T.P. OFFICE COPY

Arboricultural Advisory and Information Service

DEPOSITED
TP REF No.
WB /

THE TREE ADVICE TRUST

Trees and Proposed New Dwelling at 10 Arundel Road Worthing
Plan ref 09/110/SK01

Report by Ben Holding.
Consultant advisor to the Arboricultural Advisory and Information Service, Fellow of the Arboricultural Association and professional arboriculturist for 24 years.

This is a full tree report including a survey of the existing trees on and adjoining the site in accordance with BS5837, an Arboricultural Impact Statement and an Arboricultural Method Statement. The Report is to be read in conjunction with the Tree Protection Plan AAIS 03/10.

January 2010

ALICE HOLT LODGE * WRECCLESHAM * FARNHAM * SURREY * GU10 4LH

Trees and Proposed New Dwelling at 10 Arundel Road Worthing
Plan ref 09/110/SK01

Report by Ben Holding.
Consultant advisor to the Arboricultural Advisory and Information Service, Fellow of the Arboricultural Association and professional arboriculturist for 24 years.

This is a full tree report including a survey of the existing trees on and adjoining the site in accordance with BS5837, an Arboricultural Impact Statement and an Arboricultural Method Statement. The Report is to be read in conjunction with the Tree Protection Plan AAIS 03/10.

January 2010

Site visit 18th January 2010

Background

The Arboricultural Advisory and Information Service (AAIS) has been asked by to undertake a survey of trees growing at 10 Arundel Road, Worthing.

The property is a detached residential house located in an established residential area in Worthing.

The site is being considered for development with a single new dwelling in the rear garden – plan reference 09/110/SK01.

A Tree Preservation Order is reported to affect two trees at the front of the site. The location is not within a designated Conservation Area.

The Brief

To inspect those trees growing on and adjoining the site that could be affected by the proposed new dwelling.

To report on the condition of the trees with recommendations of minimum work considered necessary to reduce to a reasonable level any threat they currently pose to people and/or property.

To categorise the trees in accordance with the guidance given in British Standard BS 5837: 2005 Trees in Relation to Construction – Recommendations, and to recommend suitable distances for protective fencing around them.

To advise on the likely impact of the proposed new dwelling on the trees and to provide guidance and a method statement for the protection of the trees during development.

The Site

The site is a private residential dwelling set in residential area comprising detached residences in Worthing.

The site is located on Arundel Road, which is a wide, main road with grass verges and residential houses set back from the carriageway.

To the south, east and west of the site are adjacent detached residential houses and gardens.

The front boundary with Arundel Road is a masonry wall with railings. The driveway is concrete and runs between two gate piers. Most of the front garden is set to gravel but there is a bank around the northeast and east sides where several trees grow.

The rear garden is level and is set mainly to lawns with a few small saplings and fruit trees and vegetable plots. In the rear part of the garden there is a partly landscaped area with a boardwalk.

The rear garden is bounded to the east and west by beech hedges that have been clipped at around 2.5m in the past. The hedge on the west side has been allowed to grow in recent years to 6m. A few hedge stems have grown out from the clipped hedge to form trees but these are generally poorly structured and have limited safe life expectancies.

The soils of the site have not been investigated in detail but they appear to be loam overlying flinty clay.

Tree Protection

Local Planning Authorities have powers under the Town and Country Planning Acts to protect trees growing on private land in the interests of public amenity. Tree Preservation Orders can be imposed on specific trees, groups of trees, areas of trees or woodlands. Tree Preservation Orders require any works to affected trees to be the subject of consent. **A| Tree Preservation Order is reported to affect two trees in the front garden. This should be checked prior to undertaking any tree works.**

Conservation Areas make it an offence to carry out any works to a tree of over 75mm trunk diameter (measured at 1.5m above ground level) without first giving the Planning Authority 6 weeks written notice. The 6 weeks period is there to enable a Local Planning Authority, if it so wishes, to make a Tree Preservation Order. **The site is not reported to be within a Conservation Area but this should be checked prior to undertaking any tree works.**

"Trees which are dead, dying or have become dangerous" are exempt from the need for TPO consent or in the case of Conservation Areas, 6 weeks notice of intended works, but it is prudent to advise the Local Planning Authority of any intent to carry out such works and to give them at least 5 working days notice. The removal of deadwood does not require either notice to be given to the Local Planning Authority or that permission is sought.

