

PHP Primary Care
Developments Ltd

ARBORICULTURAL DEVELOPMENT STATEMENT

Site:
Land at Barnham Road
Eastergate
PO20



ARBORICULTURAL DEVELOPMENT STATEMENT

Arboricultural Implications Assessment and Method Statement
guided by recommendations within BS5837:2012

Client:	PHP Primary Care Developments Ltd
Site:	Land at Barnham Road, Eastergate, PO20 3RP
Arboricultural Consultant:	Stefan Rose <i>BSc (Hons), TechCert (Arbor.A), TechArborA</i>
Date:	May 2021

SUMMARY

There is a development proposal for a medical centre at Land at Barnham Road, Eastergate, PO20 3RP; the proposal has been assessed broadly in accordance with BS5837:2012 “*Trees in Relation to Design, Demolition and Construction – Recommendations*”.

This Arboricultural Development Statement (ADS) will demonstrate the protection measures for the retained trees and should be read in association with the Tree Protection Plan CBA11469.02 TPP that identifies tree retention and protection measures. It follows the initial tree survey assessment.

The emphasis of the report is predominantly that of preservation and tree protection. It identifies methodologies to provide protection for trees, to ensure their healthy and safe retention during and post development, as guided by BS5837:2012 and current best practice.

The proposal will retain 8 (eight) of the fifteen individual trees, the 1 (one) hedge, 3 (three) of the five groups of trees plus the partial retention of 1 (one) group.

CBA Trees believes that the trees highlighted for retention within this report can be retained without undue stress on their long-term health.

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SUPPORTING INFORMATION/APPENDICES:

CB1	Tree Survey Schedule including Tree Survey Plan CBA11469.01A TSP
CB2	Root Protection Area Schedule
CB3	Tree Protection Plan CBA11469.02 TPP
CB4	Tree Works Schedule

GUIDING PRINCIPLES/APPENDICES:

CB5	Tree Protection Guidance Leaflet
	Construction Exclusion Zone Site Notice
	Common Causes of Damage During Construction Works
CB6	Qualifications and Experience

1.0 INTRODUCTION

- 1.1 There is a development proposal for a medical centre at Land at Barnham Road, Eastergate, PO20 3RP. The proposal has been assessed broadly in accordance with BS5837:2012 *"Trees in Relation to Design, Demolition and Construction – Recommendations"*.
- 1.2 Document disclosure:
- Topographical plan, drawing no. 1142_08_04_01
 - Proposed Site Plan 9226-P013
- 1.3 The client and project architects provided the original site plans and locations of the trees, and these have been the basis for the production of subsequent plans. Whilst CBA Trees has had a limited input in defining the contents of the development plan, it broadly conforms to the requirements of BS5837:2012 *"Trees in Relation to Design, Demolition and Construction – Recommendations"* and current best practice advice.
- 1.4 Our advice has been sought on the principles of the development in relation to the potential impact on the existing tree stock, to inform and to facilitate the development layout.

2.0 CLIENT'S BRIEF

- 2.1 In line with our written quotation and verbal instructions, information has been compiled in accordance with BS5837:2012 and current best practice advice.
- To undertake a Tree Survey and produce a Root Protection Area Schedule in accordance with BS5837:2012 Annex D (appended at CB1 and CB2 respectively).
 - To produce an AutoCAD compliant Tree Survey Plan based on plans provided by the client (plan CBA11469.01A TSP appended at CB2).
 - To undertake an Arboricultural Implications Assessment (AIA) of the proposed development provided by the client to identify which trees will be lost, which can be retained and suggest mitigating build techniques in order to retain trees as appropriate.
 - Based on the above and further on-going discussions, to provide an Arboricultural Development Statement detailing the methodologies for the retention of the tree stock where feasible, in relation to the approved development layout including a Tree Protection Plan (CBA11469.02 TPP appended at CB3).
- 2.2 The advice provided has been formulated without discussion with the main ground or construction contractors who at this stage have not been appointed. Once the main contractors are appointed, amendments to this statement may be required for construction purposes. All amendments will be assessed by the retained arboricultural consultant and approved in writing by Arun District Council Planning

Officer/Tree Officer prior to any changes occurring to site works or the methodologies of site work.

3.0 DESCRIPTION OF THE SITE

- 3.1 The site is formed by the existing private staff car park for the surgery and an area of open space/field.
- 3.2 The site entrance has an immediate rise in ground level from Barnham Road; below the site appears to be level in nature.
- 3.3 The staff parking area is a compact hardcore surface. The open space/field area appears to be grassed area recently cleared of growth.
- 3.4 Trees primarily grow round the perimeter of the site with the legally protected Oak tree being the better tree of the identified tree stock.

4.0 THE TREE STOCK

- 4.1 CBA Trees undertook a tree survey on 16th February 2021. The tree survey exercise identified 15 (fifteen) individual trees, 5 (five) groups of trees with 10 (ten) notable trees and 1 (one) hedge. The Tree Survey Schedule and Tree Survey Plan (CBA11469.01A TSP) are appended at CB1.

4.2 Tree Categorisation Method

Category U = Trees in such a condition that any value would be lost within 10 years or should be removed for reasons of sound arboricultural management. There were no trees within this classification at the time of surveying.

Note:

"Category U trees are 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."

Category A = Trees of high quality and value: in such a condition as to make a substantial contribution, (40 years or more is recommended). There was 1 (one) individual tree within this classification at the time of surveying.

Individual Tree: 10

Category B = Trees of moderate quality and value, capable of making a significant contribution for in excess of 20 years. There were 3 (three) individual trees, 1 (one) group of trees and 1 (one) hedge within this classification at the time of surveying.

Individual Trees: 2, 11 and 15

Group: 2

Hedge: 1

Category C = Trees of low quality and value which might remain for a minimum of 10 years or young trees with stems of less than 150mm diameter. There were 11 (eleven) individual trees, 4 (four) groups of trees and 10 (ten) noted trees within those groups classified as low 'C' grade category at the time of surveying.

Individual Trees: 1, 3-9, 12, 13 and 14

Group: 1, 3, 4 and 5

Noted Trees: G2.1-G2.10

Note:

"Trees under these categories are trees that should be a material consideration in the development process; the subcategories are intended to reflect arboricultural, landscape and cultural values respectively."

- 4.3 For more details of the existing tree stock, refer to the Tree Survey Schedule (appended at CB1).

5.0 TREE PRESERVATION ORDER/CONSERVATION AREA

- 5.1 Arun District Council has confirmed that T10 is protected by a Tree Preservation Order, reference TPO/EG/1/17.
- 5.2 If it is intended to carry out works to trees on site prior to the granting of Full Planning Consent and Discharge of Planning Conditions it is advised that checks are made with Arun District Council prior to tree works being completed to confirm the legal protection status of the trees on and adjacent to the site and that appropriate notifications/applications have been made and allowed/granted.

6.0 PROPOSED TREE RETENTION AND TREE LOSS

- 6.1 In accordance with the recommendations contained within BS5837:2012, an experienced arboriculturalist has assessed the requirements for tree protection and the Root Protection Area (RPA). The implications of the proposed development are detailed below, along with any mitigating measures to ensure the retention of these trees.
- 6.2 As part of the assessment, dimensions have been scaled from the drawings provided by the client (9226-P013) prepared and modified, to include the relevant Tree Survey data (tree protection plan CBA11469.02 TPP appended at CB3).

PART 1
ARBORICULTURAL IMPLICATIONS ASSESSMENT

7.0 SUMMARY OF ARBORICULTURAL IMPLICATIONS

7.1 The following is a summary of arboricultural implications as indicated on Tree Protection Plan CBA11469.02 TPP.

Table 1: Arboricultural Implications

Tree No.	Species	BS 5837:2012 Cat	Potential cause of harm	Implication	Mitigation
1	Field Maple <i>Acer campestre</i>	C1+2	• Drainage and utility installation • Soakaway installation work • Access road construction and highways requirements • Construction and material delivery access	• Removed	• Replacement planting • Low grade tree
2	Field Maple <i>Acer campestre</i>	B1+2	• Drainage and utility installation • Soakaway installation work • Access road construction and highways requirements • Construction and material delivery access	• Removed	• Replacement planting
3	Field Maple <i>Acer campestre</i>	C1	• Drainage and utility installation • Access road construction and highways requirements • Construction and material delivery access	• Removed	• Replacement planting • Low grade tree
4	Goat Willow <i>Salix caprea</i>	C1+2	• Drainage and utility installation • Soakaway installation work • Access road construction and highways requirements • Construction and material delivery access	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP
5	Common Hawthorn <i>Crataegus monogyna</i>	C1+2 Interim	• Drainage and utility installation • Soakaway installation work • Access road construction and highways requirements • Construction and material delivery access	• Removed	• Replacement planting • Low grade tree
6	Field Maple <i>Acer campestre</i>	C1+2 Interim	• Drainage and utility installation • Soakaway installation work • Access road construction • Construction and material delivery access	• Removed	• Replacement planting • Low grade tree
7	Common Hawthorn <i>Crataegus monogyna</i>	C1+2	• Drainage and utility installation • Access road construction • Construction and material delivery access	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP
8	Bay Laurel <i>Laurus nobilis</i>	C1	• Drainage and utility installation • Access road construction • Construction and material delivery access	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP

