



From: Michael Eastham

Sent: 26 June 2018 14:36

To: Planning.Responses

Subject: FW: CM/13/18/OUT - Outline planning application Land to West of Church Lane South of Horsemere Green Lane, Climping

Please upload the attached Arboricultural Report onto Ocella for CM/13/18/OUT.

Thanks,

Michael

From: 

Sent: 26 June 2018 14:09

To: Michael Eastham

Subject: CM/13/18/OUT - Outline planning application Land to West of Church Lane South of Horsemere Green Lane, Climping

Michael,

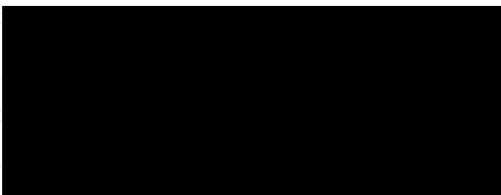
Please find attached the Arboricultural Report which supplements that already submitted with the application.

Regards

Philip Woodhams for:-

Parker Dani Chartered Town Planning Consultants

Suite S10, Waterside Centre, North Street, Lewes BN7 2PE





Arboricultural Survey Report

June 2018

www.phlorum.com

Land at Church Lane

June 2018

Parker Dann

Suite S10

Waterside Centre

North Street

Lewes

BN7 2PE

	Name	Date
Written By	Peter Davies	26 th June 2018
Checked By	Richard Schofield	26 th June 2018
Authorised By	Richard Schofield	26 th June 2018

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Doc: S18P Arbuton Road Survey 2018 Date: 26 June 2018

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1. Introduction

Summary

- 1.1 Phlorum Ltd has been commissioned by Parker Dann to undertake an arboricultural survey of land adjacent to Church Lane in Climping, West Sussex (hereafter referred to as “the site”), prior to development.

Scope of this Report

- 1.2 This report is concerned with all significant trees located within the property boundaries of the site. Additionally, trees located around the curtilage of the site have also been surveyed when they are considered likely to have the potential to impact on the development (in relation to root and crown protection or foundation design).
- 1.3 This survey has been undertaken to record the condition and value of all significant trees at the site as well as the material constraints they pose on the development. The information in this report should be used to guide the design proposals.

Site Description

- 1.4 The site is situated between Church Lane, Crookthorn Lane and Yapton Road in Climping, more broadly to the south of Arundel. The site has a central OS grid reference of TQ000 020.
- 1.5 The site comprises a large single arable field with a long woodland belt located along its southern and western boundaries. Further trees are sporadically located along the frontage of Church Lane and within the private gardens of third party residential properties to the north of the field.
- 1.6 The surrounding land use is comprised of residential properties to the north and farmland with a small number of agricultural and commercial buildings in all remaining directions. The location of the site within its environs is shown in figure 1 below.





Figure 1: Location of Site and Environs



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2. Methodology

Arboricultural Assessment

- 2.1 The arboricultural survey was undertaken in accordance with the guidelines set out in BS5837: 2012 *'Trees in relation to design, demolition and construction – Recommendations'*.
- 2.2 The tree assessment was undertaken by Peter Davies. Peter is a qualified arboriculturalist with ten years' experience in the industry, originally working as a groundsman and feller, and progressing into consultancy. He is a Lantra accredited professional tree inspector. He also has a Foundation Degree in Arboriculture and is a professional member of the Arboricultural Association.
- 2.3 The assessment was carried out on the 27th May 2018. The weather conditions at the time were cloudy with light rain showers. The visibility was adequate for visual tree inspection from ground level.
- 2.4 The following measurements and information were recorded in the Tree Survey Schedule for each individual tree (average dimensions are recorded for groups):
 - ❖ Tree reference number. (T=tree, G=group, H=hedgerow, W=woodland block). Tree numbers suffixed with PA on the Tree Constraints Plan indicate the trees location was not included on the topographical survey provided so the tree's position was approximated on site.
 - ❖ Species (common and scientific name).
 - ❖ Overall tree height (m).
 - ❖ Stem diameter (mm) per stem or average diameter for multi-stemmed trees with six or more stems.
 - ❖ Branch spread (m) measured to the four cardinal points.
 - ❖ Existing height (m) above ground level of lowest significant branch and direction of growth (for individual trees only).
 - ❖ Existing height (m) above ground level of canopy.
 - ❖ Age class (young, semi mature, early mature, mature, over mature or veteran).
 - ❖ Physiological condition (good, fair, poor).
 - ❖ Structural condition (good, fair, poor).
 - ❖ Comments (general description of tree including any notable features).



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- ❖ Preliminary management recommendations (prescriptions for tree management processes based on the current land use and not related to the proposed development).
 - ❖ Tree categorisation (see below).
 - ❖ Root protection area (m²).
 - ❖ Root protection radius (m).
- 2.5 The condition and value of each tree was evaluated based on the current land use. Each tree or tree group has been awarded either category A, B, C or U and a sub category of 1, 2 or 3 or a combination of the sub categories.
- 2.6 Tree categorisation summary:
- ❖ A – Trees of good condition or high value, with a predicted life span in excess of forty years.
 - ❖ B – Trees of moderate condition or value, with a predicted life span in excess of twenty years.
 - ❖ C – Trees of poor condition or low value, with a predicted life span in excess of ten years.
 - ❖ U – Trees of such impaired condition that they cannot realistically be retained as living trees in the context of the current land use for more than ten years.
- 2.7 Tree sub categorisation summary:
- ❖ 1 – Trees have mainly arboricultural value, e.g. trees of good condition, form and vitality or rare tree species.
 - ❖ 2 – Trees have mainly landscape value, e.g. trees of landscape prominence, that serve to screen unsightly views or that are required for privacy.
 - ❖ 3 – Trees with mainly cultural value including conservation, e.g. commemorative trees, trees of historical significance, trees of ecological significance or veteran trees.
- 2.8 Each tree can only be categorised as A, B, or C but may comply with more than one sub category. A cascade chart further explaining how tree categorisation is decided is included in Appendix C.
- 2.9 Each tree's stem diameter was recorded, and applied to the formula found in Appendix D to establish its root protection area. A root protection area represents a calculation of the minimum area of root growth required to support the tree, not the total rooting area. It is a standardised calculation based on the stem diameter(s) measured at 1.5m and is not necessarily representative of the actual or total rooting area.