Tree works (e.g. felling or pruning back branches) necessary to implement a development for which detailed planning consent has been given can be carried out when the development is being undertaken. They do not need any additional consent from the Local Planning Authority. Other works to trees on development sites must go through the normal consent or notice procedure.

The Tree Survey

General

The Tree Schedule attached to this report lists the trees growing on and adjacent to the site and comments briefly on their condition.

Recommendations in the Tree Schedule are made for minimum works necessary to reduce to a reasonable level the threat the trees currently pose to people and property.

The tree numbers in the Tree Schedule relate to the numbers marked on the Tree Protection Plan AAIS 03/10 attached to this report. The plan is based on the land survey, which appears to accurately show the positions of the trees.

The Trees

The beech (*Fagus sylvatica*) T20 growing in the front garden is a prominent tree in the street scene. It has a domed crown that is much branched from 1m above ground. There are two similar trees in the adjacent front garden to the west. T20 is understood to be protected by a Tree Preservation Order.

The branches of the beech T20 are interfering with the street light on the verge of Arundel Road. It is recommended that the tree be pruned to cut the branches back from the streetlight and allow the light to splay as intended onto the road. It is also recommended that the lowest branch tips of the tree are pruned to allow 4.5m clearance above the driveway to the house. A TPO application should be made for these works.

The Horse chestnut (*Aesculus hippocastanum*) T23 is a poorly formed, coarsely branched tree that is also reported to be protected by the TPO but this should be clarified as it is not a good specimen and has a limited future in this position. It is recommended that the low limb on the west side be removed to give more clearance above and let more light into the front garden. A TPO application should be made for this work.

The birch (*Betula* sp.) T21 is mostly dead and unlikely to survive more than 5 years. It is recommended that this tree be felled.

In the adjoining front garden to the east there is a maturing blue cedar (*Cedrus atlantica* ssp.) T22. This tree has a one sided crown as a result of competition for light.

In the rear garden there are a few small saplings and a birch T9 that grows on a raised mound.

There are several beech trees, T10, T14, T15, T16, T17 and T18 that have arisen from previously clipped hedge plants in adjacent gardens and have grown into larger stems. They are all poorly formed and have limited safe life expectancies. Trees T17 and T18 still retain some low hedge branches and if topped at 2.5m these two should continue to grow as part of the hedges. T14 appears to have a better structure than the others and may be able to be retained in the longer term but its condition should be checked once the ivy is removed.

A summary of the recommended cultural and safety works is as follows:

- **T14 - Beech — sever ivy and reinspect branching structure when visible (This recommendation is for guidance only – the owner of the tree may wish to obtain their own advice before deciding how to manage their trees)**

- **T17 and T18 – Beech stems from old hedge - Reduce back to hedge height of 2.5 – 3m (This recommendation is for guidance only – the owner of the tree may wish to obtain their own advice before deciding how to manage their trees)**

- **T20 – Beech (TPO) – Prune branches to give 1m clearance above street light with pruning to sides to allow light to splay onto road. Crown lift to give 4.5m clearance above driveway. (TPO application needed)**

- **T21 – Birch – Fell**

- **T23 – Horse chestnut – (TPO) – Remove lowest branch on west side over front garden. (TPO application needed)**

Risk

The trees currently pose a potential risk to people and property. Some trees overhang or are within falling distance of the neighbouring properties and Arundel Road. The current level of risk is very low.

No public rights of way run through or near the site.