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Tree No.	Species	BS 5837:2012 Cal	Potential cause of harm	Implication	Mitigation
9	Western Red Cedar <i>Thuja plicata</i>	C1+2	• Drainage and utility installation • Access road construction • Construction and material delivery access	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP
10 TPO	Pedunculate Oak <i>Quercus robur</i>	A1+2 Interim	• Drainage and utility installation • Road construction • Construction and material delivery access • Material storage and mixing • Road junction construction	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP • Arboricultural supervision for drainage works and installation of cellular confinement system within road junction tabletop area • Tree protection consideration extended beyond minimum required
11	Pedunculate Oak <i>Quercus robur</i>	B1+2 Interim	• Drainage and utility installation • Access road construction and highways requirements • Construction and material delivery access • Material storage and mixing	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP
12	Lawson Cypress <i>Chamaecyparis lawsoniana</i>	C1+2	• Under footprint of development	• Removed	• Replacement planting • Low grade tree
13	Golden Lawson Cypress <i>Chamaecyparis lawsoniana</i> 'Golden Wonder'	C1	• Under footprint of development	• Removed	• Replacement planting • Low grade tree
14	Norway Maple <i>Acer platanoides</i>	C1+2	• Landscaping works • General contractor movements • Material storage and mixing	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP
15	Pedunculate Oak <i>Quercus robur</i>	B1+2	• Landscaping works • General contractor movements • Material storage and mixing • Gravel footpath works	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP
H1	Goat Willow Field Maple	B2	• Drainage and utility installation • Soakaway installation work • Access road construction and highways requirements • Construction and material delivery access	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP
Grp 1	Dogwood Field Maple	C1+2	• Under footprint of access junction	• Removed	• Replacement planting • Low grade group
Grp 2	Hybrid Black Poplar Common Hawthorn Blackthorn	B2	• Drainage and utility installation • Soakaway installation work • Access road construction and highways requirements • Construction and material delivery access	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP

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Tree No.	Species	BS 5837:2012 Cat	Potential cause of harm	Implication	Mitigation
G2.1	Common Hawthorn	C1+2	• Drainage and utility installation • Soakaway installation work • Access road construction • Construction and material delivery access	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP
G2.2	Hybrid Black Poplar	C1+2	• Drainage and utility installation • Soakaway installation work • Access road construction and highways requirements • Construction and material delivery access	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP
G2.3	Hybrid Black Poplar	C1+2	• Drainage and utility installation • Soakaway installation work • Access road construction and highways requirements • Construction and material delivery access	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP
G2.4	Hybrid Black Poplar	C1+2	• Drainage and utility installation • Soakaway installation work • Access road construction and highways requirements • Construction and material delivery access	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP
G2.5	Hybrid Black Poplar	C1+2	• Drainage and utility installation • Access road construction • Construction and material delivery access	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP
G2.6	Hybrid Black Poplar	C1+2	• Drainage and utility installation • Access road construction • Construction and material delivery access	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP
G2.7	Hybrid Black Poplar	C1+2	• Drainage and utility installation • Access road construction • Construction and material delivery access	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP
G2.8	Common Hawthorn	C1+2	• Drainage and utility installation • Soakaway installation work • Access road construction and highways requirements • Construction and material delivery access	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP
G2.9	Hybrid Black Poplar	C1+2	• Drainage and utility installation • Soakaway installation work • Access road construction and highways requirements • Construction and material delivery access	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP

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<i>Tree No.</i>	<i>Species</i>	<i>BS 5837:2012 Cal</i>	<i>Potential cause of harm</i>	<i>Implication</i>	<i>Mitigation</i>
G2.10	Hybrid Black Poplar	C1+2	• Drainage and utility installation • Soakaway installation work • Access road construction and highways requirements • Construction and material delivery access	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP
Grp 3	Pedunculate Oak Blackthorn Hawthorn	C1+2	• Drainage and utility installation • Section of group under foot print of road • Access road construction • Construction and material delivery access	• Retained in part	• Protected as shown on Tree Protection Plan CBA11469.02 TPP • Section removed as show on Tree Protection Plan CBA11469.02 TPP
Grp 4	Lawson Cypress spp. X4	C1+2	• Offsite and outside of development area	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP
Grp 5	Flowering Cherry Norway Maple	C1+2	• Offsite and outside of development area • Landscaping works	• Retained	• Protected as shown on Tree Protection Plan CBA11469.02 TPP

8.0 PRE-COMMENCEMENT SITE MEETING

- 8.1 It is recommended that a pre-commencement site meeting is held prior to any works commencing on site, to agree all approved processes with the arboricultural consultant, the construction personnel and Arun District Council Tree Officer. This meeting could be used to formally agree the methods of work, position of site offices, material storage, compounds and parking plus confirmation that the tree protection measures prior to commencement of the development and the associated demolition work are correctly set up.

9.0 ADDITIONAL ARBORICULTURAL ADVICE FOR SITE PERSONNEL

- 9.1 To provide site personnel with additional information regarding the requirements of Tree Protection, a leaflet (appended at CB5) shall be issued to all staff at the time of their site induction. Spare copies of this leaflet shall be available in the site office as replacements.
- 9.2 In order to inform site personnel of the purpose of the barriers, information notices shall be fixed to the barriers at 5m intervals. These notices shall be of all-weather construction and shall be in the form of the specimen provided at appendix CB5 and replaced as and when necessary.

10.0 PRE-DEVELOPMENT TREE WORKS

- 10.1 All tree works will be undertaken prior to the commencement of site preparation, ground and construction works once full planning permission has been granted and any detail for planning conditions have been agreed with the Planning Case Officer/Tree Officer of Arun District Council.
- 10.2 **All permitted or approved tree work** as detailed within the Tree Works Schedule (appended at CB4) should be carried out in accordance with the British Standard “*Recommendations for Tree Work*” BS3998:2010, by suitably qualified and experienced professional arborists. Under no circumstances shall site personnel undertake any tree pruning operations. All tree surgery works should be carried out prior to the development of the site, and erection of protective barriers.
- 10.3 Consideration should be given to the timing of any tree works to avoid the active growing period of trees. Therefore, all tree work should ideally be carried out during the dormant period from November through to February and then again from June to August.
- 10.4 Due to the bird-nesting season, considered to be from 1st March through to the 31st July (Natural England) depending on weather conditions, consideration must also be given to the potential for nesting birds. It is advised that, where tree work is to be carried out within these months that an ecologist be consulted to:
- Complete or advise on a pre-works survey that needs to be carried out by a suitably competent person. As a general rule, it should be assumed that birds

will be nesting in trees, and it is down to contractors to assess, record and confirm that any works carried out in the management of trees and other vegetation has not disturbed actively nesting birds.

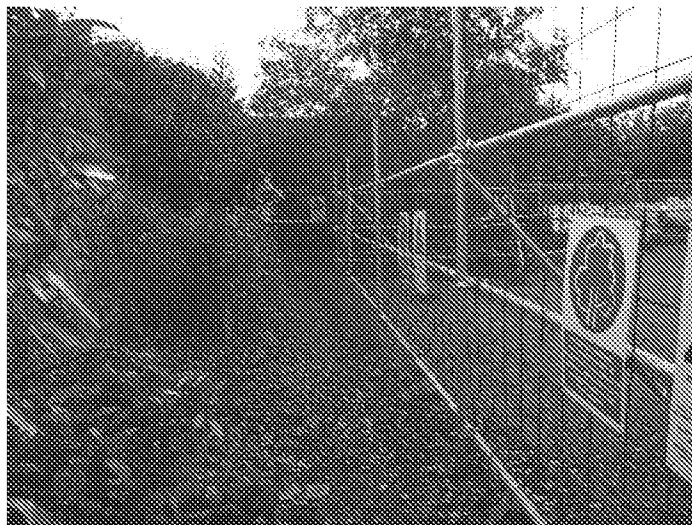
- Ground vegetation, and therefore ground nesting birds, can often be overlooked by tree workers so additional care and controls should be taken when access and egress to the work site may also cause disturbance or damage to a nesting site. This is also true for retained trees on site as the removal of adjacent trees or remedial works on a tree may lead to an established nest being abandoned, exposed to the elements or predation. This action is also a breach of the Act and therefore could lead to prosecution due to the infringement of the Wildlife and Countryside Act 1981 and breaching the Conservation of Habitats and Species Regulations 2010 (as amended).

- 10.5 Although not apparent at the time of the site visit, consideration should also be given to the presence of bats, and a full visual assessment should be undertaken before any works are carried out on the trees. Where bats are identified as a serious concern in relation to the trees, a bat survey should be undertaken by qualified and trained personnel to identify the needs of the bats (roosts, resting place etc.) and no tree works can be carried out until the 'all clear' is given, or a programme of recommendations is received in writing.
- 10.6 Should additional tree works become apparent during the construction process written consent will be required from Arun District Council tree team prior to these additional works being undertaken.
- 10.7 All tree works that are required to facilitate the development are detailed within the Tree Works Schedule appended at CB4.

11.0 TREE PROTECTION MEASURES

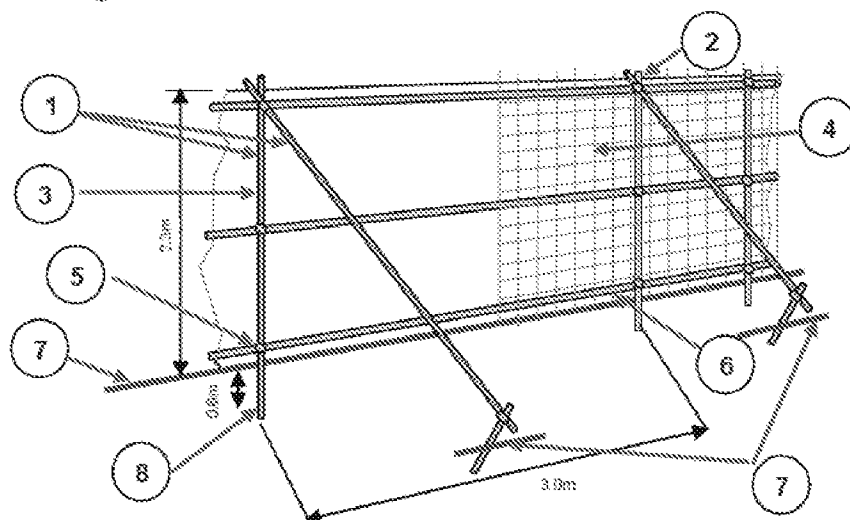
- 11.1 All site operations will be planned, implemented and supervised to prevent the following unless otherwise agreed within this report:
- Root severance
 - Damage to the bark, branches and trunks
 - Compaction of the soil within the Construction Exclusion Zone
 - Alterations in soil level
 - Soil contamination by phytotoxic materials such as herbicides, petrol, oils, diesel, cement and concrete washings or other construction additives
- 11.2 Before starting any site works in relation to this development proposal, tree protection will be installed in accordance with Tree Protection Plan CBA11469.02 TPP (appended at CB3). This will occur immediately following the completion of tree works and prior to any site preparation works starting.

