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PARKER DANN

LAND AT CHURCH LANE, CLIMPING, WEST SUSSEX

ARBORICULTURAL SURVEY REPORT
REVISION 2

APRIL 2016

	Name	Date
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1. INTRODUCTION

Summary

1.1 Phlorum Limited was commissioned by Parker Dann to provide 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. 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.

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Figure 1: Location of Site and Environs

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2. METHODOLOGY

Aboricultural 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, a qualified arboriculturalist with nine years' experience in the arboricultural industry, originally working as a groundsman and feller, and progressing into consultancy. Peter has a Foundation Degree in Arboriculture and is a professional member of the Arboricultural Association.

2.3 A site visit was carried out on 3rd August 2015 with a subsequent visit carried out on 22nd April 2016 to pick up further trees on the frontage of Crookthorn Lane. The weather conditions at the time of both visits were overcast with light rain showers. The visibility was good.

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).

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- ¿ Comments (general description of tree including any notable features).
- ¿ 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.

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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.

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 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.

2.12 A total of thirty-one trees, twenty tree groups, two hedgerows and six woodland blocks were surveyed and recorded in the Tree Survey Schedule.

Constraints

2.13 The survey methodology was restricted to a visual tree assessment. 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.

2.14 No topographical survey with the existing tree locations was provided to produce this report. All tree positions on the Tree Constraints Plan were approximated on site and from satellite imagery.

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3. RESULTS

Arboricultural Assessment

3.1 The site comprises a large single arable field with a long woodland belt located along its southern and western boundaries. The woodland belt comprises blocks of beech, ash, English 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, however the majority those in the south facing section of the woodland are exhibiting dieback. Furthermore many of the ash on the southern and western boundaries are also exhibiting dieback, quite significantly in W29. The apparent cause of the dieback would be windburn as the site is located relatively close to the sea and the trees exhibiting dieback are those most exposed to the prevailing wind from the south west.

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 flailed 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 to 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 Further information for each tree including preliminary management recommendations can be viewed in the Tree Survey Schedule in Appendix B.

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Statutory Tree Protection

3.8 Arun District Council's online Geographical Information System was used to determine restrictions to tree works at the site. The site is not located within a conservation area, however the woodland belt on the southern and western boundaries is protected by a Tree Preservation Order (TPO). TPO reference TPO/CM/A/04. Trees covered by the TPO are highlighted on the Tree Constraints Plan in Appendix A. Any persons proposing to undertake tree works must check the status of these trees with the local authority, and gain necessary consent before works are undertaken.

3.9 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.

Tree Categorisation Summary

3.10 A total of thirty-one trees, twenty tree groups, two hedgerows and six woodland blocks were surveyed and recorded in the Tree Survey Schedule.

Table 1: Tree Categorisation Summary

TREE CATEGORY	INDIVIDUAL TREE	TREE GROUP	HEDGEROW	WOODLAND BLOCK
A	1	0	0	1
B	16	9	0	4
C	10	9	2	1
U	4	2	0	0
Total	31	20	2	6

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 To comply with BS5837: 2012, it is recommended that an arboricultural impact assessment be produced when the proposed layout has been finalised. The arboricultural impact assessment should include a schedule of trees to be retained and removed, evaluate the likely effects of construction works on retained trees including post development pressures and provide recommendations on mitigation measures to be implemented. It should also include a Tree Retention Plan.

4.2 As far as possible new buildings and areas of hard surfacing should be located outside of the root protection areas of retained trees. In certain situations, engineered solutions are available to allow construction within the root protection areas. Further input from an arboriculturalist should be sought regarding their site-specific viability before these methods are relied upon.

4.3 Over-shading of gardens and dwellings for prolonged periods, 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 can result in significant pressure from future residents to carry out harsh remedial pruning works or to remove trees post-development. All of these factors should be considered at the design stage. To avoid significant post-development pressure on the TPO tree belt, it is recommended that a minimum buffer of 20m be left between houses and the trees, and consideration given to over-shading of gardens, particularly on the southern boundary.

4.4 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 effect on their amenity value and the cost of future tree works should be considered.

4.5 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 NJUG Volume 4 "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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4.6 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. If further tree planting does occur, 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.

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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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Appendix A
Tree Constraints Plan



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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'.***

Appendix 2, (Tree Survey Schedule) contained within the arboricultural report r no. PJC/3780/15-01 contains further information for each tree.

This drawing should be viewed in colour.

All tree locations on this plan were approximated on site and using satellite ima so must not be scaled from.

Drawing no: PJC/3780/15/A **Rev:** 02 **Sheet number:** 1 of 2

Client and site:
Phlorum

Land at Church Lane
Climping

Drawing title: Tree Constraints Plan

Date drawn: 27/04/2016

Scale: 1:1000 at A1

Drawn by: PD **Checked by:** NB

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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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Drawing no: PJC/3780/15/A **Rev:** 02 **Sheet number:** 2 of 2

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Appendix B
Tree Survey Schedule

Tree Survey Schedule

Client: Phlorum
Site: Church Lane, Climping
Survey date: 03/07/2015
Surveyor: Peter Davies

T: Individual tree or shrub
G: Group of 2 or more trees
H: Hedgerow
W: Woodland block