Where trees pose a significant threat to private users of a site and to members of the public there are important responsibilities that must be considered.

In the event of an accident, the courts will seek evidence that the owner has acted reasonably in so far as the trees have been inspected on a regular basis and that the risks have been properly assessed and addressed.

If the site is redeveloped the trees should be transferred to any new owner in a safe and stable condition.

A scheduled tree inspection regime should be set in place with a detailed inspection carried out at intervals not greater than 3 – 5 years and with annual visual checks made to identify any situations that may require further investigation by a specialist arboriculturist.

Subsequent to any unusually strong winds or heavy snowfall, the trees should again be inspected. They should be inspected following any site works.

Details of all inspections and any works carried out should be kept as a formal record.

Wildlife

Wildlife issues are a significant concern to the general public. To ensure the protection of the valuable wildlife habitat, care must be taken to balance these interests with the need for safety when managing trees.

The Wildlife and Countryside Act (1981) and associated legislation gives statutory protection to wild birds and bats and some mammals, invertebrate species and plants. It is important to ensure that this legislation is properly considered when carrying out any works to the trees. It is normally considered necessary to undertake a bat and dormouse survey prior to carrying out any works to trees with significant cavities and bark crevices and to check carefully for nesting birds before carrying out any surgery. (See note 5).

None of the trees in the garden have obvious cavities and holes that could be roosting or nesting sites for birds or bats. If cavities and holes are found to be present in the trees they should be checked for nesting birds and possible bat roosts by a suitably experienced person prior to undertaking any tree surgery.

Trees and Development

Construction works and the installation of underground services can cause serious harm to the health and stability of trees and in severe cases can lead to their physical failure and death.

In the longer term the physical size of a tree can dominate a building. Concerns for safety and the inconveniences caused by shading and leaf fall along with continued growth can lead to healthy trees being removed.

The British Standard BS 5837: 2005 "Trees in Relation to Construction - Recommendations" gives guidance on the inter-relationship of development and trees. The British Standard also gives guidance on the minimum distances that should be kept undisturbed around trees to minimise the risk of significant damage to them – the "root protection area".

Recommended protective fencing distances shown in the Tree Schedule are based on the guidance in Table 2 of the Standard. Unless otherwise stated they are taken to be circles with a specified radius.

The tree categories used in this report and shown in the Tree Schedule are defined in Table1 – Cascade Chart of British Standard BS 5837:2005 Trees in Relation to Construction - Recommendations and are summarised as:

A	*Trees of high quality and value*
B	*Trees of moderate quality and value*
C	*Trees of low quality and value*
R	*Trees for removal*

The number adjacent to the letter category in the Tree Schedule refers to the reason for the grading. '1' refers to individual tree quality; '2' refers to position in the landscape. '3' refers to conservation value. No number indicates the tree is the same grade for individual tree quality, landscape and conservation value.

Categorisation of the Trees Growing on the Site

The beech T20 and the similar beech trees in the adjacent front garden to the west of the site are B2 grade for their contribution to the street scene.

The birch T21 is R grade and recommended for felling.

All the other trees on or adjoining the site are C grade.

Trees as a Constraint to Development of the Site

Root Protection Areas expressed as radial distances from the trunks (RPD in the Tree Schedule) of the trees are indicated in the Tree Schedule and are shown on the Tree Protection Plan AAIS 03/10.

It is generally desirable to retain A grade trees in any development and to retain B grade trees where possible.

The British Standard states in the footnote to Table 1 that C grade trees should not be considered to be a constraint on development. C grade trees should however be retained where possible and particularly where they can contribute to a coordinated landscape scheme.

Impact of Proposed New Dwelling - Plan reference 09/110/SK01- on Trees

The proposed development is for a single new dwelling to the rear of the existing house. The Tree Protection Plan AAIS 03/10 shows the trees on and adjoining the site in relation to the proposed house.

The sapling T4, willow coppice stump T6 and apple T7 are to be removed to enable the construction of the driveway and new dwelling.