- 2.10 The root protection areas are plotted on to the Tree Constraints Plan in Appendix A, and recorded in the Tree Survey Schedule in Appendix B. These are represented as a circle on the plan (unless significant rooting constraints are present), and are colour coded depending on the category the tree has been awarded. Where existing site conditions/features are present that are deemed likely to have affected the root morphology, the root protection areas have represented as a polygon of equivalent size.
- 2.11 The proposed layout should avoid level changes or the placement of new buildings and areas of hard surfacing within the root protection areas of retained trees. In certain situations, engineered solutions are available to allow construction within the root protection areas however further input from an arboriculturalist should be sought regarding their site-specific viability before these methods are relied upon.
- 2.12 The disturbance of a tree's root system can result in crown dieback and even death of the tree. Roots are used to support the tree structurally and act as transport for water and nutrients. Direct damage such as root severance can lead to ill health, as can compaction of the soil by construction traffic, heavy plant and storage of materials. Changing the nature of the surface above growing medium, i.e. from porous to non-porous can alter the resources available to the tree, which in turn can lead to its decline.
- 2.13 The root protection areas must be left free from excavation and disturbance, and protected from compaction or contamination during any proposed works. The majority of root growth is usually found within the top meter of soil. As such, even shallow disturbance within root protection areas can potentially have a significant impact on the trees.
- 2.14 A total of twenty-nine trees, nineteen tree groups, six woodland blocks and two hedgerows were surveyed and recorded in the Tree Survey Schedule. Any construction works within a root protection area required for the proposed layout must be justifiable within the arboricultural impact assessment.

Limitations of Survey

- 2.15 The survey methodology was restricted to a visual tree assessment from ground level. No tree climbing or ground investigation was carried out for this report. Where existing site constraints are present such as ivy covered trees, a very dense under-storey, or where trees are located on third party land to which access was not granted, tree dimensions were estimated by eye as accurately as possible.
- 2.16 This survey represents a preliminary overview of the condition and value trees at the site. It is not a detailed assessment of any individual tree and although preliminary management recommendations are included, this report will not be sufficient to be used as a detailed condition and safety survey.



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- 2.17 The information and measurements in this report are representative of the date of the site visit. The tree survey data will need to be updated to reflect tree growth and changes in the condition of trees after prolonged periods.
- 2.18 No topographical survey with measured tree positions was provided to produce this report. All tree positions on the Tree Constraints Plan were approximated on site and using satellite imagery so must not be scaled from for detailed design purposes.



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3. Results

Arboricultural Assessment

Appraisal of Tree Stock

- 3.1 The woodland belt comprises blocks of beech, ash, pedunculate oak and poplar. The majority of the woodland has a dense hawthorn and bramble under-storey that inhibited inspection of several trees.
- 3.2 The condition of the trees in the woodland belt varies significantly. Notable trees include a block of mostly oak at the eastern end of the woodland that has been awarded category A for its condition and predicted contribution to the site.
- 3.3 There is a long section of beech woodland adjacent to Crookthorn Lane. The trees in the northern half of this block are generally displaying good vitality (with the exception of the ash trees in group G23), however the majority those in the south facing section of the woodland are exhibiting dieback. Furthermore many of the ash on the western boundary (notably those in W29) are also exhibiting dieback.
- 3.4 A broken tree line, largely comprised of sycamore, ash and hawthorn is located along the eastern site boundary on the frontage of Church Lane. The majority of the trees on this boundary have previously been felled to avoid conflict with the arable field. With a few exceptions, the trees on this boundary are of relatively low arboricultural value but collectively provide visual amenity and contribute to the character of Church Lane.
- 3.5 Numerous residential gardens back directly onto the northern field boundary. Only trees where the root protection area or crown spread will encroach the site have been surveyed in these gardens. As the trees are situated to the north of the site, they will not pose a shading constraint.
- 3.6 A number of densely spaced blocks of elm suckers are located both within the woodland belt and to the north of the site. A number of the elms were exhibiting minor crown dieback on the date of the site visit. It is recommended that the elms be monitored in the future for evidence of Dutch elm disease and removed as appropriate, regardless of the proposed development.
- 3.7 Measurements and information for each tree or group can be viewed in the Tree Survey Schedule in Appendix 2.
- 3.8 **Tree categorisation summary:** A total of twenty-nine trees, nineteen tree groups, six woodland blocks and two hedgerows were surveyed and recorded in the Tree Survey Schedule.



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Table 1: Tree Categorisation Summary

Categorisation	Individual Tree	Tree group	Woodland	Hedgerow
A	2	-	2	-
B	15	8	3	-
C	9	9	1	2
U	3	2	-	-
Total	29	19	6	2

- 3.9 Further information for each tree can be viewed in the Tree Survey Schedule in Appendix B.

Statutory Tree Protection

- 3.10 Arun District Council's online mapping tool was used on 14th June 2018 to establish restrictions to tree works at the site. The site was not shown to be in a conservation area however the woodland belt on the southern and western site boundaries is shown to be protected by a Tree Preservation Order (ref. TPO/CM/1/04). Trees that are covered by the TPO are highlighted orange on the Tree Constraints Plan and noted in the Tree Survey Schedule.
- 3.11 Any persons proposing to undertake tree works should must check the status of the trees with the local authority, and gain the necessary consent before the works are undertaken. Financial penalties and/or criminal proceedings can result if tree works are carried out on a protected tree without consent. The entirety of the tree is protected, both above and below ground.



4. Conclusions and Recommendations

Arboricultural Input to Planning Application

- 4.1 To comply with BS5837: 2012, an arboricultural impact assessment should be produced when the proposed layout has been fixed. The arboricultural impact assessment should include a schedule of trees to be retained or removed as well as access facilitation pruning required to enable the construction works. It should also evaluate the likely effects of the construction works on retained trees including post development pressures and provide recommendations on mitigation measures to be implemented.
- 4.2 It is recommended that input is sought from the project arboriculturalist into the proposed layout before it is fixed. This will help ensure the proposed layout integrates well with the retained tree stock, and will allow potential areas of conflict that may not be identified by non-arboricultural professionals to be rectified whilst the layout is being developed.
- 4.3 The arboricultural impact assessment should be accompanied by an arboricultural method statement and a dimensioned Tree Protection Plan to show how retained trees will be protected whilst the development is constructed.