Example of protective barrier:



- 11.3 A copy of the Tree Protection Plan CBA11469.02 TPP and arboricultural development statement will be made available by the client and a copy kept on site by the appointed contractor for reference at all times during external site works.
- 11.4 Installing the following protective barrier as indicated on Tree Protection Plan CBA11469.02 TPP will protect retained trees. It is recommended that the appropriate barrier will consist of a robust barrier where it (the barrier) is resistant to impact and requires a positive or considered movement/adjustment by contractors of the barrier to adjust its position.
- 11.5 The barrier is to comprise of a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at a maximum interval of 3m. Onto this, weldmesh panels should be securely fixed with wire or scaffold clamps.

Figure 1: Protective Barrier



1. Standard scaffold poles
2. Uprights to be driven into the ground
3. Panels secured to uprights with wire ties and where necessary standard scaffold clamps
4. Weldmesh wired to the uprights and horizontals
5. Standard clamps
6. Wire twisted and secured on inside face of barriers to avoid easy dismantling
7. Ground level
8. Approximately 0.6m driven into the ground

- 11.6 There will be a pinch point at the far end of the existing car park area into the field to pass the legally protected Oak tree (T10). Prior to any ground or construction works occurring within this area, fit for purpose ground protection will be established (at the same time as the tree protection barriers within the tabletop road junction to ensure that the ground is not unduly disturbed by vehicle and plant movements). This ground protection may consist of a geotextile membrane and 100mm wood chip with steel road plates placed over the area to provide access without compromising the Oak. This ground protection will be retained during site works until such time as the cellular confinement system within the tabletop junction has been established. The ground protection can be adjusted to allow for the drainage run and utility installation by pulling the plates to either side to allow for the trenching to be dug and again pulled away as the confinement system is being installed.
- 11.7 Tree protection barriers will remain *in-situ* for the duration of the project for all external works. The areas protected by barriers will be regarded as **sacrosanct**, and the tree protective barriers shall not be taken down or relocated at any time without the written approval of the Planning Case Officer/Tree Officer of Arun District Council during works that relate to the planning consent. An example of a CEZ notice is appended at CB5.

12.0 EXISTING SERVICES

- 12.1 No information has been provided on the location and size of existing services but given the site is, it is thought unlikely that any drainage or services are on site. However, if there are any existing services within the RPA and CEZ of retained trees will not be chased out, but cut at the edge of any structure and left *in-situ*.
- 12.2 Cabling will only be recovered from beneath a CEZ where it is located in ducting, and can be removed by winching from an existing service manhole beyond the CEZ.
- 12.3 Service pipes and ducts, where they are located within the CEZ or RPA of retained trees, will be made redundant either by pipe bursting or by filling with an inert material such as foamed concrete.

13.0 AVOIDING DAMAGE TO STEMS AND BRANCHES

- 13.1 Care shall be taken when planning site operations, to ensure that wide, tall loads or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact could result in serious damage to them, and might make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees, will be conducted under the supervision of a banksman, in order to ensure adequate clearance from trees is maintained at all times.

14.0 VEHICULAR MOVEMENTS

- 14.1 The existing access provides for continued access. However, this will be upgraded to be fit for purpose and meet the highways requirements and as such ground works to create an acceptable gradient will be required adjacent to Barnham Road.
- 14.2 There will be a pinch point at the far end of the existing car park area into the field to pass the legally protected Oak tree (T10). Prior to any ground or construction works occurring within this area, fit for purpose ground protection will be established (at the same time as the tree protection barriers within the tabletop road junction to ensure that the ground is not unduly disturbed by vehicle and plant movements).

15.0 SITING OF TEMPORARY OFFICES, TOILETS AND MATERIAL STORAGE COMPOUNDS

- 15.1 It is anticipated that all deliveries shall make use of the existing site access and parking area until such time as the tree protection measures are in place and/or the new access has been constructed, in order to avoid unnecessary damage to tree roots.
- 15.2 Mixing of materials must take place outside the construction exclusion zone formed by the barriers and ground protection and not within the root protection areas of retained as shown on the tree protection plan CBA11469.02TPP.
- 15.3 The locations shall be agreed in writing with the Planning Case Officer/Tree Officer of Arun District Council prior to the commencement of works on site, and will remain in only those agreed locations throughout the construction phases. If an alternative location is required, this must be agreed in writing with the Planning Case Officer/Tree Officer of Arun District Council. This will also include the delivery, storage and movement of all essential facilities, as well as aspects such as temporary contractor vehicle parking and site location of chemical mixing (e.g. concrete). All such locations will be outside of the RPAs, and avoid areas where 'run off' of chemicals may flow into RPAs.
- 15.4 *Site Huts*

It is unlikely that a significant number of site huts or large site huts will be required given the small scale nature of the project. However, any site huts that are to be situated on ground that is not existing hard surfacing shall have appropriate footings or be situated on a temporary surface, which will aid in reducing the potential for compaction of the ground, where they are in close proximity to the existing tree protective barrier line. Site huts can be used as part of the protective barrier boundary, and in some cases, can be beneficial where installation does not conflict with the aerial parts of the tree.

15.5 Material Storage

This shall be accommodated outside of the CEZ formed by the tree protective barriers, particularly to avoid harmful spillages of fuel, or phytotoxic substances that may damage the health of retained trees.

16.0 GENERAL CONSIDERATIONS WITHIN AND OUTSIDE THE CONSTRUCTION EXCLUSION ZONE

16.1 Inside the CEZ formed by the tree protective measures, the following prohibitions shall apply:

- No construction activity will occur within the CEZ unless otherwise stated in this report, or agreed in writing with the Planning Case Officer/Tree Officer of Arun District Council prior to the specific activity taking place.

16.2 In addition to the above, further precautions are necessary adjacent to trees outside the CEZ:

- Materials which will contaminate the soil e.g. concrete mixing, diesel oil and vehicle washings, shall not be discharged within 10 metres of the tree stem. This should take into consideration the topography of the site and slopes, to avoid materials such as concrete washings running towards trees.
- Fires shall not be lit in a position where their flames can extend to within 5 metres of foliage, branches or trunk. This will depend on the size of the fire and the wind direction.
- Notice boards, telephone cables or other services shall not be attached to any part of the tree. (See appendix CB5 Common Causes of Damage During Construction Works)

17.0 GROUND LEVEL ALTERATIONS

17.1 There will be no increases or decreases to the ground levels within the root protection areas of the retained trees or group unless otherwise stated within this report.

18.0 REPORT DAMAGE TO TREES AND TREE PROTECTION BARRIERS

18.1 Should any damage be caused to the trees or groups noted for retention, either by the above works or as the result of any other action, the damage should be reported to the site supervisor immediately. The site supervisor shall report up the chain of responsibility to the retained consultant arboriculturalist, or in the absence of such an appointment, to an appropriately qualified arboriculturalist, to enable remedial

measures to be implemented as necessary and as agreed with the Arun District Council Tree Officer.

- 18.2 Should damage occur to a protective barrier to impair its function in protecting the trees and groups, all work will cease near the damage, until the barrier has been returned to standard.

19.0 UTILITY SERVICE CONNECTIONS

- 19.1 Details of drainage location proposals have been forwarded to CBA Trees at the time of compiling this assessment and the location of the drainage runs are located outside the root protection areas of retained trees.

20.0 INSTALLATION OF HARD SURFACING IN CLOSE PROXIMITY TO RETAINED TREES

- 20.1 Plan CBA11469.02 TPP indicates where no-dig hard surfaces are to be installed within and beyond the RPA of the retained Oak, Tree 10. This surface must comply with the following requirements:

- The proposed hard surface will consider site-specific factors and will be designed in accordance with advice from a structural engineer drainage engineer and arboricultural consultant. This will result in a design which is fit for purpose, adequate for the task and sympathetic to the biological requirements of the trees.
- If ground levels are to be raised, this should be achieved with a granular material which does not inhibit gaseous exchange (such as no-fines gravel, washed aggregate or cobbles).
- Sub-base contained within a cellular confinement system will consist of a non-binding, no fines granular material such as MOT type 3 which does not inhibit water percolation or gaseous exchange.
- If a substantial area of fill is to be installed, provision will be made for the installation of irrigation and aeration system within the RPA of retained trees. Distance between pipes will not exceed 400mm, irrigation pipes will be connected to the surface water drainage system. Aeration pipes will be installed in between and will be protected by paving mounted grills.

- 20.2 The wearing courses to be installed over the granular material will be:

- Tabletop road junction
Block Paving— These can be installed with infiltration spaces between the slabs and should be installed dry-jointed and on a sharp sand-foundation.

- Gravel path
The gravel path should be of a simple design whereby the existing vegetation is removed by use of handheld/operated tools within the root protection area, a geotextile weed membrane laid and then loose gravel laid on top.

20.3 If edge supports are required, they will be designed so as not to require any excavation of the existing soil surface and should be in the form of either wooden or other edging materials, approved by a structural engineer and the retained arboriculturist. These edgings should be pinned in place, and the location of the pins should seek to avoid exposed surface or structural roots exceeding 25mm diameter. Construction of the surface will be considered at the design stage. All work will need to be completed, either from existing hard surface, or as a rolling construction working from the finished hard surface to avoid the need for additional ground protection. This will prevent damage to the roots and rooting environment of retained trees.