The new dwelling is within the root protection areas of the C grade beech stems T16, T17 and T18. These are poor stems that have grown from clipped shoots in the beech hedges adjoining the garden. They have limited safe life expectancies as a result of their poor form and weak forks where previously clipped. They should not be considered to be a constraint to development. If reduced back to a height of 2.5 to 3m trees, T17 and T18 will continue to grow as part of the hedge and will remain healthy despite some possible root damage taking place when the house is built. It would also be possible to keep these trees slightly larger, at a height of around 6m, and at this height they would maintain some higher level screening.

The proposed driveway uses the existing driveway from the highway and runs down the west side of the existing property, partly on land that is occupied by a large wooden outbuilding. The existing driveway is within the root protection area of the B grade beech T20. Roots of the beech tree are unlikely to suffer any harm as a result of the addition vehicles using the surface but precautions should be taken to ensure that no excavations are undertaken below the sub-base of the existing surface.

Should the driveway entrance need to be widened, it would be possible to create a 5m width by removing the section of curved masonry wall on the east side of the entrance. The removal of this wall, if undertaken with care, would not be likely to harm the beech tree. There is existing hard surfacing on both sides of the wall and this should be retained and used as the base of any new surface.

In Summary:

Three small trees T4, T6 and T7 will be removed to allow the building of the new house and driveway.

The house is within the root protection areas of the C grade beech trees T16, T17 and T18 growing in adjacent gardens. These trees can be retained if reduced back appropriately to hedge height or to leave a higher screen.

The removal of the curved masonry wall at the access point would allow the widening of the entrance to 5m (if required by the highway authority) without damaging the beech tree T20

Services and Protection of the Trees during Development.

All services including foul and surface water drainage systems will link to the existing services for the site and no excavations will be undertaken within the root protection areas of retained trees.

The specifications set out in British Standard BS 5837:2005 Trees in Relation to Construction - Recommendations provide a suitable minimum standard for protective barriers around trees. Section 9.2.1 indicates barriers should be rigid, complete and fit for the purpose of excluding construction activity.

Details of how the trees to be retained will be protected during site works are included in the Tree Protection Plan and in the Arboricultural Method Statement at the end of this report. Adherence with the Tree Protection Plan AAIS 03/10 and the Arboricultural Method Statement should be included as part of the works contracts for demolition of the existing building and construction of the new house.

Conclusions

The site at 10 Arundel Road is a detached residential property located in a residential area of Worthing.

The site is being considered for development with a new dwelling to the rear of the existing house.

The trees growing on and adjacent to the site have been surveyed in accordance with the guidance given in BS 5837:2005 Trees in Relation to Construction – Recommendations.

The details of the trees are presented in the Tree Schedule attached to this report.

A summary of the recommended cultural and safety works is as follows:

- T14 - Beech –sever ivy and reinspect branching structure when visible. (This recommendation is for guidance only – the owner of the tree may wish to obtain their own advice before deciding how to manage their trees)

- T17 and T18 – Beech stems from old hedge - Reduce back to hedge height of 2.5 – 3m. (This recommendation is for guidance only – the owner of the tree may wish to obtain their own advice before deciding how to manage their trees)

- T20 – Beech (TPO) – Prune branches to give 1m clearance above street light with pruning to sides to allow light to splay onto road. Crown lift to give 4.5m clearance above driveway.

- T21 – Birch – Fell

- T23 – Horse chestnut – (possible TPO) – Remove lowest branch on west side over front garden.

Note – An application should be made to the Local Planning Authority for the pruning of the beech T20 and Horse chestnut T23.

Root Protection Areas expressed as radial distances from the trunks (RPD in the Tree Schedule) of the trees are indicated in the Tree Schedule and are shown on the Tree Protection Plan AAIS 03/10.