Arboricultural Considerations for Proposed Layout

- 4.4 The proposed layout should take into account the following considerations related to trees:
 - ☉ The proposed layout should seek to retain higher quality trees, particularly those that cannot easily be replaced. Where tree removal is necessary to facilitate the wider regeneration benefits associated with development, a tree replacement strategy could be implemented to mitigate tree loss. A net loss in tree cover within a development site will not be looked on favourably when determining a planning application.
 - ☉ The proposed layout should take into account the root protection areas of retained trees. These should be left free of construction activities including hard landscaping unless the project arboriculturalist confirms engineered solutions or sympathetic construction methodology will be a viable option to mitigate the encroachment.
 - ☉ The proposed layout should take into account the shade cast by trees. Over-shading of gardens and buildings (notably habitable rooms) can result in future pressures to prune or remove additional trees post development and will be a material consideration for the local authority when determining a planning application.



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- ☛ The proposed layout should also take into account other common potential nuisances resulting from trees including nuisance caused by leaf/fruit drop or honeydew drip (particularly onto footpaths, parking areas or roof guttering) and an over-bearing presence of large trees.
 - ☛ Allowance should be made for future canopy growth of both existing and newly planted trees. Trees growing in areas of limited space may require regular future pruning works. The suitability of different species for regular crown reductions, the affect on their amenity value and the cost of future tree works (as well as who would be responsible for undertaking the works) should be considered.
- 4.5 If further tree planting does occur within the development site, consideration should be given to species selection (in relation to form and potential size) and planting locations to ensure their successful integration into the new development. Recommendations for mitigation tree planting may be included in the arboricultural impact assessment, or a more thorough landscaping strategy may be provided by a landscape designer/architect.
- 4.6 The final design should show service locations and their routing. New utilities should be located outside of the trees root protection areas where they are underground and outside of the anticipated area of mature crown spread where above ground. If this is not possible, recommendations outlined in NJUG10 'Guidelines for the planning, installation and maintenance of utilities in proximity to trees' should be followed. Advice should also be sought from the project arboriculturalist.



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5. Other Considerations

- *****
- 5.1 Trees should be checked for protected species before works are undertaken. It is against the law to disturb bats or their roosts under the Conservation of Habitat and Species Regulations. Nesting birds are protected by the Wildlife and Countryside Act. If protected species are discovered, Natural England should be contacted for advice.
 - 5.2 The tree works contractors should carry out all tree works to BS3998: 2010 *'Tree works – recommendations'*, as modified by research that is more recent. They should also carry relevant, adequate and up to date insurance.
 - 5.3 It is also recommended that all tree works be carried out by an Arboricultural Association approved contractor. Approved contractors are expected to work to industry best standards, and the Arboricultural Association website contains contact details and information on engaging a suitable contractor.
 - 5.4 The trees at this site were assessed for their condition and safety in relation to the average range of weather conditions that the region experiences. Any weather events that exceed the average norm cannot be predicted, and so their effects are not considered within this report.
 - 5.5 The views and opinions contained within this report are entirely those of the author.



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6. References

- ❖ British Standards Institute (2012). 5837:2012. *Trees in Relation to Design, Demolition and Construction – Recommendations*. Standards Policy & Strategy Committee. Milton Keynes: BSI.
- ❖ British Standards Institute (2010). 3998:2010. *Tree Work, Recommendations*. Standards Policy & Strategy Committee. Milton Keynes: BSI.
- ❖ National Joint Utilities Group (NJUG) (2007) '*Guidelines for the planning, installation and maintenance of utilities in proximity to trees*' Volume 4. London: NJUG.



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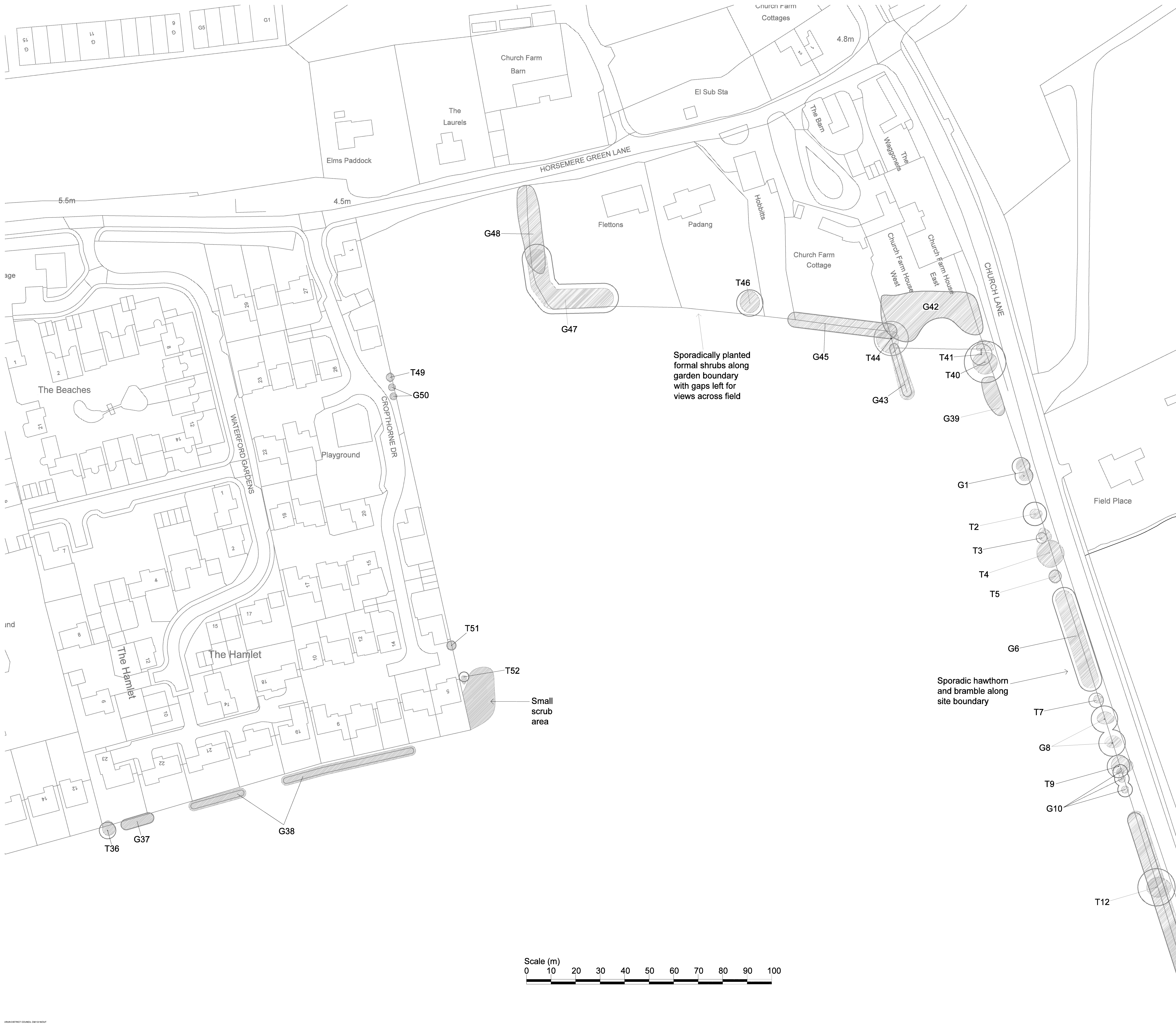
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Appendix A

