. W: Woodland. A: Area
Tree Preservation Order/ (TPO) conservation area (CA)	Served on individual, groups, woodland or as an area when the local planning authorities (LPA) consider it necessary to protect the visual amenity of the local area. Consent from the LPA must be sought prior to undertaking any works, failure to do so may lead to unlimited fines. Conservation area is an area designated under 69 of the Planning (Listed Buildings and Conservation Areas) Act 1990. Works to trees located within a CA require six weeks notification (S211 notice) to be submitted to the LPA. If the works are considered excessive and will have an impact on the visual amenity of the CA a TPO can be served.
Name	Species listed by common name/ latin name
Height	Estimated height of tree shown in metres.
Trunk Dbh:	Diameter at breast height measured at approximately 1.5 m above ground level given in millimetres and to the nearest 100 mm. Where there are more than 1 stem the average diameter is provided.
Radial crown spread (M)	Given as a radial measurement in metres from the centre of the stem to the furthest point of the canopy at the four main compass points N, E, S, W
Crown clearance (M)	First branch above ground level
Height to first branch	Height and orientation of first significant branch.
Age Class	Y: Young: Age less than 1/4 life expectancy SM: Semi Mature: 1/4 to 1/2 life expectancy EM: Early Mature: 1/2 to 3/4 life expectancy M: Mature: Over 3/4 life expectancy OV: Over-mature: Mature, and in a state of decline V: Veteran: tree that, by recognized criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.
Physiology At the time of inspection the general health of the tree based upon its general appearance, vigour and the presence or absence of symptoms associated with poor health and physiological stress	• Good: Typical for species and age • Fair: Signs of physiological stress or dysfunction; but not significant enough that the tree may not recover. • Poor: Signs of physiological stress or dysfunction; significant enough that the tree might not recover. • Dead: Dead specimen.

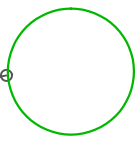
Structure Structural condition of the tree based on the structure of its roots, trunk and major stems and branches in relation to the presence of any physiological, pathological or mechanical defects.	• Good: No significant structural defects. • Fair: Significant structural defects; but these are either remediable or do not put the tree at immediate or early risk of collapse. • Poor: Significant and irremediable structural defects, such that there may be a risk of early or premature collapse. • Hazardous: Significant and irremediable structural defects, such that there is a risk of imminent collapse.
Landscape value	• High: Individuals specimens considered to be of visual importance • Moderate: trees growing in a group no individual tree/s of significance: • Low; located within woodland, or provide little landscape value
Estimated Years	Estimated life expectancy based on current condition. • 0 Dead trees. • <10 Less than ten years. • 10+ more than ten years. • 20+ more than twenty years. • 40+ more than forty years
Comments:	General comments relating to identified structural defects or hazards, vitality, pathogens or observational notes.
Recommendation of work	Arboricultural – Remedial tree works that involves pruning to a specification in accordance with the arboricultural best practice BS3998: 2010 Tree work – Recommendations. Examples include crown reduction, crown thinning, reducing specific branches and crown lifting. Safety works- nature of the works is to ensure the trees are kept in a safe manner. Facilitative – one off pruning works associated with development works whereby branches are removed to allow the movement of plant machinery within the grounds of the site without harming the trees visual appearance.
Category	A-Trees of high quality; B- Trees of moderate quality; C- Trees of low quality; U – Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years 1- Mainly arboricultural qualities 2- Mainly landscape qualities 3 – Mainly cultural values , including conservation values
Root Protection Area: (RPA)	• The RPA represents the minimum area of soil that the tree requires supporting a healthy and effective root system. The amount shown is based on the calculations set out in section 4.6 of the BS see attached appendices for the method of calculation.
Root Protection Area m²	• Root Protection Area (RPA) as radius (m) from the centre of the trunk