Three small trees T4, T6 and T7 will be removed to allow the building of the new house and driveway. The removal of these trees will not have a significant impact on the local landscape

The house is within the root protection areas of the C grade beech trees T16, T17 and T18 growing in adjacent gardens. These trees can be retained if reduced back appropriately to hedge height or to leave a higher screen.

The removal of the curved masonry wall at the access point would allow the widening of the entrance to 5m (if required by the highway authority) without damaging the beech tree T20

Details of how the trees to be retained will be protected during site works are shown on the Tree Protection Plan AAIS 03/10 and are presented in the Arboricultural Method Statement at the end of this report. Adherence with the Tree Protection Plan and the Arboricultural Method Statement should be included as part of the works contracts for the site.

J. B. Holding BSc (Hons) For., F.Arbor.A.

27th January 2010

Notes:

1. If the trees that are the subject of this report are the subject of a Tree Preservation Order made under the Town and Country Act then the work described should not be undertaken without the Local Planning Authority's permission.

2. If the trees stand in a Conservation Area designated under the Town and Country Planning Act the Local Planning Authority should be given 6 weeks notice of any intended works.

3. If a tree is considered to be immediately dangerous then work necessary to make it safe may be undertaken but the Local Planning Authority should be notified that action has been taken.

4. Work to trees required to fulfill either permission, or a condition attached to permission granted under the Town and Country Planning Acts by the Local Planning Authority do not need any additional authorisation.

5. Wildlife issues are of significant concern to the general public. To ensure the protection of the valuable wildlife, care should be taken to balance these interests with the need for safety when managing the trees. The Wildlife and Countryside Act (1981) and Countryside and Rights of Way Act (2000) give statutory protection to wild birds, bats, mammals, some invertebrate species and plants and it is important to ensure that this legislation is properly considered when carrying out any works to the trees. It would be prudent to undertake a bat survey prior to carrying out any works to trees with significant cavities and to avoid works at times when birds are likely to be nesting.

Tree Schedule

Age class: OM = Over mature (crown breaking up or declining)
M = Mature (fully developed crown with limited further growth in height likely)
EM = Early maturity (well developed crown but with significant further crown development likely)
Y = Young (established tree, still to develop a full crown.)

L/E is useful life expectancy. A life expectancy of 40 indicates that the tree can typically be expected to remain alive and healthy for more than 40 years.

Dbh is trunk diameter at 1.5metres above ground (in millimetres). 'E' indicates this has been estimated over ivy growth (EI) or because access was restricted. 'L' indicates the largest stem of a multistemmed tree.
* Indicates the basal diameter of a multistemmed tree. Hght is height (in metres).

RPD is the radial root protection distance based on the guidance in BS 5837. Where this is modified by factors affecting the likely root spread of the tree this is indicated in the comments section and in the report above.

The tree numbers in this schedule relate to the numbers on the Tree Protection Plan

Tree No.	Species	Age L/E	Dbh. Hght	Crown spread (m)– N, S, E, W Comments	BSI Grade RPD	Recommended works
T1	Thorn	Y 10	100E 4	2,0,1,1 Poorly formed self seeded sapling	C 2	
T2	Holly	Y 40	60 3	Sapling	C 2	
T3	Horse chestnut	EM 30	390EI 12	4,4,4,4 Trunk forked into large codominant limbs at 2m, poor union and likely to be unstable in the long term. South limb becoming dominant	C 4.5	
T4	Pear			Sapling	C 2	
T5	Gum	Y 20	100E 8	Narrow spindly stem in adjacent garden, not affecting site	C 2	
T6	Willow			Coppicing stump	C 2	
T7	Apple	M 20	150* 3	Small stunted tree in brambles	C 2	
T8	Scrub			Elder and lilac	C 2	
T9	Birch	M 40	380* 9	3,2,3,3 On landscape mound. 3 limbs from base	C 4	