21.0 SOFT LANDSCAPING WORKS

21.1 Any soft landscaping works within the development area will be in accordance with the approved landscape plan, and any specification of such works approved by Arun District Council.

21.2 Landscaping proposals indicate that across the site 40 (forty) trees will be planted providing a net gain in the number of trees on site and also increasing the canopy cover.

21.3 Landscaping accord with following requirements:

- The CEZ will remain off limits for all site plant and machinery unless fit for purpose ground protection is installed. Pedestrian traffic must be kept to an absolute minimum only permitted for the ground preparation and landscape installation works
- The landscaping works will need to be undertaken in such a way as to avoid level changes, deep digging or mechanical rotovating. Excavation of planting pits with the RPA can cause serious harm the root system of retained trees. Planting pits within the RPA of retained trees will be excavated by hand to avoid roots greater than 25mm and masses of smaller roots.
- If any planting pits are required within the CEZ of retained trees, these will be dug by hand and with care avoiding roots greater than 25mm diameter or masses of smaller roots.

Figure 2:

Root severance as a result of planting within RPA

Planting Trees and Shrubs. Watson G. W. and Himelick E. B. 1997



- 21.4 Any surface mulch will consist of well-composted material such as bark or wood chips. This is necessary to avoid potential nutrient loss from the soil, such as Nitrogen, as the mulch breaks down, as nutrient loss can be detrimental to the health and longevity of retained trees.
- 21.5 All work specified in the approved landscaping scheme shall be carried out before the end of the first planting and seeding season, following the occupation of any completed part of the development.
- 21.6 Any existing trees shown to be retained, or trees and shrubs to be planted as part of the landscaping scheme that are removed, die, become severely damaged beyond recovery or diseased within 2-5 years of the completion of the development (dependent on planning Conditions), shall be replaced within the next planting season with trees or shrubs of appropriate size and species that complement the existing tree stock. Where the trees in question are protected by planning controls, the local planning authority should be informed and necessary arrangements made prior to such work.

22.0 SITE MONITORING AND SUPERVISION

- 22.1 It is recommended that on-going arboricultural site monitoring takes place for the duration of the proposed development, to be carried out by a qualified and experienced arboriculturist at pre-determined and agreed time intervals, and governed by the type, timing, location and intensity of site works. Arun District Council to Condition site monitoring if required.
- 22.2 If Conditioned, it will take the form of regular inspections (to be agreed, but at least one visit per month during the construction phase of the development is advised,

PART 2
ARBORICULTURAL / CONSTRUCTION METHOD STATEMENTS

together with additional visits to supervise works with the CEZ of retained trees). The aim of the visits is to maintain on-going liaison with all personnel involved in the site development, Arun District Council and its Tree Officer.

- 22.3 Any defects requiring rectification shall be notified to the Contractor/Site Manager and the client.
- 22.4 In addition, a site logbook for tree protection measures is kept to record all stages of the development from the erection of the protective barriers, right through to the completion of the project. This will be made available to the arboricultural consultant and Arun District Council if required, to show evidence of continuous site monitoring.

Example pro-forma:

Date	Activity	Checked	Comments/ damage noted	By whom	Signed	Action taken
	Erection of protective barriers					
	Inspection of protective barriers					

- 22.5 The Arun District Council Tree Officer (or appropriate representative) will have agreed access to the site and will report on any problem areas directly to the developer's retained arboriculturist, who will then visit the site and make recommendations to the developer on how best to rectify the situation and ensure the implementation.

23.0 REMOVAL OF PROTECTIVE BARRIERS

- 23.1 When the demolition, ground and construction works are complete with all machinery and plant removed from site, the protective barriers can be dismantled.
- 23.2 This barrier dismantling must be undertaken with great care, and will need to be supervised to avoid heavy machinery being used within the Root Protection Areas. Hoarding, scaffolding and other barrier materials will need to be removed from site immediately.

24.0 CONCLUSIONS

- 24.1 The development proposal for a medical centre at Land at Barnham Road, Eastergate, PO20 3RP has been assessed broadly in accordance with BS5837:2012 *"Trees in Relation to Design, Demolition and Construction – Recommendations"*.
- 24.2 The proposal will retain 8 (eight) of the fifteen individual trees, the 1 (one) hedge, 3 (three) of the five groups of trees plus the partial retention of 1 (one) group.

PART 2

ARBORICULTURAL / CONSTRUCTION METHOD STATEMENTS

- 24.3 It is our opinion that the trees, groups and hedges identified for retention can be afforded due respect and provided adequate protection, ensuring their safe and healthy retention during the development process.
- 24.4 The proposed landscaping provides for 40 (forty) new trees that will increase and provide for a net gain in tree numbers and canopy cover for the site.
- 24.5 Provided the recommendations included within this report are strictly adhered to, CBA Trees believes the trees and groups highlighted for retention within this report can be retained without undue stress on their long-term health.

25.0 CONTACT LIST

- 25.1 It is suggested that points of contact and lines of communication are established prior to commencement of the works on site including:
- Arboricultural Consultant
 - Project Architect
 - Arun District Council Tree Officer
 - Arun District Council Planning Case Officer
 - Site Supervisor and Foreman
- 25.2 It is advised that the site supervisor establishes their own listing of contact details at the pre-start site meeting and displays this in their office for general use as necessary.

26.0 BIBLIOGRAPHY

- British Standard 5837:2012 –
"Trees in Relation to Design, Demolition and Construction - Recommendations"
- British Standard 3998:2010 –
"Recommendations for Tree Work"
- National Joint Utilities Group Publication Volume 4 –
"Guidelines for the planning, installation and maintenance of utility services in proximity to trees"
- Wildlife and Countryside Act 1981
- Conservation of Habitats and Species Regulations 2010 (as amended)
- Town and Country Planning Acts







The Professional Arboricultural Consultancy

TREE SURVEY NOTES

This Tree Survey has been undertaken within the recommendations of British Standards 5837:2012 and current arboricultural best practice.

- Each tree has been numbered and, where instructed, for future identification on site, has been tagged using small durable metal or plastic tags.
- Due to variations of existing ground levels through the site, height dimensions are estimated and are given in metres. Accurate heights, measured with the aid of optical instruments can be provided where instructed.
- Trunk/stem diameters are measured in mm at 1.5 metres above ground level, using a standard measuring tape as defined by British Standards, unless otherwise stated.
- Estimated branch spread is taken in metres from the centre of the trunk, at the four cardinal points of a compass, to achieve an accurate representation of the crown shape which will be recorded on the tree survey plan.

- An assessment of a tree's age classification is made in terms of its maturity within the site's landscape and defined as:

Y	=	young trees
SM	=	semi-mature trees
EM	=	early mature trees
M	=	mature trees
OM	=	over-mature trees

- An assessment of a tree's physiological condition is defined as:

Good	=	fully functioning biological system showing average vitality i.e. normal bud growth, leaf size, crown density and wound closure
Fair	=	fully functioning biological system showing below average vitality i.e. reduced bud growth, smaller leaf size, lower crown density and reduced wound closure
Poor	=	a biological system with limited functionality showing significantly below average vitality i.e. limited bud growth, small and chlorotic leaves, low crown density and limited wound closure
Dead	=	dead

- An assessment of a tree's structural condition is defined as:

Good	=	no significant structural defects
Fair	=	structural defects which could be alleviated through remedial tree surgery or management practices
Poor	=	structural defects which cannot be alleviated through tree surgery or management practices
Dead	=	dead

- An assessment of a tree's future life expectancy is defined as: **<10, 10+, 20+ or 40+ years.**

Categorisation of Trees

The category for each tree is assessed using the recommendations of BS5837:2012. The assessment has not considered any site-specific development proposals, but will have considered any changes on or off-site which may have an effect on the conditions surrounding the surveyed trees.

The trees have been classified into one of the following categories (and one or more sub-categories [this will however not increase the value of the tree]) and are indicated on the associated drawings by colours as indicated.

Category U				Identification colour on plan
Trees 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	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality			DARK RED
Category A	1 – Mainly arboricultural values	2 – Mainly landscape values	3 – Mainly cultural values	Identification colour on plan
Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands, of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
Category B	1 – Mainly arboricultural values	2 – Mainly landscape values	3 – Mainly cultural values	Identification colour on plan
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are down-graded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation value or other cultural value	MID BLUE
Category C	1 – Mainly arboricultural values	2 – Mainly landscape values	3 – Mainly cultural values	Identification colour on plan
Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	GREY

Clients are advised that Tree Surveys are a basic data collection exercise and record of tree condition at the time of survey. This will identify any visible signs of ill-health or major defects, advising a further detailed investigation where appropriate. This will most often take the form of a request for either “*full ground level inspection*” or “*climbing inspection required*”. There may also be a further reference to the need for “*decay detection equipment*” to aid diagnosis. A tree survey does not include a comprehensive schedule or specification of remedial tree works, but may contain a guide to the work which might be undertaken by a prudent tree owner, purely for reasons of health and safety.

A Tree Survey should not be confused with a Tree Inspection or Arboricultural Implication Assessment, which are totally separate exercises.