No.	Species	Height	Trunk Dia.	Radial Crown Spread	Crown Clearance	Height to 1st Branch	Life Stage	Physiology	Structure	Landscape Value	Est. Years	Comments	Recommendation	Category	RPA Radius	RPA m ²
T1	Leyland cypress	12m	400mm est	N4m E4m S4m W4m	N2.5m E2.5m S2.5m W1m	1m W	SM	Good	Good	Low	10+	Low level boundary screening.		C (12)	4.8m	72.4m ²
T2	Common Oak	18m	800mm est	N8m E8m S8m W8m	N5m E2m S2m W8m	2m S	EM	Good	Good	Moderate	40+	Off-site.		B (1)	9.6m	289.5m ²
T3	Common Oak	16m	700mm	N5m E4m S4m W6m	N2.5m E4m S5m W2.5m	3m W	SM	Good	Good	Moderate	20+	Of mainly low level boundary screening value.		B (12)	8.4m	221.7m ²
T4	Common Oak	15m	500mm est	N6m E6m S4m W4m	N4m E4m S4m W8m	8m E	SM	Good	Good	Low	20+	Boundary tree.		B (12)	6.0m	113.1m ²
T5	Sweet chestnut	10m	2 stems @ 400mm ivy est	N6.5m E4m S3m W4.5m	N6m E6m S6m W6m	5m N	SM	Good	Fair	Low	10+	Of mainly low level boundary screening value.		C (12)	6.8m	144.8m ²
T6	Sweet chestnut	7m	500mm est	N7m E6m S7m W5m	N4m E5m S5m W4m	4m N	SM	Good	Fair	Low	20+	Off site tree. No access. Remote inspection only; crown has been previously lopped.		C (1)	6.0m	113.1m ²
T8	Common Oak	14m	800mm	N6m E5.5m S5m W5m	N2.5m E2m S4m W4m	3.5m N	SM	Fair	Fair	Low	10+	Boundary tree.		C (1)	9.6m	289.5m ²
T9	Sycamore	13m	420mm	N4m E6m S6m W3.5m	N2m E2m S2m W2.5m	2m E	SM	Good	Good	Low	20+	Of mainly low level boundary screening value.		C (12)	5.0m	79.8m ²
T10	Leyland cypress	20m	860mm	N5m E5.5m S5m W5m	N3m E3m S3m W3m	4m E	SM	Good	Good	Moderate	20+	Boundary tree.		C (1)	10.3m	334.6m ²

No.	Species	Height	Trunk Dia.	Radial Crown Spread	Crown Clearance	Height to 1st Branch	Life Stage	Physiology	Structure	Landscape Value	Est. Years	Comments	Recommendation	Category	RPA Radius	RPA m ²
T12	Leyland cypress	12m	400mm est	N2m E2m S2m W2m	0m	1m W	SM	Good	Good	Moderate	20+	Front garden tree.	Fell to ground level	C (1)	4.8m	72.4m ²
T13	Colorado blue spruce	10m	200mm est	N2.5m E2.5m S2.5m W2.5m	0m	1m E	SM	Good	Good	Low	10+	Front garden tree.	Fell to ground level	C (1)	2.4m	18.1m ²
T14	Goat willow	6m	400mm est	N2.5m E2.5m S2.5m W2.5m	0m	1m N	SM	Good	Fair	Low	20+	Crown has been previously heavily reduced.	Fell to ground level	C (1)	4.8m	72.4m ²
T15	Ash	12m	130mmW 170mmN 220mmE 240mmS	N3m E5m S4m W3m	N6m E2m S5m W4m	3m E	Y	Fair	Good	Low	10+	Four stemmed from base.	Fell to ground level	C (1)	4.7m	68.7m ²
T16	Lawson cypress	16m	3 stems @ 340mm	N4.5m E3m S4m W5m	N1.5m E2m S2m W2m	2m S	Y	Good	Fair	Low	10+	Boundary tree; one-sided crown as suppressed by adjacent tree.	Fell to ground level	C (1)	7.1m	156.9m ²
T17	Hawthorn	10m	400mm est	N4m E4m S4m W4m	N2m E2m S2m W2m	2.5m S	Y	Good	Fair	Low	10+	Off site tree. No access. Remote inspection only.		C (1)	4.8m	72.4m ²
G7	Common Hazel, Leyland cypress and Cherry Laurel	Min 6m Max 10m	Avg 200mm est	N2m E2m S2m W2m	0m	0m E	Y	Good	Good	Low	10+	Mixed species hedge.		C (12)	2.4m	18.1m ²
H11	Beech	2m	Avg 100mm est	N1m E1m S1m W1m	1m	1m E	Y	Good	Good	Low	10+	Boundary hedge.		C (12)	1.2m	4.5m ²
W18	Sweet chestnut, Ash and Common Oak	15m	Avg 200mm est	N3m E3m S3m W3m	4m	2m S	Y	Good	Good	Low	10+	Woodland.		C (12)	2.4m	18.1m ²

Legend:

Canopy edge



1

Tree no.