Tree Constraints Plan



Key:

- RPA for CAT A* tree
- RPA for CAT B* tree
- RPA for CAT C* tree
- RPA for CAT U* tree
- Tree canopy - with TPO
- Tree canopy - without TPO
- CAT A* Woodland/group
- CAT B* Woodland/group
- CAT C* Woodland/group
- CAT U* Woodland/group

* Tree categorised in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

Tree Survey Schedule contained within the arboricultural report contains further information for each tree.

This drawing should be viewed in colour.

All tree positions on this drawing were approximated on site and/or using aerial imagery so must not be scaled from for detailed design purposes.

Drawing no: 4883/18/ARev: -Sheet number: 1 of 3

Site:
Land adjacent to Church Lane
Climping
West Sussex

Drawing title: Tree Constraints Plan

Date drawn: 14/06/2018

Scale: 1:500 at A0

Drawn by: PDChecked by: NB



- Key:**
- RPA for CAT A* tree
 - RPA for CAT B* tree
 - RPA for CAT C* tree
 - RPA for CAT U* tree
 - Tree canopy - with TPO
 - Tree canopy - without TPO
 - CAT A* Woodland/group
 - CAT B* Woodland/group
 - CAT C* Woodland/group
 - CAT U* Woodland/group

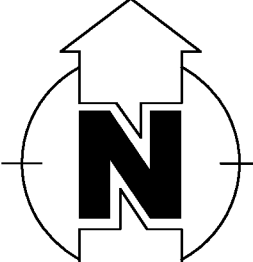
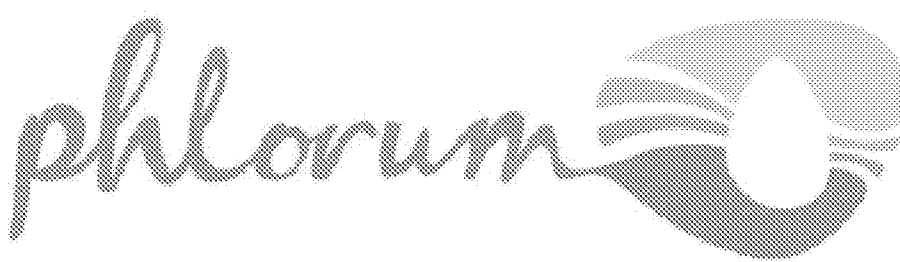
* Tree categorised in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

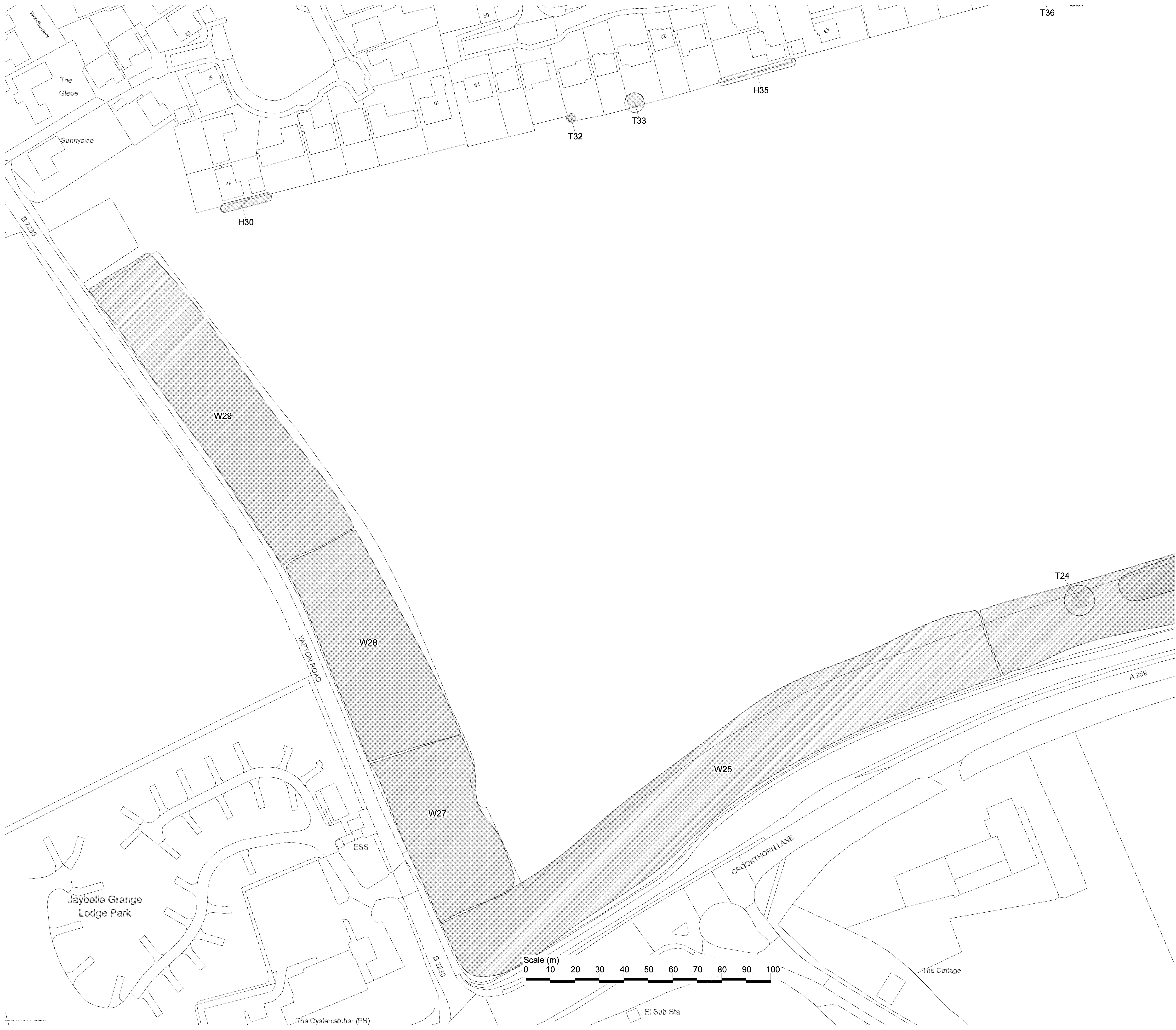
Tree Survey Schedule contained within the arboricultural report contains further information for each tree.