	TREE SURVEY REPORT (BS5837:2012)	
	Site:	Land at Barnham Road, Eastergate, PO20 3RP
	Date:	16th February 2021
	Consultant:	Stefan Rose <i>BSc (Hons), TechCert (Arbor.A), TechArbor.A</i>
	Tagged:	No

Notes:

1. It may be advised that some trees should have the ivy removed to enable a re-survey to be carried out. This would also alleviate the tree from becoming suppressed; carrying additional weight that increases the chance of windthrow due to a larger dense crown area; and only receiving restricted light. Unless otherwise stated, in order to prevent regrowth, it is only necessary to remove a 300mm section of ivy and clear around the base.
2. It may be advised that it was only possible to estimate the diameter of some trees because of ivy smothering, dense vegetation, or trees located off-site with no access.
3. The estimated remaining contribution in years, and the tree grading category have been calculated for the current situation and may alter where further investigation works are advised.
4. Some trees or groups may have been given an interim grade. The reason for the interim grading is addressed in the timescales given as this may have a bearing on health and safety and/or any development proposals.
5. Tree Groups have been assessed with estimated and representative data.
6. This is not a Tree Works Schedule. Any preliminary management recommendations are listed in the interests of health and safety and should be carried out by a prudent tree owner.
7. Any management recommendations are suggested for reasons of health and safety only, regardless of development proposals at this stage. However, the defects requiring remedial tree surgery are by their very nature potential wildlife habitats, including protected species which needs consideration prior to any tree surgery works commencing.
8. The data collected and any advice provided within this report is supplied in the interests of sound arboricultural management. Trees are a living dynamic organism that can be affected by external conditions (high winds, storms, snow, heavy rain or drought) and may occasionally fail without warning. It is therefore not possible to state with any certainty that any tree or group of trees is completely safe. The condition of a tree or group of trees can change rapidly as a result of external factors; we would advise that the occupier/owners inspect the trees at least every 12 months or following periods of extreme weather and where concerns are raised relating to tree health that would be considered beyond the knowledge of a layperson, further arboricultural advice should be sought.

TREE PRESERVATION ORDER:
Arun District Council website has confirmed that T10 is protected by a Tree Preservation Order, reference TPO/EG/1/17.

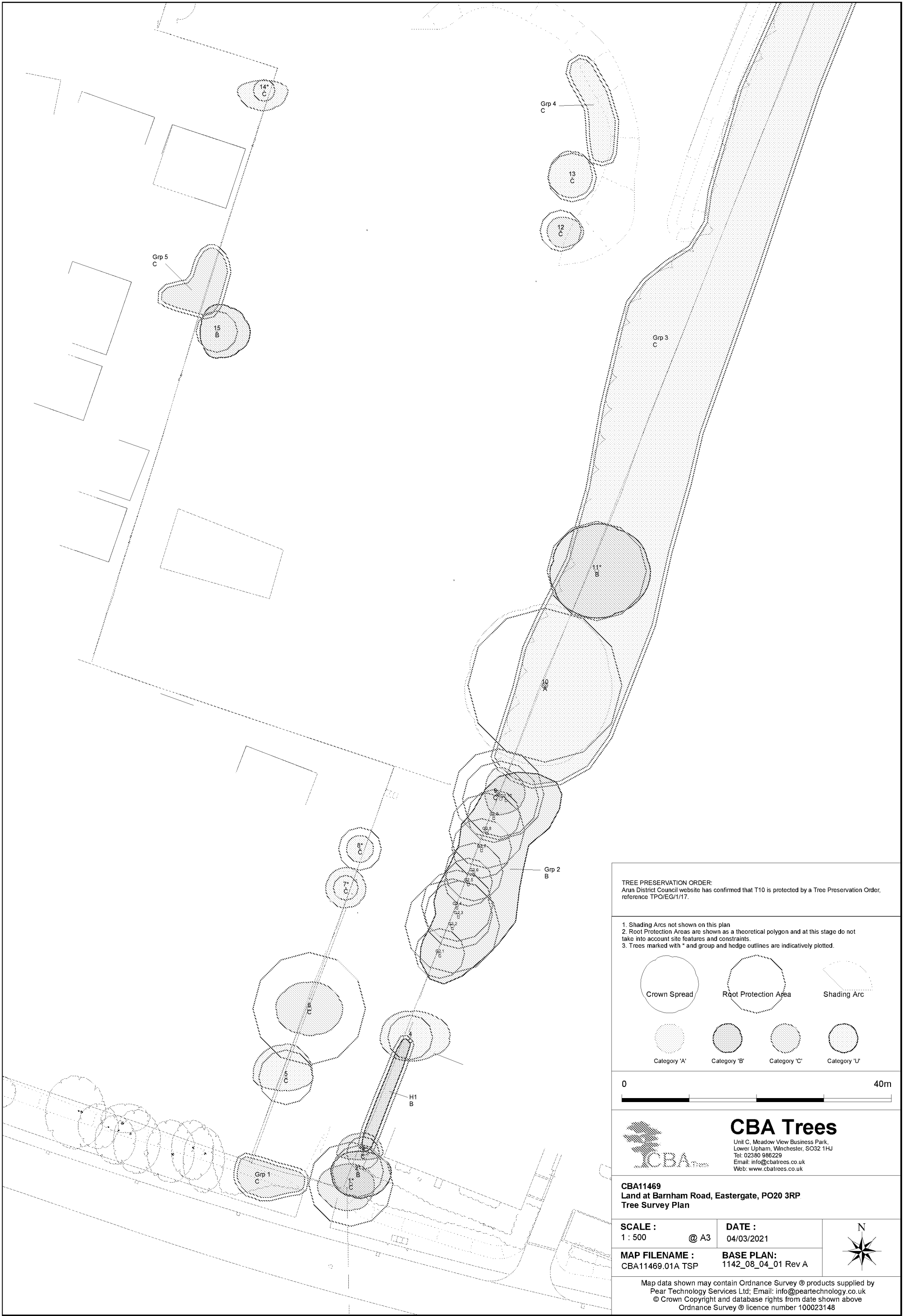
Tree No	Species	Ht (m)	Single/Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m)				Ht of Crown AGL (m)				Life Stage	Physiological Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
					N	E	S	W	N	E	S	W						
1	Field Maple <i>Acer campestre</i>	7	S	510	3.0	3.5	4.0	5.0	3.0	3.0	3.0	3.0	EM	Fair	Fair Basal suckers Ivy on trunk and in crown Bifurcated at 1.6m above ground level Crown shape distorted due to group pressure Minor deadwood in crown	No works required at time of survey	10+	C1+2
2	Field Maple <i>Acer campestre</i>	10	S	310	3.0	5.0	4.0	4.0	2.5	3.0	2.5	3.0	EM	Fair	Fair Basal suckers Ivy on trunk and in crown Minor deadwood in crown	No works required at time of survey	20+	B1+2
3	Field Maple <i>Acer campestre</i>	8	MS<5	200	3.0	3.0	1.0	4.0	2.0	2.0	2.0	2.0	SM	Fair	Fair Bifurcated at ground level Leans and weighted north Northern trunk previously topped Poor quality tree Poor shape and form Growing close to existing surgery Decay in topping point	No works required at time of survey	10+	C1
4	Goat Willow <i>Salix caprea</i>	11	S	270	4.0	6.0	3.5	4.5	2.5	3.0	3.0	2.5	EM	Fair	Fair Ivy on trunk and in crown Tight forks with included bark Bifurcated at 5m above ground level Minor deadwood in crown	No works required at time of survey	20+	C1+2
5	Common Hawthorn <i>Crataegus monogyna</i>	7	S	330	5.0	4.0	2.0	5.0	2.0	2.0	2.0	2.0	M	Fair	Fair Ivy on trunk and in crown Leans and weighted north Ivy limits survey Minor deadwood in crown	Sever ivy and resurvey	10+	C1+2 Interim

Tree No	Species	Ht (m)	Single/Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m)				Ht of Crown AGL (m)				Life Stage	Physiological Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
					N	E	S	W	N	E	S	W						
6	Field Maple <i>Acer campestre</i>	8	S	680	4.0	5.0	4.0	5.0	3.0	3.0	3.0	3.0	M	Good	Fair Leans north Tight forks with included bark Ivy on trunk and in crown limits survey Epicormics on trunk and in crown Minor deadwood in crown	Sever ivy and resurvey	10+	C1+2 Interim
7	Common Hawthorn <i>Crataegus monogyna</i>	5	S	150	3.0	3.0	3.0	3.0	2.5	2.5	2.5	2.5	SM	Good	Fair Offsite Unable to verify health and safety due to no access Estimated data	No works required at time of survey	20+	C1+2
8	Bay Laurel <i>Laurus nobilis</i>	5	MS<5	260	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	EM	Fair	Fair Offsite Unable to verify health and safety due to no access Estimated data Bifurcated at 1.5m above ground level Previously topped	No works required at time of survey	10+	C1
9	Western Red Cedar <i>Thuja plicata</i>	10	S	550	4.0	4.0	3.0	2.0	2.0	2.0	2.5	1.0	EM	Fair	Fair Trunk and crown shape distorted due to group pressure Multi-stemmed at 5m above ground level Low hanging branches Minor deadwood in crown	No works required at time of survey	10+	C1+2

Tree No	Species	Ht (m)	Single/ Multi- Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m)				Ht of Crown AGL (m)				Life Stage	Physio- logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
					N	E	S	W	N	E	S	W						
10 TPO	Pedunculate Oak <i>Quercus robur</i>	21	S	930	12.0	10.0	12.0	12.0	6.0	5.0	4.0	3.0	M	Good	Good Offsite Ivy on trunk and in crown limits survey Unable to verify health and safety due to no access Epicormics on trunk and in crown Major deadwood in crown Storm damage and branch tear wound in crown Estimated data	Sever ivy and resurvey	40+	A1+2 Interim
11	Pedunculate Oak <i>Quercus robur</i>	18	S	600	7.0	8.0	7.0	7.0	5.0	4.0	4.0	5.0	M	Good	Fair Offsite Unable to verify health and safety due to no access Trunk kinked east at base Bifurcated at 3m above ground level Estimated data	No works required at time of survey	20+	B1+2 Interim
12	Lawson Cypress <i>Chamaecyparis lawsoniana</i>	5	MS<5	250	2.0	3.5	2.5	2.0	0.0	0.0	1.0	1.0	SM	Fair	Fair Bifurcated at ground level Growing on bank Minor deadwood in crown	No works required at time of survey	10+	C1+2
13	Golden Lawson Cypress <i>Chamaecyparis lawsoniana</i> 'Golden Wonder'	6	MS>6	300	4.0	3.0	3.0	3.5	0.5	0.5	0.5	0.5	SM	Good	Fair Multi-stemmed at 1m above ground level Tight forks with included bark Low hanging branches Minor deadwood in crown	No works required at time of survey	10+	C1
14	Norway Maple <i>Acer platanoides</i>	8	S	130	1.5	3.5	3.0	4.0	3.0	3.0	3.0	3.0	SM	Good	Fair Offsite Unable to verify health and safety due to no access Estimated data Developing tree	No works required at time of survey	10+	C1+2