Ash

Tree species

Tree categorization:

In accordance with the cascade chart in *Table 1* of British Standard 5837 (2012) *Trees in relation to design, demolition and construction — Recommendations*

Canopy of a category U tree



Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years

Canopy of a category A tree



Trees of high quality with an estimated remaining life expectancy of at least 40 years

Canopy of a category B tree

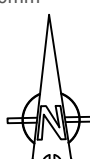


Trees of moderate quality with an estimated remaining life expectancy of at least 20 years

Canopy of a category C tree



Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm



0 2 4 6 8 10 20m

1:500 Scale



GRS LTD

ARBORICULTURAL CONSULTANT

GRS Arboricultural Consultant

The Old Coach House,

Waterside Mews,

Watlingtonbury,

Kent, ME18 5AB

Tel: 01622 817516

Email: guy@grstrees.co.uk

www.grstrees.co.uk

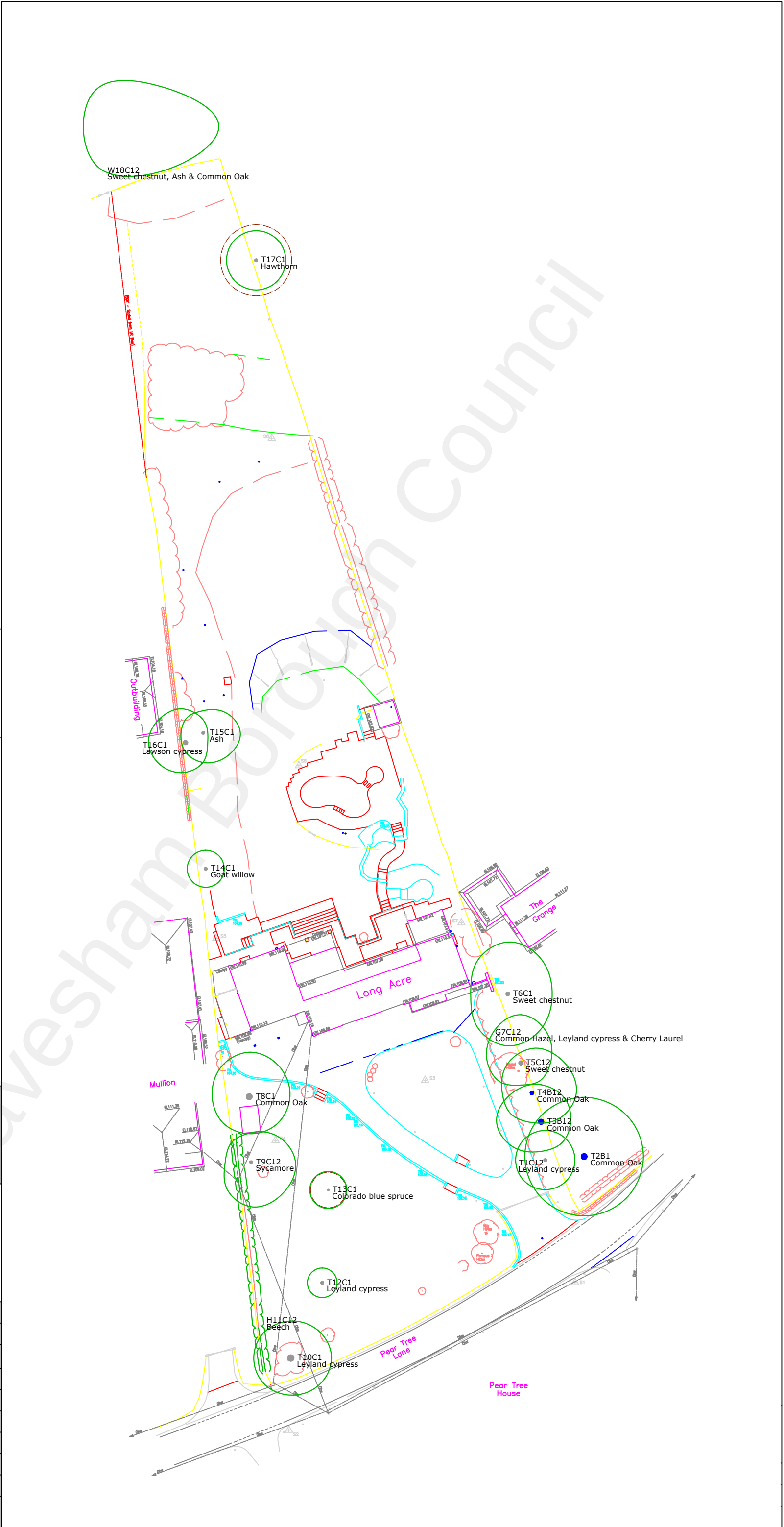
Please ensure all dimensions on site and any if there are any discrepancies please notify us.