This drawing should be viewed in colour.

All tree positions on this drawing were approximated on site and/or using aerial imagery so must not be scaled from for detailed design purposes.

Drawing no: 4883/18/A	Rev: -	Sheet number: 2 of 3
Site: Land adjacent to Church Lane Climping West Sussex		
Drawing title: Tree Constraints Plan		
Date drawn: 14/06/2018		
Scale: 1:500 at A0		
Drawn by: PD	Checked by: NB	





- Key:**
- RPA for CAT A* tree
 - RPA for CAT B* tree
 - RPA for CAT C* tree
 - RPA for CAT U* tree
 - Tree canopy - with TPO
 - Tree canopy - without TPO
 - CAT A* Woodland/group
 - CAT B* Woodland/group
 - CAT C* Woodland/group
 - CAT U* Woodland/group

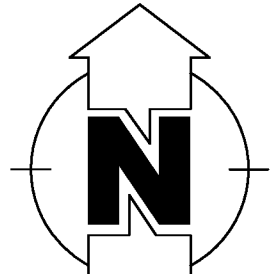
* Tree categorised in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

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This drawing should be viewed in colour.

All tree positions on this drawing were approximated on site and/or using aerial imagery so must not be scaled from for detailed design purposes.

Drawing no: 4883/18/A	Rev: -	Sheet number: 3 of 3
Site: Land adjacent to Church Lane Climping West Sussex		
Drawing title: Tree Constraints Plan		
Date drawn: 14/06/2018		
Scale: 1:500 at A0		
Drawn by: PD	Checked by: NB	

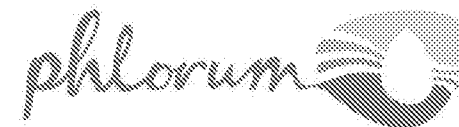


Appendix B

Tree Survey Schedule

Site: Church Lane, Climping

Tree Survey Schedule



Survey date: 27/05/2018

Surveyor: Peter Davies

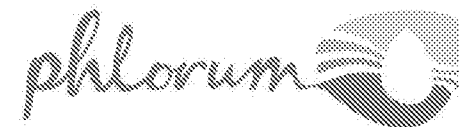
Tree ref.	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Crown clearance (m)	Age class	Physiological condition	Structural condition	Comments	Preliminary management recommendation	Category grading	Root Protection Area (m ²)	Root Protection Radius (m)
G1	2x sycamore (Acer pseudoplatanus)	7-8 average	Up to 300 average	N: 3 E: 4 S: 2 W: 2	0 average	Early mature	Good	Good	Flailed from field. No major visible defects.	No action required on date of survey.	B2	40.7 average	3.6 average
T2	Ash (Fraxinus excelsior)	6	200, 200, 200, 200 est	N: 2 E: 3 S: 2 W: 2	Crown: 0 north Branch: 1 average	Mature	Poor	Poor	Previously coppiced at 1m. Coppice stand decayed. Bacterial canker throughout crown and stems.	Fell to ground level.	U	72.4	4.8
T3	Ash (Fraxinus excelsior)	8	180	N: 4 E: 4 S: 1 W: 1	Crown: 1 north Branch: 2 east	Semi mature	Good	Good	Small tree of reasonable condition. Slightly suppressed on south side by oak.	No action required on date of survey.	C2	14.7	2.2
T4	Pedunculate oak (Quercus robur)	10	440	N: 5 E: 6 S: 6 W: 5	Crown: 2 south Branch: 2 south	Early mature	Good	Good	Previously crown lifted over road. No major visible defects. Good development potential.	No action required on date of survey.	A1	87.6	5.3
T5	Horse chestnut (Aesculus hippocastanum)	6	150, 80, 80, 90	N: 3 E: 2 S: 3 W: 2	Crown: 0.5 average Branch: 0.5 average	Semi mature	Fair	Fair	Multi-stemmed. Compression fork in primary union. Leaf miner moth damage to foliage.	No action required on date of survey.	C1	19.6	2.5
G6	Mixed (sycamore dominant, hawthorn)	4-8 average	Up to 400 average	2-4 average	0 average	Early mature	Good	Fair	Linear tree belt. Previously flailed from field and reduced from road. Multi-stemmed trees present.	No action required on date of survey.	B2	72.4 average	4.8 average

Site: Church Lane, Climping

Tree Survey Schedule

Survey date: 27/05/2018

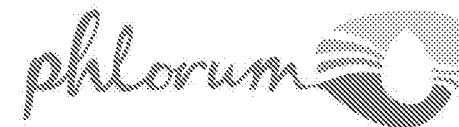
Surveyor: Peter Davies



Tree ref.	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Crown clearance (m)	Age class	Physiological condition	Structural condition	Comments	Preliminary management recommendation	Category grading	Root Protection Area (m ²)	Root Protection Radius (m)
T7	Horse chestnut (Aesculus hippocastanum)	5	250	N: 2 E: 3 S: 1 W: 1	Crown: 0.5 average Branch: 1 east	Semi mature	Fair	Fair	Damage to foliage from leaf miner and Guignardia aesculi. Mechanical damage to stem bark.	No action required on date of survey.	C1	28.3	3.0
G8	2x sycamore (Acer pseudoplatanus)	10 average	450 average	N: 3 E: 4 S: 2 W: 3	Crown: 0.5 average Branch: 1 average	Mature	Good	Fair	Multi-stemmed trees. Crowns failed from field.	No action required on date of survey.	B2	91.6 average	5.4 average
T9	Ash (Fraxinus excelsior)	8	380	N: 4 E: 6 S: 3 W: 3	Crown: 0 north Branch: 2 north	Mature	Fair	Fair	Reduced from field and crown lifted over road. Minor deadwood throughout crown.	Remove deadwood over 75mmØ and/or 500mm length that overhangs road.	B2	65.3	4.6
G10	Mixed (2x ash and 1x sycamore)	6-7 average	250 average	1-2 average	0 average	Semi mature	Poor	Poor	Ash exhibiting significant crown dieback. Sycamore suppressed by T9 resulting in drawn up habit.	Remove all three trees due to defects and to improve condition of T9.	U	28.3 average	3.0 average
G11	Mixed (sycamore dominant, ash, pedunculate oak, hawthorn)	4-14 average	Up to 250 average	N: 3 E: 4 S: 3 W: 3	0-3 average	Semi mature-mature	Good	Fair	Line of mostly sycamore with hawthorn under-storey. Slightly drawn up habits due to close spacing (in places).	No action required on date of survey.	B2	28.3 average	3.0 average
T12	Poplar (Populus canadensis)	18	630	N: 4 E: 6 S: 4 W: 4	Crown: 1 east Branch: 3 south	Mature	Good	Good	Under-storey inhibits inspection. No major visible defects.	No action required on date of survey.	B2	179.6	7.6