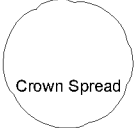
Tree No	Species	Ht (m)	Single/Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m)				Ht of Crown AGL (m)				Life Stage	Physiological Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
					N	E	S	W	N	E	S	W						
15	Pedunculate Oak <i>Quercus robur</i>	11	S	250	4.0	5.0	4.0	2.5	1.5	1.5	1.5	1.5	SM	Good	Fair Old pruning wounds on trunk and in crown Crown shape distorted Weighted east Bifurcated at 4m above ground level	No works required at time of survey	20+	B1+2
H1	Goat Willow Field Maple	3	S	120	-	-	-	-	-	-	-	-	SM	Good	Fair Well maintained boundary hedge	No works required at time of survey	20+	B2
Grp 1	Dogwood Field Maple	7	S	170	-	-	-	-	-	-	-	-	SM	Good	Fair Trunk and crown shape distorted due to group pressure Provides visual separation to car park area	No works required at time of survey	20+	C1+2
Grp 2	Hybrid Black Poplar Common Hawthorn Blackthorn	17	S/MS	See below	-	-	-	-	-	-	-	-	EM	Fair	Fair Offsite Trunk and crown shape distorted due to group pressure Woodland edge trees Minor deadwood in crown Low hanging branches Unable to verify health and safety due to no access	No works required at time of survey	20+	B2
G2.1	Common Hawthorn	-	S	300	-	-	-	-	-	-	-	-	M	Fair	Fair Ivy on trunk and in crown	No works required at time of survey	10+	C1+2
G2.2	Hybrid Black Poplar	-	S	570	-	-	-	-	-	-	-	-	M	Good	Fair Ivy on trunk and in crown	No works required at time of survey	10+	C1+2
G2.3	Hybrid Black Poplar	-	S	410	-	-	-	-	-	-	-	-	EM	Good	Fair Ivy on trunk and in crown	No works required at time of survey	10+	C1+2
G2.4	Hybrid Black Poplar	-	S	430	-	-	-	-	-	-	-	-	EM	Good	Fair Ivy on trunk and in crown	No works required at time of survey	10+	C1+2
G2.5	Hybrid Black Poplar	-	S	290	-	-	-	-	-	-	-	-	SM	Good	Fair	No works required at time of survey	10+	C1+2
G2.6	Hybrid Black Poplar	-	S	350	-	-	-	-	-	-	-	-	EM	Good	Fair	No works required at time of survey	10+	C1+2

Tree No	Species	Ht (m)	Single/Multi-Stemmed (S or MS)	Stem Diam (mm)	Branch Spread (m)				Ht of Crown AGL (m)				Life Stage	Physiological Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
					N	E	S	W	N	E	S	W						
G2.7	Hybrid Black Poplar	-	S	360	-	-	-	-	-	-	-	-	EM	Good	Fair	No works required at time of survey	10+	C1+2
G2.8	Common Hawthorn	-	MS<5	455	-	-	-	-	-	-	-	-	M	Good	Fair	No works required at time of survey	10+	C1+2
G2.9	Hybrid Black Poplar	-	S	320	-	-	-	-	-	-	-	-	SM	Good	Fair	No works required at time of survey	10+	C1+2
G2.10	Hybrid Black Poplar	-	S	460	-	-	-	-	-	-	-	-	M	Good	Fair	No works required at time of survey	10+	C1+2
Grp 3	Pedunculate Oak Blackthorn Hawthorn	6	S	300	-	-	-	-	-	-	-	-	SM	Good	Fair Growing on and offsite Natural regeneration growing onsite Woodland edge trees Trunk and crown shape distorted due to group pressure Basal suckers Low hanging branches Minor deadwood in crown	No works required at time of survey	20+	C1+2
Grp 4	Lawson Cypress spp. X4	4	S	150	-	-	-	-	-	-	-	-	SM	Good	Fair Offsite Four trees forming small group on mound Low hanging branches	No works required at time of survey	20+	C1+2
Grp 5	Flowering Cherry Norway Maple	6	S	150	-	-	-	-	-	-	-	-	SM	Good	Fair Offsite Unable to verify health and safety due to no access Developing trees Estimated data	No works required at time of survey	20+	C1+2



TREE PRESERVATION ORDER:
Arun District Council website has confirmed that T10 is protected by a Tree Preservation Order, reference TPO/EG/1/17.

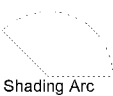
- 1. Shading Arcs not shown on this plan
- 2. Root Protection Areas are shown as a theoretical polygon and at this stage do not take into account site features and constraints.
- 3. Trees marked with * and group and hedge outlines are indicatively plotted.



Crown Spread



Root Protection Area



Shading Arc



Category 'A'



Category 'B'



Category 'C'



Category 'U'





CBA Trees
Unit C, Meadow View Business Park,
Lower Upham, Winchester, SO32 1HU
Tel: 02380 986229
Email: info@cbatrees.co.uk
Web: www.cbatrees.co.uk

CBA11469
Land at Barnham Road, Eastergate, PO20 3RP
Tree Survey Plan

SCALE : 1 : 500 @ A3		DATE : 04/03/2021	
MAP FILENAME : CBA11469.01A TSP		BASE PLAN: 1142_08_04_01 Rev A	

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	BS5837:2012 TREE ROOT PROTECTION AREA SCHEDULE					
	Site:	Land at Barnham Road, Eastergate, PO20 3RP				
	Date:	16th February 2021				
	Consultant:	Stefan Rose BSc (Hons), TechCert (Arbor.A), TechArbor.A				

Notes:

1. This is an assessment of the Root Protection Area (RPA) required, based on the individual tree data collected and Section 4.6.1 of BS5837:2012.

2. For all single stem trees with a stem diameter greater than 1250mm, and multi-stem trees with a stem diameter greater than 1500mm, the calculated RPA has been capped at 707m2 in accordance with Section 4.6.1 of BS5837.2012.

TREE PRESERVATION ORDER:

Arun District Council website has confirmed that T10 is protected by a Tree Preservation Order, reference TPO/EG/1/17.

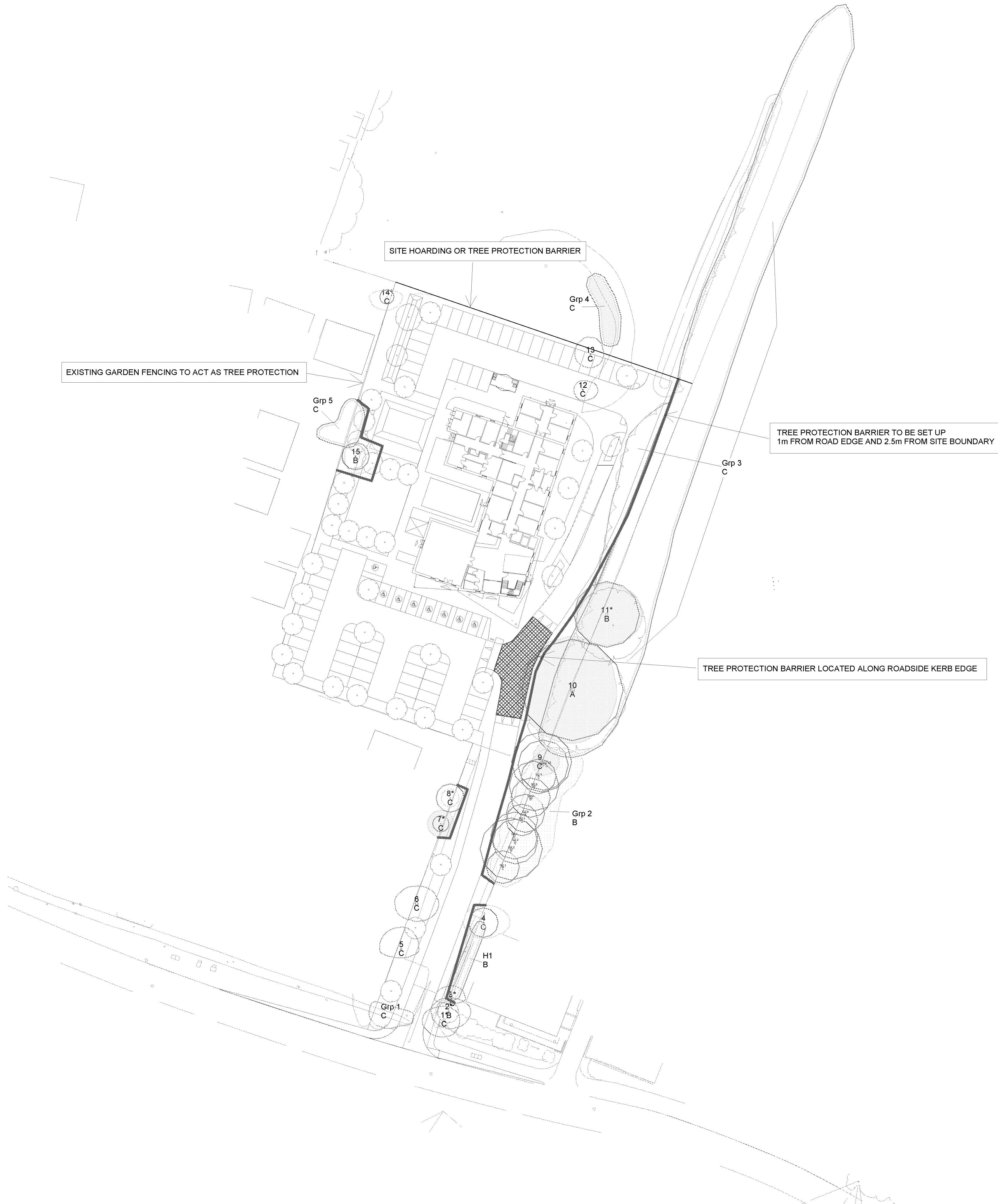
Tree No	Species	Category	Single/ Multi-Stemmed (S or MS)	Stem Diameter (mm)	Initial Linear Root Protection Distance (Radius m)	Root Protection Area (m2)
1	Field Maple Acer campestre	C1+2	S	510	6.1	118
2	Field Maple Acer campestre	B1+2	S	310	3.7	43
3	Field Maple Acer campestre	C1	MS<5	200	2.4	18
4	Goat Willow Salix caprea	C1+2	S	270	3.2	33
5	Common Hawthorn Crataegus monogyna	C1+2 Interim	S	330	4.0	49
6	Field Maple Acer campestre	C1+2 Interim	S	680	8.2	209
7	Common Hawthorn Crataegus monogyna	C1+2	S	150	1.8	10
8	Bay Laurel Laurus nobilis	C1	MS<5	260	3.1	31
9	Western Red Cedar Thuja plicata	C1+2	S	550	6.6	137