T10	Beech	M 20	460* 12	3,3,6,1 Poor one sided tree with 5-7 limbs from 3m above ground. Outgrown from old clipped hedge.	C 4.5	
T11	Laburnum	M 10	130 4	2,1,0,2 Poor small tree	C 2	
T12	Stump					
T13	Birch	M 20	160 7	2,0,2,0 Small suppressed stem	C 2	
T14	Beech	M 40	400EI 11	3,5,4,4 Probably in neighbours garden. Outgrown from old beech hedge. Dense ivy into crown.	C 5	Sever ivy and reinspect branching structure
T15	Beech	M 20	350EI 11	4,0,3,3 In neighbours garden. Poor form, outgrown from old clipped beech hedge. Limited safe life expectancy	C 4	
T16	Beech	M 20	300EI 10	2,2,2,2 In neighbours garden. Poor form, outgrown from old clipped beech hedge. Limited safe life expectancy	C 4	
T17	Beech	M 20	400EI 12	2,2,0,3 In neighbours garden. Poor form, outgrown from old clipped beech hedge. Low branches still form part of hedge Limited safe life expectancy. Note – the owner of the tree is not obliged to follow the recommendation in this report and may wish to obtain their own specialist advice	C 4	Reduce back to hedge height of 2.5 – 3m. See note
T18	Beech	M 20	400* 13	On slightly raised land in neighbours garden. Outgrown from hedge. Poor form with trunk forked poorly at 1.5m where it was previously clipped for many years as a hedge. Most branches on east side. Crown only overhanging site by 2m. Limited safe life expectancy Note – the owner of the tree is not obliged to follow the recommendation in this report and may wish to obtain their own specialist advice.	C 4	Reduce back to hedge height of 2.5 – 3m See note

Arboricultural Method Statement – 10 Arundel Drive Worthing

This Method Statement is to be used in conjunction with the Tree Protection Plan (AAIS plan 03/10)

Tree Works

All works to trees growing on the site will be undertaken in accordance with BS 3998:1989 – "Recommendations for Tree Works". The pruning and felling will be undertaken, where possible, prior to any development works.

Trees T21 (R grade), T4, T6 and T7 are to be removed.

The beech hedges to the east and west of the new house will be clipped back to the boundary.

Trees T20 and T23 are recommended to be pruned but this is not associated with the development and is subject to the need for TPO consent.

Trees T17 and T18 are recommended to be reduced but these trees are not in the site and are the responsibility of the adjacent landowners. The branches that overhang the boundary and cause a nuisance during building works will be clipped back to the boundary.

Site Facilities and Access

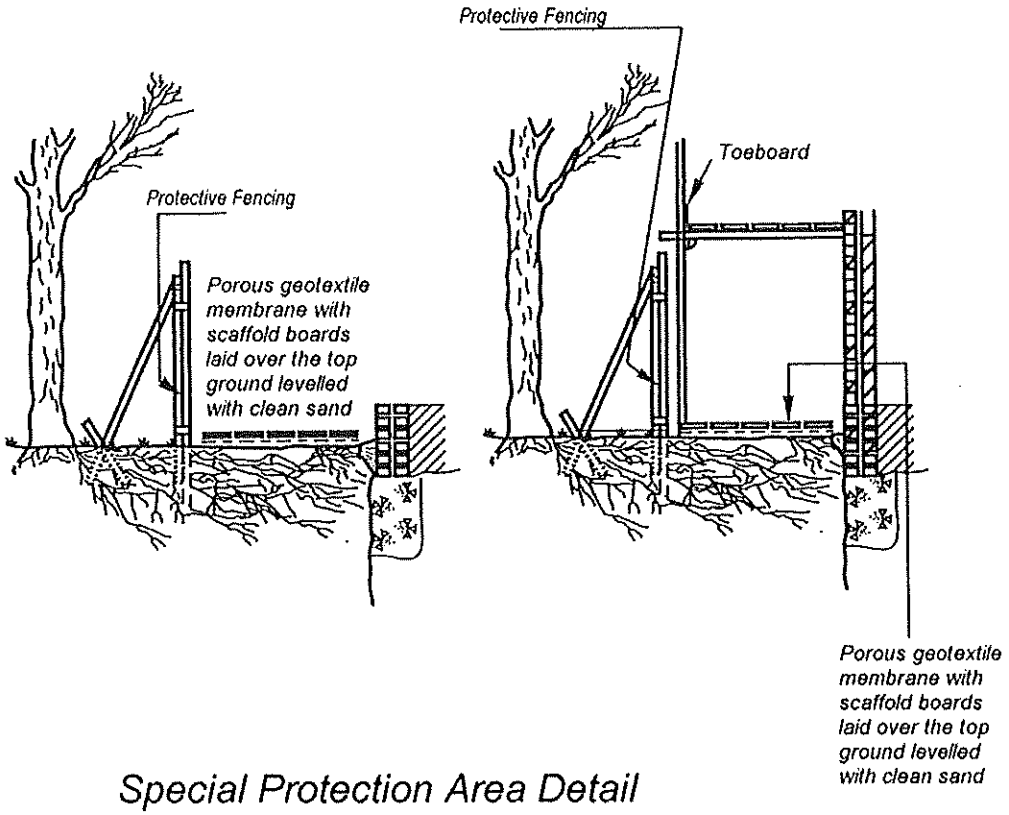
The location for the site office and storage of dry materials will be outside the recommended root protection areas of all retained trees.