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Client	Mr and Mrs King
Title	Tree location plan - TLP-01
Site	Long Acre, Pear Tree Lane, Gravesend, Kent DA12 3JT
Date	01/02/2023
Drawn	GRS
Job ref	GRS.12.23
Scale	1:500
Paper size	A2
Notes	Planning
Drawing reference	Topographical survey



- CHRONOLOGICAL ORDER OF EVENTS
1.

Pre-start meeting
2.

Tree removals
3.

Demolition phase - removal of structures
4.

Construction of building
5.

Landscape phase
6.

Removal protective fencing

CONSTRUCTION EXCLUSION ZONES (CEZs)
Area which access is prohibited during development (based on the RPAs).

Construction Exclusion Zones shall be safeguarded during development by the installation of protective fencing and / or fit for purpose ground protection before any development works occur.

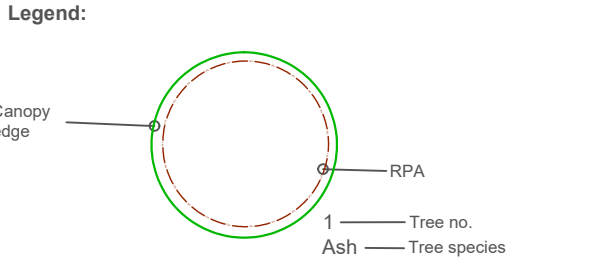
There shall be no development within CEZs including*:

- No soil disturbance
- No trenches for foundations, services or drainage
- No soil level changes
- No new hard surfaces

*If any such works are later proposed within any RPAs of trees to be retained these shall be supervised by the arboricultural consultant.

The mixing of cement based materials shall take place outside the Construction Exclusion Zones. In small confined areas provision will be made to prevent run-off from entering the RPA see diagram for a suitable example. All mixers and barrows shall be cleaned so the run-off does not enter the RPA. If there is sufficient space for mixing of cement to occur away from nearby trees then no precautions are necessary.

All other chemicals hazardous to tree health, including petrol and diesel, shall be stored in suitable containers as specified by current COSHH Regulations, and kept away from Root Protection Areas.



Tree categorization:

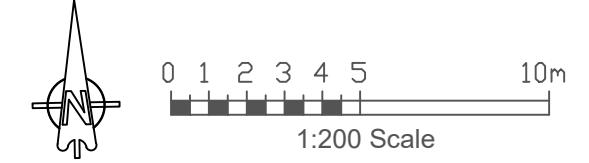
In accordance with the cascade chart in Table 1 of British Standard 5837 (2012) *Trees in relation to design, demolition and construction — Recommendations*

Canopy of a category U tree ●
Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years

Canopy of a category A tree ●
Trees of high quality with an estimated remaining life expectancy of at least 40 years

Canopy of a category B tree ●
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years

Canopy of a category C tree ●
Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm



GRS Arboricultural Consultant
The Old Coach House,
Waterside Mews,
Watlingtonbury,
Kent, ME18 5AB
Tel: 01622 817516
Email: guy@grstrees.co.uk
www.grstrees.co.uk

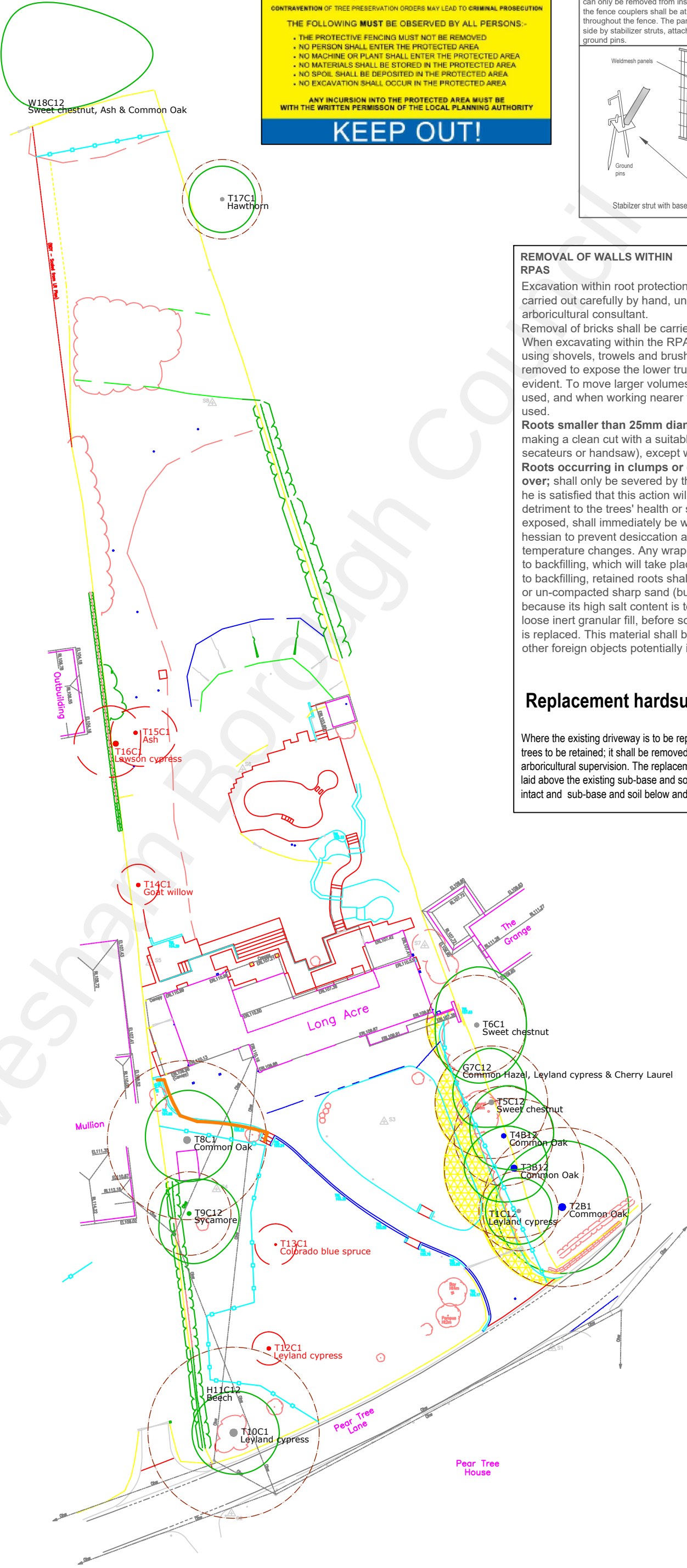
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Client	Mr and Mrs King
Title	Tree removal plan - TRP-01
Site	Long Acre, Pear Tree Lane, Gravesend, Kent DA12 3JT
Date	01/02/2023
Drawn	GRS
Job ref	GRS.12.23
Scale	1:500
Paper size	A2
Notes	Planning
Drawing reference	Topographical survey