Site: Church Lane, Climping

Tree Survey Schedule



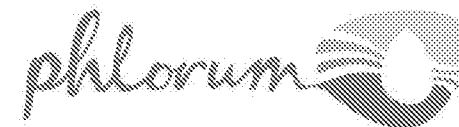
Survey date: 27/05/2018

Surveyor: Peter Davies

Tree ref.	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Crown clearance (m)	Age class	Physiological condition	Structural condition	Comments	Preliminary management recommendation	Category grading	Root Protection Area (m ²)	Root Protection Radius (m)
W13	Mixed (pedunculate oak dominant, ash, field maple, poplar, hawthorn, elder)	2-16 average	Up to 400 average	1-4 average	0-6 average	Mature	Good	Good	Drawn up habits, typical of woodland specimens. Minor deadwood throughout.	TPO - Detailed condition survey should be undertaken if frequency of use within woodland target area increases.	A1/2	72.4 average	4.8 average
T14	Pedunculate oak (Quercus robur)	15	710	N: 11 E: 5 S: 3 W: 5	Crown: 3 south Branch: 5 average	Mature	Good	Good	Notably large specimen within woodland. North lean.	TPO - No action required on date of survey.	A1	228.0	8.5
G15	3x ash (Fraxinus excelsior)	16-20 average	Up to 500 average	4 average	2 average	Mature	Fair	Good	Dense under-storey inhibits inspection. Relatively sparse crown in west tree.	TPO - No action required on date of survey.	B1/2	113.1 average	6.0 average
G16	Poplar (Populus canadensis)	8-12 average	Up to 150 average	1-4 average	0 average	Semi mature	Good	Good	Densely spaced, semi mature trees along road frontage.	TPO - No action required on date of survey.	B2	10.2 average	1.8 average
T17	Ash (Fraxinus excelsior)	14	350 est	N: 3 E: 4 S: 3 W: 3	Crown: 0 average Branch: 2 south	Mature	Fair	Fair	Dense under-storey inhibits inspection. Dieback in upper crown.	TPO - Remove deadwood over 75mmØ and/or 500mm length and monitor vitality if frequency of land use increases.	B1	55.4	4.2
T18	Ash (Fraxinus excelsior)	15	490, 150	N: 7 E: 6 S: 4 W: 4	Crown: 2 south Branch: 3 north	Mature	Good	Good	Multi-stemmed from 3m.	TPO - No action required on date of survey.	B1/2	118.8	6.1

Site: Church Lane, Climping

Tree Survey Schedule



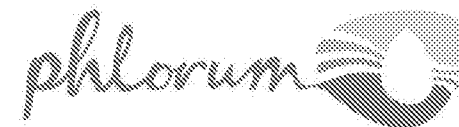
Survey date: 27/05/2018

Surveyor: Peter Davies

Tree ref.	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Crown clearance (m)	Age class	Physiological condition	Structural condition	Comments	Preliminary management recommendation	Category grading	Root Protection Area (m ²)	Root Protection Radius (m)
T19	Ash (Fraxinus excelsior)	14	350 est	N: 3 E: 4 S: 3 W: 3	Crown: 7 north Branch: 7 west	Mature	Good	Fair	Drawn up habit and high crown clearance due to suppression. Poor access to survey.	TPO - No action required on date of survey.	B1	55.4	4.2
T20	Ash (Fraxinus excelsior)	14	490, 250, 200	N: 4 E: 4 S: 5 W: 6	Crown: 1 north Branch: 0.5 north	Mature	Fair	Good	Dieback on north side of crown (not overhanging field). Multi-stemmed.	TPO - No action required on date of survey.	B1	155.0	7.0
G21	Mixed (elm dominant, cherry, ash, poplar)	4-6 average	Up to 200 average	1-4 average	0 average	Semi mature	Fair	Fair	Predominantly elm suckers with other small trees. Evidence of Dutch Elm Disease observed.	TPO - Monitor for Dutch elm disease and clear as necessary.	C1	4.5 average	1.2 average
W22	Mixed (beech and ash dominant) hawthorn, elder, pedunculate oak)	Up to 25 average	Up to 600 average	Up to 6 over field boundary	0-7 average	Mature	Fair	Good	Dieback in all trees on south side of woodland belt (possibly associated with wind burn).	TPO - Consider planting shelterbelt trees such as poplar to the south of W22.	B1/2	162.9 average	7.2 average
G23	Ash (Fraxinus excelsior)	15 average	300 average	3 average	4 average	Mature	Poor	Poor	Group of ash exhibiting significant dieback. Located within falling distance of field.	TPO - Consider undertaking additional tree planting of different species to provide long term replacements.	U	40.7 average	3.6 average
T24	Ash (Fraxinus excelsior)	17	520	N: 5 E: 4 S: 3 W: 3	Crown: 6 north Branch: 7 north	Mature	Good	Poor	Co-dominant stems from 4m - potential decay in compression fork at primary union (partially obscured by ivy).	TPO - Sever ivy to allow comprehensive future inspection.	U	122.3	6.2