CBA11469_2021-02-16 v1 RPA

Tree No	Species	Category	Single/ Multi-Stemmed (S or MS)	Stem Diameter (mm)	Initial Linear Root Protection Distance (Radius m)	Root Protection Area (m2)
10 TPO	Pedunculate Oak Quercus robur	A1+2 Interim	S	930	11.2	391
11	Pedunculate Oak Quercus robur	B1+2 Interim	S	600	7.2	163
12	Lawson Cypress Chamaecyparis lawsoniana	C1+2	MS<5	250	3.0	28
13	Golden Lawson Cypress Chamaecyparis lawsoniana 'Golden Wonder'	C1	MS>6	300	3.6	41
14	Norway Maple Acer platanoides	C1+2	S	130	1.6	8
15	Pedunculate Oak Quercus robur	B1+2	S	250	3.0	28
H1	Goat Willow Field Maple	B2	S	120	1.4	7
Grp 1	Dogwood Field Maple	C1+2	S	170	2.0	13
Grp 2	Hybrid Black Poplar Common Hawthorn Blackthorn	B2	S/MS	See below	-	..
G2.1	Common Hawthorn	C1+2	S	300	3.6	41
G2.2	Hybrid Black Poplar	C1+2	S	570	6.8	147
G2.3	Hybrid Black Poplar	C1+2	S	410	4.9	76
G2.4	Hybrid Black Poplar	C1+2	S	430	5.2	84
G2.5	Hybrid Black Poplar	C1+2	S	290	3.5	38
G2.6	Hybrid Black Poplar	C1+2	S	350	4.2	55
G2.7	Hybrid Black Poplar	C1+2	S	360	4.3	59
G2.8	Common Hawthorn	C1+2	MS<5	455	5.5	94

Tree No	Species	Category	Single/ Multi-Stemmed (S or MS)	Stem Diameter (mm)	Initial Linear Root Protection Distance (Radius m)	Root Protection Area (m2)
G2.9	Hybrid Black Poplar	C1+2	S	320	3.8	46
G2.10	Hybrid Black Poplar	C1+2	S	460	5.5	96
Grp 3	Pedunculate Oak Blackthorn Hawthorn	C1+2	S	300	3.6	41
Grp 4	Lawson Cypress spp. X4	C1+2	S	150	1.8	10
Grp 5	Flowering Cherry Norway Maple	C1+2	S	150	1.8	10





TREE PRESERVATION ORDER:
Arun District Council website has confirmed that T10 is protected by a
Tree Preservation Order, reference TPO/EG/11/17.

KEY:

- TREES TO BE RETAINED
- TREES TO BE REMOVED
- ROOT PROTECTION AREA
- LOCATION OF TREE PROTECTION BARRIER

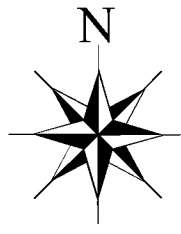
FIT FOR PURPOSE GROUND PROTECTION PRIOR TO TABLE TOP ROAD JUNCTION CONSTRUCTION AND DURING DRAINAGE AND UTILITY WORKS

TABLE TOP ROAD JUNCTION RAISED UP USING NO DIG SOLUTION WITH PERMEABLE BLOCK PAVING. DRAINAGE RUN WORKS WITHIN THIS AREA TO BE HANG DUG/ MACHINE DUG AND ARBORICULTURALLY SUPERVISED AS REQUIRED TO MINIMISE IMPACT ON OAK.



CBA Trees
Unit C, Meadow View Business Park,
Lower Upham, Winchester, SO32 1HJ
Tel: 02380 986229
Email: info@cbatrees.co.uk
Web: www.cbatrees.co.uk

CBA11469
Land at Barnham Road, Eastergate, PO20 3RP
Tree Protection Plan

SCALE : 1 : 500 @ A1	DATE : 19/05/2021	
MAP FILENAME : CBA11469.02 TPP	BASE PLAN: 9226-PO13	

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	TREE WORKS SCHEDULE	
	Client:	PHP Primary Care Developments Ltd
	Site:	Land at Barnham Road, Eastergate, PO20 3RP
	Date:	May 2021
	Consultant:	Stefan Rose <i>BSc (Hons), TechCert (Arbor.A), TechArbor.A</i>

Tree works to only be completed on receipt of full planning permission.

Tree No	Species	Recommended Works
1	Field Maple <i>Acer campestre</i>	Fell and remove stump
2	Field Maple <i>Acer campestre</i>	Fell and remove stump
3	Field Maple <i>Acer campestre</i>	Fell and remove stump
4	Goat Willow <i>Salix caprea</i>	No works required
5	Common Hawthorn <i>Crataegus monogyna</i>	Fell and remove stump
6	Field Maple <i>Acer campestre</i>	Fell and remove stump
7	Common Hawthorn <i>Crataegus monogyna</i>	No works required
8	Bay Laurel <i>Laurus nobilis</i>	No works required
9	Western Red Cedar <i>Thuja plicata</i>	No works required
10 TPO	Pedunculate Oak <i>Quercus robur</i>	No works required
11	Pedunculate Oak <i>Quercus robur</i>	No works required
12	Lawson Cypress <i>Chamaecyparis lawsoniana</i>	Fell and remove stump
13	Golden Lawson Cypress <i>Chamaecyparis lawsoniana</i> 'Golden Wonder'	Fell and remove stump
14	Norway Maple <i>Acer platanoides</i>	No works required
15	Pedunculate Oak <i>Quercus robur</i>	No works required
H1	Goat Willow Field Maple	No works required
Grp 1	Dogwood Field Maple	Fell and remove stumps
Grp 2	Hybrid Black Poplar Common Hawthorn Blackthorn	No works required
G2.1	Common Hawthorn	No works required
G2.2	Hybrid Black Poplar	No works required
G2.3	Hybrid Black Poplar	No works required

Tree No	Species	Recommended Works
G2.4	Hybrid Black Poplar	No works required
G2.5	Hybrid Black Poplar	No works required
G2.6	Hybrid Black Poplar	No works required
G2.7	Hybrid Black Poplar	No works required
G2.8	Common Hawthorn	No works required
G2.9	Hybrid Black Poplar	No works required
G2.10	Hybrid Black Poplar	No works required
Grp 3	Pedunculate Oak Blackthorn Hawthorn	Fell and remove stumps in section indicated on tree protection plan CBA11469.02 TPP
Grp 4	Lawson Cypress spp. X4	No works required
Grp 5	Flowering Cherry Norway Maple	No works required

- All tree works are advised to be carried out between July and September or November and February. Tree works should also avoid the season for nesting birds.
- All tree works should be carried out in accordance with current best practice guidelines and BS3998:2010 – Tree Work Recommendations.
- We recommend the use of an Arboricultural Association Approved Contractor or an ISA Certified Arborist/Tree Worker that is suitably insured and experienced to carry out the tree works.





SUMMARY OF TREE PROTECTION MEASURES

Introduction

This leaflet shall be issued to all site personnel as part of their induction briefing.

It describes in summary form, the precautions that site personnel shall at all times follow, to ensure that the existing trees on the site come to no harm.

The precautions described are neither arbitrary nor reducible and must be adhered to in full.

These precautions are necessary because unprotected trees are very vulnerable to damage during demolition and construction works.

Furthermore, many of the trees on the site are under LEGAL PROTECTION and damaging them can result in heavy fines.

Two common misconceptions about trees:

MYTH: Trees have deep taproots and so shallow excavations will not harm the tree.

FACT: 90% of all tree's roots are found in the top 600mm of soil; all excavations near to trees are likely to cause root damage which can kill the tree.

MYTH: Trees will quickly heal over any bark wound, with no ill effect.

FACT: Bark wounds take years to heal and larger ones never do; missing bark can lead to disease and even the death of the tree.

Tree Protection

All trees adjacent to unsupervised work areas have been protected by fencing.

This fencing must be respected at all times and no attempts shall be made to damage, bypass or ignore it.

In areas designated for supervised working, no works shall be undertaken without the supervisor being present or without him/her issuing a "carry on" chit.

Prohibitions Adjacent to Trees

Inside the exclusion area of the tree protection, the following prohibitions shall apply.

- No digging or scraping
- No storage of plant or materials
- No vehicular access
- No fire lighting
- No handling, discharge or spillage or any chemical substance
- No water-logging

In addition to the above, further precautions shall be taken near to trees.