TREE PROTECTION AREA

TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND ARE SUBJECTS OF A TREE PRESERVATION ORDER (TOWN & COUNTRY PLANNING ACT 1990)

CONTRAVENTION OF TREE PRESERVATION ORDERS MAY LEAD TO CRIMINAL PROSECUTION

THE FOLLOWING MUST BE OBSERVED BY ALL PERSONS:-

• THE PROTECTIVE FENCING MUST NOT BE REMOVED

• NO PERSON SHALL ENTER THE PROTECTED AREA

• NO MACHINE OR PLANT SHALL ENTER THE PROTECTED AREA

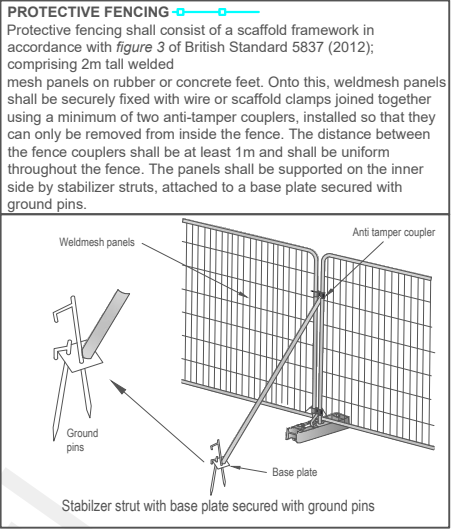
• NO MATERIALS SHALL BE STORED IN THE PROTECTED AREA

• NO SPOIL SHALL BE DEPOSITED IN THE PROTECTED AREA

• NO EXCAVATION SHALL OCCUR IN THE PROTECTED AREA

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

KEEP OUT!



REMOVAL OF WALLS WITHIN RPAS

Excavation within root protection areas (RPAs) shall be carried out carefully by hand, under direct supervision of the arboricultural consultant.

Removal of bricks shall be carried out using hand tools. When excavating within the RPA the soil shall be moved using shovels, trowels and brushes. Enough soil should be removed to expose the lower trunk where the roots become evident. To move larger volumes of soil a spade should be used, and when working nearer to roots a trowel must be used.

Roots smaller than 25mm diameter; shall be pruned back, making a clean cut with a suitable sharp tool (e.g. bypass secateurs or handsaw), except where they occur in clumps.

Roots occurring in clumps or of 25mm diameter and over; shall only be severed by the arboricultural consultant if he is satisfied that this action will not lead to significant detriment to the trees' health or safety. Roots, whilst exposed, shall immediately be wrapped or covered by hessian to prevent desiccation and to protect them from rapid temperature changes. Any wrapping shall be removed prior to backfilling, which will take place as soon as possible. Prior to backfilling, retained roots shall be surrounded with topsoil or un-compacted sharp sand (builders' sand will not be used because its high salt content is toxic to tree roots), or other loose inert granular fill, before soil or other suitable material is replaced. This material shall be free of contaminants and other foreign objects potentially injurious to tree roots.

Replacement hardsurfacing

Where the existing driveway is to be replaced within the RPAs of trees to be retained; it shall be removed with care under arboricultural supervision. The replacement hard surfacing shall be laid above the existing sub-base and soil below, which shall be left intact and sub-base and soil below undisturbed.

CHRONOLOGICAL ORDER OF EVENTS

1. Pre-start meeting
2. Tree removals
3. Demolition phase - removal of structures
4. Construction of building
5. Landscape phase
6. Removal protective fencing

CONSTRUCTION EXCLUSION ZONES (CEZs)
Area which access is prohibited during development (based on the RPAs).

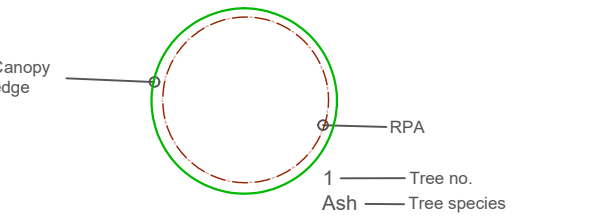
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- No soil disturbance
- No trenches for foundations, services or drainage
- No soil level changes
- No new hard surfaces

*If any such works are later proposed within any RPAs of trees to be retained these shall be supervised by the arboricultural consultant.