Tree Protection - General

All the trees and hedges to be retained will be protected in accordance with section 9.2.1 of British Standard BS 5837: "Trees in Relation to Construction – Recommendations". That is, ***barriers will be fit for the purpose of excluding*** *demolition and* ***construction activity*** *during development. The barriers will be designed to be* ***rigid*** *and constructed to be* ***appropriate to the degree and proximity of work taking place around the retained trees.***

Heras fencing or 2m high solid wooden boarding supported on stout posts driven into the ground *will be used on this site, in the positions shown on the Tree Protection Plan – AAIS 03/10.* ***The fencing will be installed prior to any site works including demolition.***

The locations of the Special Protection Areas are marked on the Tree Protection Plan. The ground protection will be installed before any construction works.



Special Protection Area Detail

Tree Protection - Services

Services, including those provided by statutory undertakers such as the electricity, water, telephone and gas suppliers that will be needed for the new house will link directly to the existing services for the site and will be outside the recommended root protection areas of any retained trees.

If underground cables or pipes are to be installed within the root protection area of any retained trees this will only be undertaken by hand digging, retaining, undamaged, all roots over 20mm in diameter. Such works will be supervised on site by an arboriculturist.

Supervision

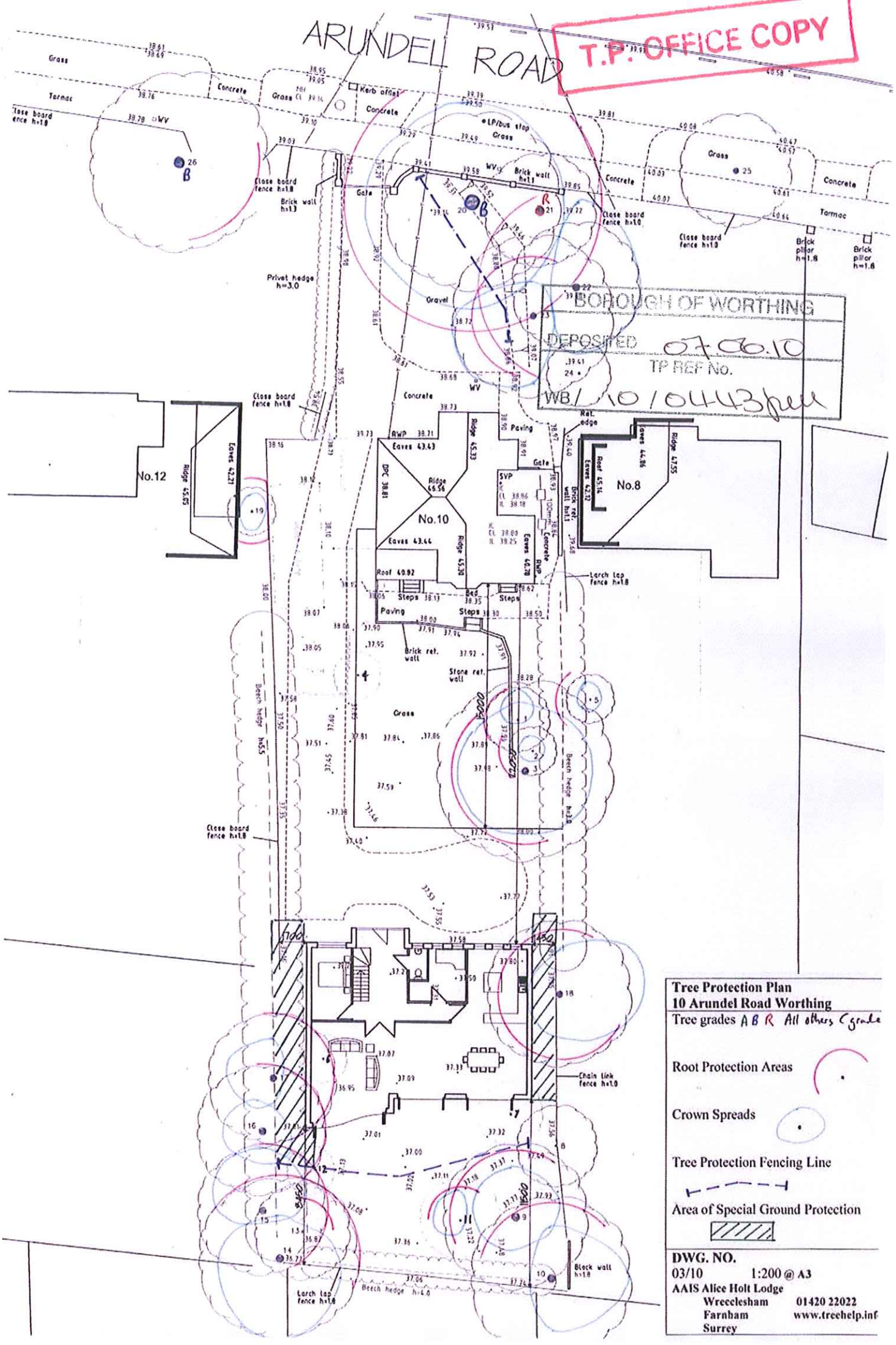
A pre-commencement meeting will take place on site with an arboricultural consultant and the project manager. The purpose of the meeting is to ensure that the requirements of the tree protection measures identified in this method statement are implemented appropriately.

Should any changes to the proposed tree protection measures be required during the development works, this will only be undertaken with the guidance of an arboricultural consultant and with on-site supervision if deemed appropriate by the arboricultural consultant.

Tree Protection - Completion

On completion of the development the protective fences will be removed taking care not to damage roots or the aerial parts of the retained trees and hedges.

A final check of the trees and hedges will be made by the arboricultural consultant to schedule any repair or remedial actions that may be necessary to ensure the property is handed over in a safe and marketable condition.


ARUNDEL ROAD
T.P. OFFICE COPY
BOROUGH OF WORTHING
DEPOSITED 07.06.10
TP REF No.
WB/10/0443/TPO
No.12
No.10
No.8
Tree Protection Plan
10 Arundel Road Worthing
Tree grades A B R All others C grade
Root Protection Areas
Crown Spreads
Tree Protection Fencing Line
Area of Special Ground Protection
DWG. NO.
03/10
1:200 @ A3
AAIS Alice Holt Lodge
Wrecclesham
Farnham
Surrey
01420 22022
www.treehelp.inf