- A 10m separation distance shall be observed between trees and any substance injurious to their health, including fuels, oil, bitumen, cement (including washings) builders' sand, concrete mixing and other chemicals.
- No fire shall be lit such that flames come within 5m of any foliage; this shall be taken to mean a fire separation distance to the leaves of 20m.

Avoiding Damage to Stem and Branches

Care shall be taken when planning site operations to ensure that wide or tall loads or plant with booms, jibs and counterweights, can operate without coming into contact with trees.

Consequently, any transit or traverse of plant in proximity to trees shall be conducted under the supervision of a spotter to ensure that adequate clearance is at all times maintained.

In some circumstances, it may be impossible to achieve this, necessitating the pruning of the tree.

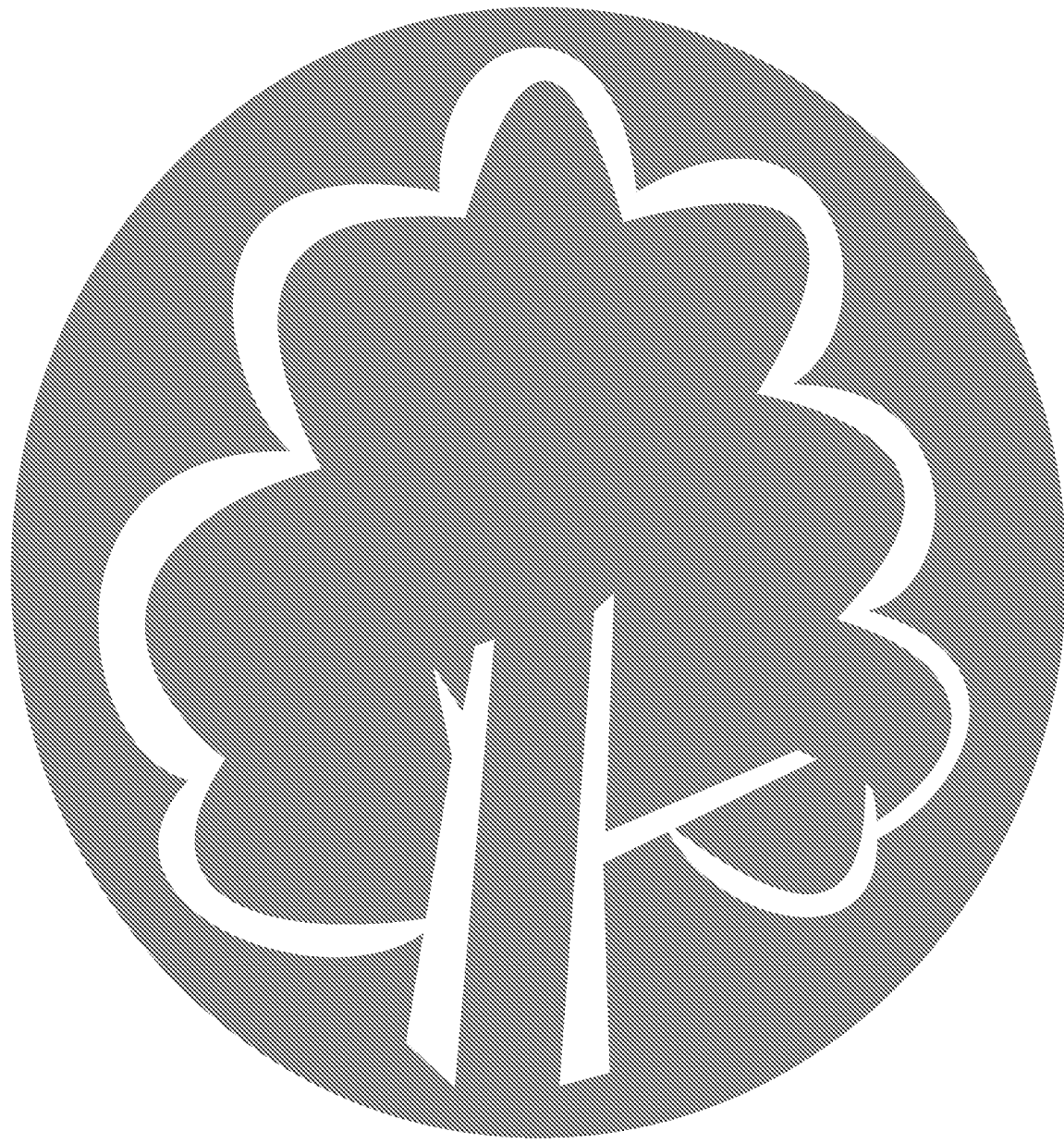
If this is necessary, a specialist team shall be called in following referral to the project Arboriculturist.

No tree pruning shall be undertaken by demolition or construction personnel.

Asking for Help

If you see any damage to a tree or its protective fencing, or if you need a tree pruning for plant clearance, contact **CBA Trees** as follows:

**REMEMBER:
ALL TREE DAMAGE
IS AVOIDABLE –
SO AVOID IT!**



**PROTECTIVE BARRIERS.
THESE BARRIERS MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.**



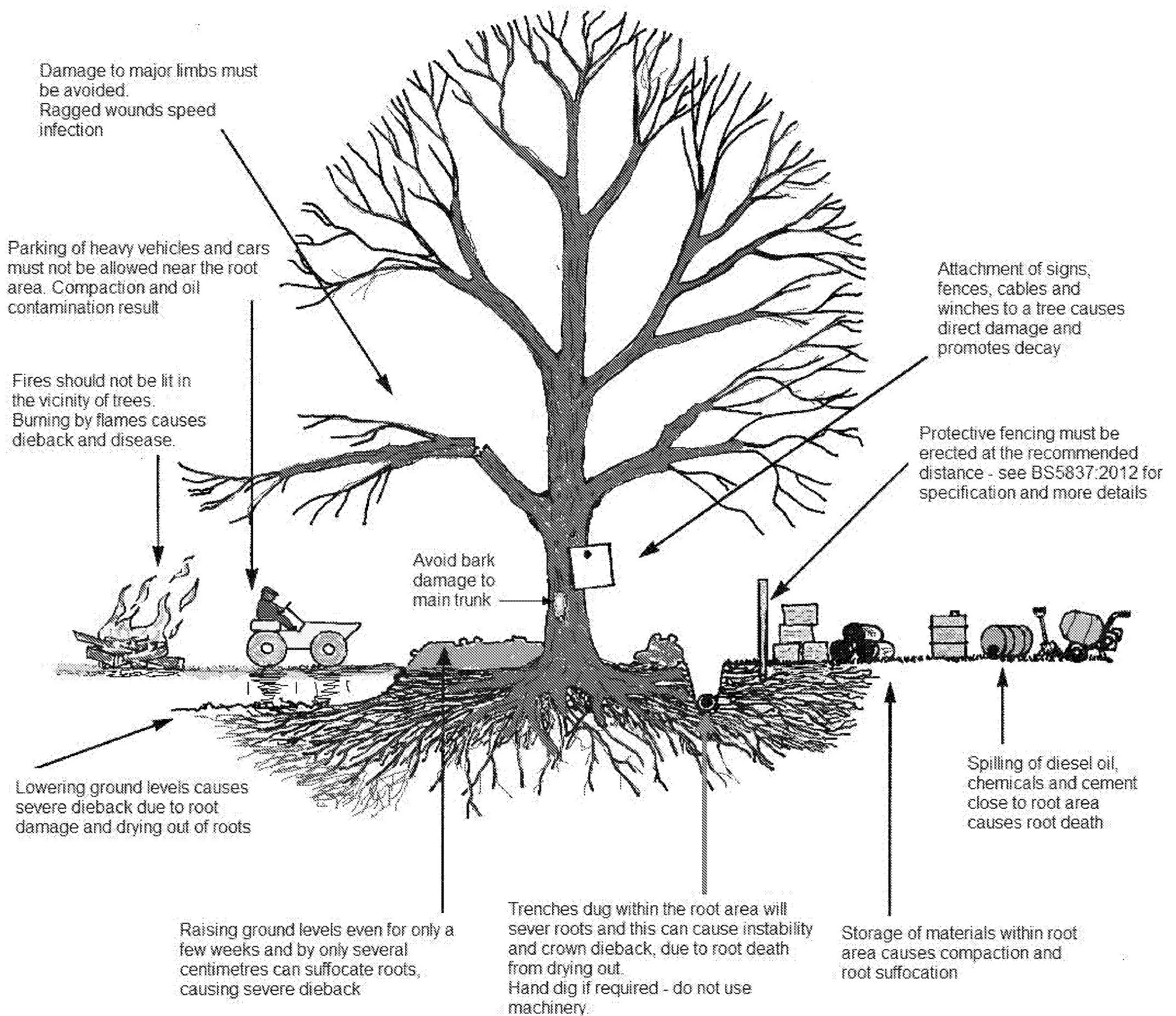
**TREE PROTECTION AREA
KEEP OUT !**

**(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A
TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY
LEAD TO CRIMINAL PROSECUTION**

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

COMMON CAUSES OF TREE DEATH

The use of properly positioned protective barriers can prevent tree deaths occurring.







The Professional Arboricultural Consultancy

Qualifications of Stefan Rose Principal Consultant

Stefan Rose *BSc (Hons), TechCert (Arbor.A), TechArbor.A*, joined CBA Trees in 1998 as a junior surveyor and having gained extensive knowledge and a wealth of experience over the years including Professional Tree Inspectors Certification (LANTRA), has progressed to Principal Consultant. He has considerable experience in working as a locum for Local Authorities, assessing new and extant Tree Preservation Orders, and continues to work on a number of major development projects nationwide.

As our Principal Consultant Stefan undertakes a full range of arboricultural services from health and safety audits to BS5837:2012 tree surveys, providing expert advice and guidance on initial feasibility site assessments to full scale planning applications. He is accomplished at producing implication assessments and method statements for the submission of planning applications, working with both individual home owners and within multi-disciplinary teams to achieve successful arboricultural outcomes.