The mixing of cement based materials shall take place outside the Construction Exclusion Zones. In small confined areas provision will be made to prevent run-off from entering the RPA see diagram for a suitable example. All mixers and barrows shall be cleaned so the run-off does not enter the RPA. If there is sufficient space for mixing of cement to occur away from nearby trees then no precautions are necessary. All other chemicals hazardous to tree health, including petrol and diesel, shall be stored in suitable containers as specified by current COSHH Regulations, and kept away from Root Protection Areas.

Legend:



Tree categorization:
In accordance with the cascade chart in Table 1 of British Standard 5837 (2012) *Trees in relation to design, demolition and construction — Recommendations*

Canopy of a category U tree ●
Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years

Canopy of a category A tree ●
Trees of high quality with an estimated remaining life expectancy of at least 40 years

Canopy of a category B tree ●
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years

Canopy of a category C tree ●
Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm



GRS Arboricultural Consultant
The Old Coach House,
Waterside Mews,
Wateringbury,
Kent, ME18 5AB

Tel: 01622 817516
Email: guy@grstrees.co.uk
www.grstrees.co.uk

ARBORICULTURAL CONSULTANT

Please ensure all dimensions on site and any if there are any discrepancies please notify us.

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The origin of this drawing was produced in colour - a monochrome copy should not be relied upon.

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Client	Mr and Mrs King
Title	Tree protection plan - TPP-01
Site	Long Acre, Pear Tree Lane, Gravesend, Kent DA12 3JT
Date	01/02/2023
Drawn	GRS
Job ref	GRS.12.23
Scale	1:500
Paper size	A2
Notes	Planning
Drawing reference	Proposed site layout

TREE PROTECTION AREA

TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND ARE SUBJECTS OF A TREE PRESERVATION ORDER (TOWN & COUNTRY PLANNING ACT 1990)

CONTRAVENTION OF TREE PRESERVATION ORDERS MAY LEAD TO CRIMINAL PROSECUTION

THE FOLLOWING **MUST** BE OBSERVED BY ALL PERSONS:-

- THE PROTECTIVE FENCING MUST NOT BE REMOVED
- NO PERSON SHALL ENTER THE PROTECTED AREA
- NO MACHINE OR PLANT SHALL ENTER THE PROTECTED AREA
- NO MATERIALS SHALL BE STORED IN THE PROTECTED AREA
- NO SPOIL SHALL BE DEPOSITED IN THE PROTECTED AREA
- NO EXCAVATION SHALL OCCUR IN THE PROTECTED AREA

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

KEEP OUT!