Site: Church Lane, Climping

Tree Survey Schedule



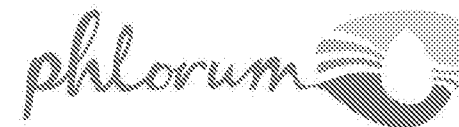
Survey date: 27/05/2018

Surveyor: Peter Davies

Tree ref.	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Crown clearance (m)	Age class	Physiological condition	Structural condition	Comments	Preliminary management recommendation	Category grading	Root Protection Area (m ²)	Root Protection Radius (m)
W25	Mixed (pedunculate oak dominant, sycamore, ash)	14-25 average	Up to 500 average	Up to 6 over field boundary	1-7 average	Mature	Good	Fair	Drawn up habits. Multiple decay cavities observed.	TPO - Detailed condition survey should be undertaken if frequency of use within woodland target area increases.	B1/2	113.1 average	6.0 average
T26	English oak (Quercus robur)	7	330	N: 0 E: 3 S: 5 W: 3	Crown: 2 south Branch: 3 south	Early mature	Good	Fair	Strong south lean. Previously crown lifted over drainage ditch.	TPO - No action required on date of survey.	B2	49.3	4.0
W27	Beech dominant and ash	14-20 average	Up to 700 average	Up to 5 over field boundary	0-6 average	Mature	Good	Fair	Trees planted in linear belts. Minor dieback in some beech specimens. Multi-stemmed trees.	TPO - No action required on date of survey.	A2	221.7	8.4 average
W28	Mixed (beech, ash, pedunculate oak)	13-15 average	Up to 400 average	Up to 6 over field boundary	0-6 average	Mature	Good	Good	Mixed deciduous woodland block. Some ash exhibiting crown dieback.	TPO - No action required on date of survey.	B1/2	72.4 average	4.8 average
W29	Ash (Fraxinus excelsior)	10-15 average	Up to 400 average	Up to 7 over field boundary	0 average	Over mature	Fair	Fair	Multiple trees exhibiting dieback along field boundary.	TPO - Remove deadwood and fell dying stems located in falling distance of field if frequency of target area increases.	C2	72.4 average	4.8 average
H30	Cypress (Cupressocyparis leylandii)	3 average	Up to 150 average	1-2 average	0 average	Semi mature	Fair	Fair	Topped cypress tree line. Some sparse areas on south side.	No action required on date of survey.	C2	10.2 average	1.8 average

Site: Church Lane, Climping

Tree Survey Schedule



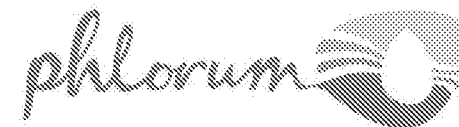
Survey date: 27/05/2018

Surveyor: Peter Davies

Tree ref.	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Crown clearance (m)	Age class	Physiological condition	Structural condition	Comments	Preliminary management recommendation	Category grading	Root Protection Area (m ²)	Root Protection Radius (m)
T31	English oak (Quercus robur)	7	370	N: 1 E: 5 S: 6 W: 2	Crown: 2 south Branch: 2 average	Semi mature	Good	Fair	One sided crown. Slightly suppressed by T57. No major visible defects.	TPO - No action required on date of survey.	B2	61.9	4.4
T32	Flowering cherry (Prunus spp.)	5	60, 90 est	N: 2 E: 2 S: 2 W: 2	Crown: 1 average Branch: 1 south	Young	Good	Good	Small third party tree.	No action required on date of survey.	C1	5.3	1.3
T33	Silver birch (Betula pendula)	8	150, 150, 150, 150 est	N: 4 E: 4 S: 2 W: 3	Crown: 2 south Branch: 1.5 average	Early mature	Good	Good	Small third party tree. Multi-stemmed.	No action required on date of survey.	B1	50.9	4.0
T34	English oak (Quercus robur)	11	530	N: 2 E: 3 S: 7 W: 6	Crown: 2 south Branch: 3 south	Mature	Good	Good	Low deadwood. Slight south lean. No major visible defects. Understorey inhibits inspection.	TPO - No action required on date of survey.	B1/2	127.1	6.4
H35	Cherry laurel (Prunus laurocerasus)	1.5 average	130 average est	0.5 average	0 average	Semi mature	Good	Fair	Third party clipped hedgerow.	No action required on date of survey.	C2	7.6 average	1.6 average
T36	Eucalyptus (Eucalyptus spp.)	6	280	N: 4 E: 3 S: 2 W: 2	Crown: 1 south Branch: 1.5 average	Semi mature	Good	Good	Typical habit for species. No major visible defects.	No action required on date of survey.	B1	35.5	3.4

Site: Church Lane, Climping

Tree Survey Schedule



Survey date: 27/05/2018

Surveyor: Peter Davies

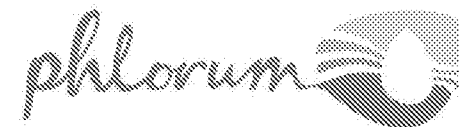
Tree ref.	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Crown clearance (m)	Age class	Physiological condition	Structural condition	Comments	Preliminary management recommendation	Category grading	Root Protection Area (m ²)	Root Protection Radius (m)
G37	Mixed (silver birch, cherry laurel, cherry)	3-5 average	Up to 180 average	2-3 average	0-1 average	Young-semi mature	Good	Good	Small trees and shrubs.	No action required on date of survey.	C1/2	14.7 average	2.2 average
G38	Mixed (pampas grass, silver birch, buddleia, blackthorn, hawthorn)	2-4 average	Up to 100 average	Up to 2 average	0 average	Young-semi mature	Good	Good	Small trees and shrubs.	No action required on date of survey.	C1	4.5 average	1.2 average
G39	Hawthorn, elm	3-6 average	Up to 100 average	Refer to drawing	0 average	Semi mature	Fair	Fair	Self set trees - some smothered with bramble. Evidence of Dutch Elm Disease observed.	Monitor for Dutch elm disease and clear as necessary.	C2	4.5 average	1.2 average
T40	Sycamore (Acer pseudoplatanus)	10	710 at 1m	N: 4 E: 5 S: 5 W: 5	Crown: 3 west Branch: 1.5 north	Mature	Good	Good	Under-storey and Ivy inhibit inspection. Previously crown lifted over field. No major visible defects.	No action required on date of survey.	B1/2	228.0	8.5
T41	Scots pine (Pinus sylvestris)	7	370	N: 6 E: 5 S: -2 W: 2	Crown: 4 north Branch: 4 north	Early mature	Good	Fair	Minor basal wound. North east lean due to suppression from adjacent sycamore. Small stem cavity.	No action required on date of survey.	C1/2	61.9	4.4
G42	Mixed (sumach, silver birch, willow, Norway maple, pedunculate oak, cypress)	Up to 8 average	Up to 300 average	2-6 average	1-2 average	Semi mature-mature	Good	Good	Third party trees in private garden. Only viewed from site. Appear of reasonable condition.	No action required on date of survey.	B1/2	N/A	2m from field boundary

Site: Church Lane, Climping

Survey date: 27/05/2018

Surveyor: Peter Davies

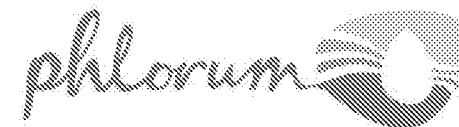
Tree Survey Schedule



Tree ref.	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Crown clearance (m)	Age class	Physiological condition	Structural condition	Comments	Preliminary management recommendation	Category grading	Root Protection Area (m ²)	Root Protection Radius (m)
G43	Silver birch (<i>Betula pendula</i>)	6-7 average	Up to 150 average	2-3 average	1 average	Semi mature	Fair	Fair	Line of flailed birch trees. 1x tree exhibiting severe crown dieback.	Fell dying tree to ground level if frequency of land use increases.	C1	10.2 average	1.8 average
T44	Goat willow (<i>Salix caprea</i>)	5	340, 190, 320, 290	N: 3 E: 3 S: 6 W: 6	Crown: 2 south Branch: 1 average	Mature	Good	Fair	Multi-stemmed. Possible third party specimen. Asymmetric crown.	No action required on date of survey.	C1	153.0	7.0
G45	Mixed (Silver birch, rowan, copper beech, goat willow, ash, cypress, elder)	6-7 average	Up to 250 average	Up to 3 over site	2 over site	Semi-early mature	Fair	Fair	Third party trees along field boundary. Previously flailed. Flailed to 3m.	No action required on date of survey.	C2	28.3 average	3.0 average
T46	Horse chestnut (<i>Aesculus hippocastanum</i>)	8	350, 200, 200 est	N: 5 E: 4 S: 4 W: 4	Crown: 1 average Branch: 2 average	Early mature	Fair	Good	Third party tree only viewed from site. Leaf miner moth damage to the foliage.	No action required on date of survey.	B1/2	91.6	5.4
G47	Mixed (Leyland cypress dominant and Monterey cypress)	12-15 average	Up to 500 average	2-5 average	0 average	Mature	Good	Fair	Third party tree belt, flailed along field boundary.	No action required on date of survey.	B2	113.1 average	6.0 average
G48	Mixed (elm dominant, hawthorn, silver birch)	Up to 6 average	Up to 75 average	Refer to drawing	0 average	Semi mature	Good	Fair	Third party elm suckers. Evidence of Dutch Elm Disease observed.	Monitor for Dutch elm disease and clear as necessary.	C1	2.5 average	0.9 average

Site: Church Lane, Climping

Tree Survey Schedule



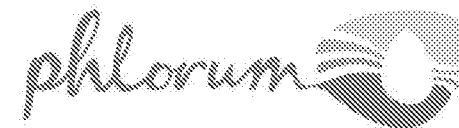
Survey date: 27/05/2018

Surveyor: Peter Davies

Tree ref.	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Crown clearance (m)	Age class	Physiological condition	Structural condition	Comments	Preliminary management recommendation	Category grading	Root Protection Area (m ²)	Root Protection Radius (m)
T49	Whitebeam (Sorbus aria)	4	130	N: 2 E: 1 S: 2 W: 1	Crown: 1.5 average Branch: 2 average	Semi mature	Good	Good	Third party tree. No major visible defects.	No action required on date of survey.	C1	7.6	1.6
G50	2x Bay (Laurus nobilis)	3 average	Up to 120 average	1 average	1 average	Semi mature	Good	Good	Third party shrubs pruned to formal shapes.	No action required on date of survey.	C1	6.5 average	1.4 average
T51	Silver birch (Silver birch)	9	150 est	N: 2 E: 2 S: 2 W: 2	2 over site	Semi mature	Good	Good	Third party tree only viewed from site.	No action required on date of survey.	C1	10.2	1.8
T52	Elder (Sambucus nigra)	3	170	N: 0 E: 1 S: 3 W: 1	Crown: 1 south Branch: 1 east	Mature	Fair	Fair	Minor crown dieback. Bark damage to stem. Unlikely to be present in 10 years.	No action required on date of survey.	U	13.1	2.0
G53	Mixed (hawthorn, blackthorn, elder)	2-7 average	Up to 150 average	1-3 average	0 average	Semi mature-mature	Good	Fair	Scrub (sporadic in places) along road frontage. Areas smothered by bramble or ivy.	TPO - No action required on date of survey.	C2	10.2 average	1.8 average
T54	Hawthorn (Crataegus monogyna)	8	320	N: 1 E: 3 S: 3 W: 2	Crown: 0 west Branch: 1 south	Over mature	Fair	Good	Dieback in upper and west side of crown (tree not suppressed).	TPO - No action required on date of survey.	C1	46.3	3.8

Site: Church Lane, Climping

Tree Survey Schedule



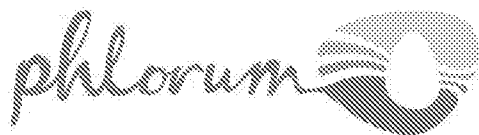
Survey date: 27/05/2018

Surveyor: Peter Davies

Tree ref.	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Crown clearance (m)	Age class	Physiological condition	Structural condition	Comments	Preliminary management recommendation	Category grading	Root Protection Area (m ²)	Root Protection Radius (m)
T55	English oak (Quercus robur)	11	510	N: 3 E: 7 S: 7 W: 6	Crown: 2 east Branch: 2 east	Mature	Good	Good	1 sided crown and slight south lean. Located on road frontage.	TPO - No action required on date of survey.	B1/2	117.7	6.1
T56	English oak (Quercus robur)	9	370, 220	N: 1 E: 5 S: 6 W: 4	Crown: 2 east Branch: 2 west	Early mature	Good	Fair	Dual stemmed. Tree leans south towards road. Previously crown lifted over drainage ditch.	TPO - No action required on date of survey.	B2	83.8	5.2

Appendix C

Cascade Chart for Tree Quality Assessment



Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of their 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 the 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. Note Category U trees can have existing or potential conservation value which it might be desirable to preserve			Red
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A 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 that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remedial 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, 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).	Green
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.		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 or other cultural value.	Blue
Category C 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

Appendix D

Root Protection Area Formulas

Root Protection Area Formulas

CALCULATING THE RPA

For single stemmed trees

$$\text{RPA (m}^2\text{)} = \frac{(\text{stem diameter (mm) @ 1.5 m x 12})^2 \times 3.142}{1000}$$

For trees with two to five stems, a combined stem diameter is calculated as follows:

$$\sqrt{(\text{stem diameter 1})^2 + (\text{stem diameter 2})^2 \dots + (\text{stem diameter 5})^2}$$

For trees with more than five stems, the combine stem diameter is calculated as follows:

$$\sqrt{(\text{mean stem diameter})^2 \times \text{number of stems}}$$

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