PROTECTIVE FENCING

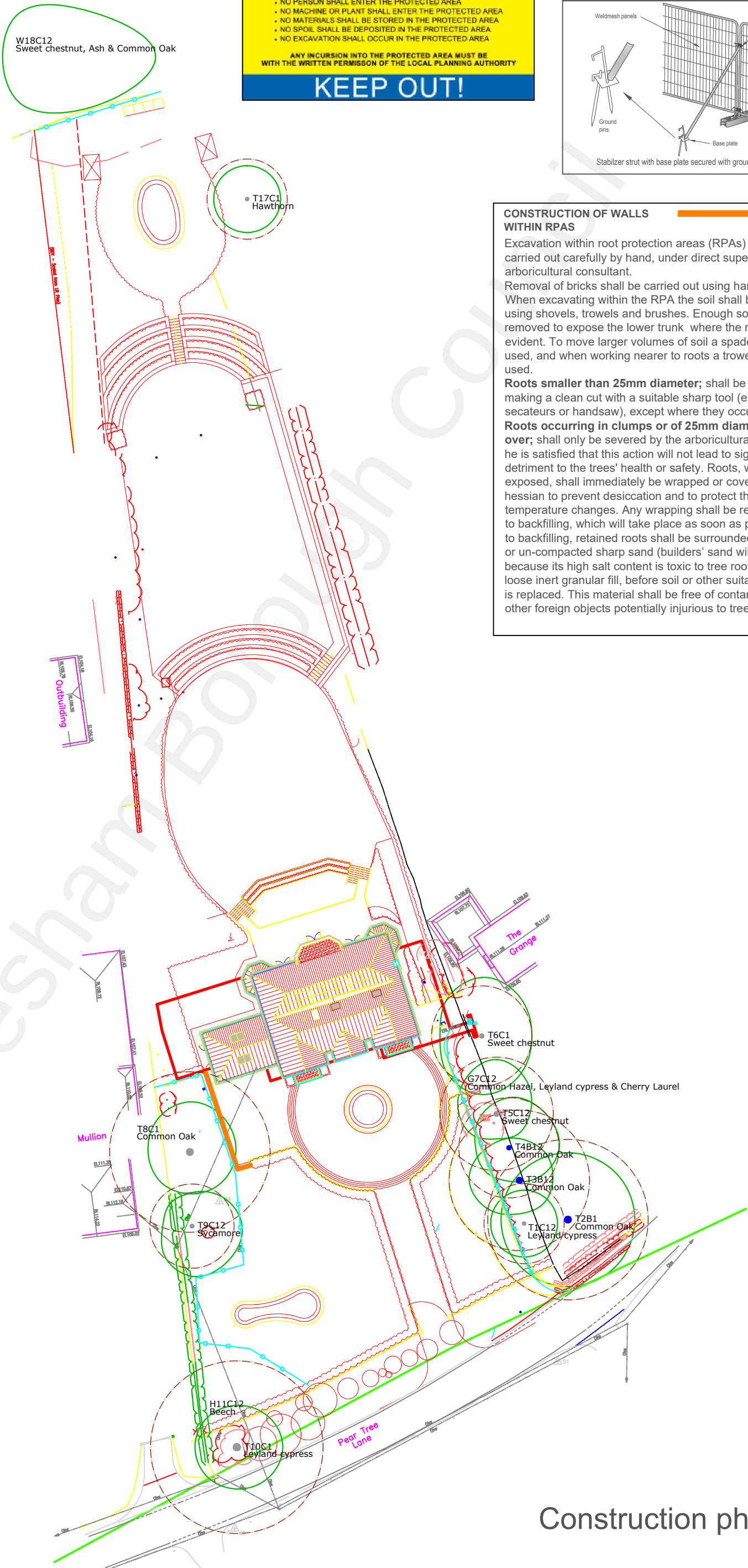
Protective fencing shall consist of a scaffold framework in accordance with figure 3 of British Standard 5837 (2012); comprising 2m tall welded mesh panels on rubber or concrete feet. Onto this, weldmesh panels shall be securely fixed with wire or scaffold clamps joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The distance between the fence couplers shall be at least 1m and shall be uniform throughout the fence. The panels shall be supported on the inner side by stabilizer struts, attached to a base plate secured with ground pins.

CONSTRUCTION OF WALLS WITHIN RPAs

Excavation within root protection areas (RPAs) shall be carried out carefully by hand, under direct supervision of the arboricultural consultant. Removal of bricks shall be carried out using hand tools. When excavating within the RPA the soil shall be moved using shovels, trowels and brushes. Enough soil should be removed to expose the lower trunk where the roots become evident. To move larger volumes of soil a spade should be used, and when working nearer to roots a trowel must be used.

Roots smaller than 25mm diameter; shall be pruned back, making a clean cut with a suitable sharp tool (e.g. bypass secateurs or handsaw), except where they occur in clumps.

Roots occurring in clumps or of 25mm diameter and over; shall only be severed by the arboricultural consultant if he is satisfied that this action will not lead to significant detriment to the trees' health or safety. Roots, whilst exposed, shall immediately be wrapped or covered by hessian to prevent desiccation and to protect them from rapid temperature changes. Any wrapping shall be removed prior to backfilling, which will take place as soon as possible. Prior to backfilling, retained roots shall be surrounded with topsoil or un-compacted sharp sand (builders' sand will not be used because its high salt content is toxic to tree roots), or other loose inert granular fill, before soil or other suitable material is replaced. This material shall be free of contaminants and other foreign objects potentially injurious to tree roots.



Construction phase