Tree ref. no.	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 (m2)	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	Fair	Poor	Previously coppiced at 1m. Coppice stands decayed. Bacterial canker throughout crown and stems.	Fell to ground level within 1 year.	U	72.4	4.8
T3	Ash (Fraxinus excelsior)	6	180	N: 3 E: 3 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	English oak (Quercus robur)	8	440	N: 4 E: 5 S: 5 W: 4	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.	B1/2	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	Sycamore dominant and hawthorn	4-7	Up to 400 average	2 average	0 average	Early mature	Good	Fair	Tree line, previously flailed from field and reduced from road. Multi-stemmed trees.	No action required on date of survey.	B2	72.4 average	4.8 average

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G: Group of 2 or more trees
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Tree ref. no.	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 (m2)	Root Protection Radius (m)
T7	Horse chestnut (Aesculus hippocastanum)	5	250	N: 2 E: 3 S: 1 W: 0	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)	8 average	450 average	N: 3 E: 4 S: 2 W: 2	Crown: 0.5 average Branch: 1 average	Mature	Good	Fair	Multi-stemmed trees flailed 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 road within 6 months,	B2	65.3	4.6
G10	2x ash and 1x sycamore	6-7 average	250 average	1 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 within 1 year.	U	28.3 average	3.0 average
G11	Sycamore dominant, ash, oak, hawthorn	4-8 average	Up to 250 average	N: 3 E: 4 S: 3 W: 2	0 average	Semi-early 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)	15	630	N: 4 E: 6 S: 4 W: 3	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

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Tree ref. no.	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 (m2)	Root Protection Radius (m)
W13	English oak dominant and ash	12-14 average	Up to 400 average	Refer to drawing	1 average	Mature	Good	Good	Drawn up habits, typical of woodland specimens. Minor deadwood throughout.	Remove deadwood if frequency of land use increases.	A1/2	72.4 average	4.8 average
T14	English 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.	No action required on date of survey.	A1	228.0	8.5
G15	3x ash (Fraxinus excelsior)	15-16 average	Up to 500 average	4 average	2 average	Mature	Fair	Good	Dense under-storey inhibits inspection. Relatively sparse crown in west tree.	No action required on date of survey.	B1/2	113.1 average	6.0 average
G16	Poplar (Populus canadensis)	Up to 8 average	Up to 150 average	Refer to drawing	0 average	Semi mature	Good	Good	Densely spaced, semi mature trees along road frontage.	No action required on date of survey.	B2	10.2 average	1.8 average
T17	Ash (Fraxinus excelsior)	14	350 est	N: 3 E: 3 S: 3 W: 3	Crown: 0 average Branch: 2 average	Mature	Fair	Fair	Dense under-storey inhibits inspection. Dieback in upper crown.	Remove deadwood 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.	No action required on date of survey.	B1/2	118.8	6.1

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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,	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.	Monitor vitality if retained.	B1	155.0	7.0
G21	Elm (Ulmus spp.)	4-6 average	Up to 100 average	Refer to drawing	0 average	Semi mature	Fair	Fair	Densely spaced elm suckers. Minor dieback observed in multiple specimens.	Monitor for Dutch elm disease and clear as necessary.	C1	4.5 average	1.2 average
W22	Beech and ash	Up to 16 average	Up to 600 average	Refer to drawing	0 average	Mature	Fair	Good	Dieback in all trees on south side of woodland belt (possibly associated with wind burn). Multiple compression forks.	Consider planting shelterbelt trees to the south such as Canadian poplar.	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.	Fell if frequency of land use increases.	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).	Sever ivy and reassess suitability for retention if frequency of land use increases.	U	122.3	6.2

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W25	English oak dominant, sycamore and ash	14-16 average	Up to 400 average	Refer to drawing	1 average	Mature	Good	Fair	Drawn up habits. Multiple decay cavities observed.	Sever ivy and clear vegetation around base of trees on field boundary to facilitate future inspection.	B1/2	72.4 average	4.8 average
T26	Ash (Fraxinus excelsior)	16	440	N: 3 E: 4 S: 3 W: 2	Crown: 8 west Branch: 6 west	Over mature	Good	Fair	Extensive basal decay. Bacterial canker on lower stem. Tree located in falling distance of field.	Fell to ground level if frequency of land use increases.	U	87.6	5.3
W27	Beech dominant and ash	14-16 average	Up to 700 average	Refer to drawing	2 average	Mature	Good	Fair	Minor dieback in some beech specimens. Multi-stemmed trees.	No action required on date of survey.	B1/2	221.7	8.4 average
W28	Beech, ash and English oak	13-15 average	Up to 400 average	Refer to drawing	1 average	Mature	Good	Good	Mixed deciduous woodland block.	No action required on date of survey.	B1/2	72.4 average	4.8 average
W29	Ash (Fraxinus excelsior)	10-14 average	Up to 350 average	Refer to drawing	0 average	Over mature	Fair	Fair	Multiple trees exhibiting dieback along field boundary.	Remove deadwood and fell dying stems located in falling distance of field if frequency of land use increases.	C2	55.4 average	4.2 average
H30	Cypress (Cupressocyparis leylandii)	3 average	Up to 150 average	1 average	0 average	Semi mature	Fair	Fair	Formal hedgerow, heavily pruned with very little foliage on south side.	No action required on date of survey.	C2	10.2 average	1.8 average

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Tree ref. no.	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 (m2)	Root Protection Radius (m)
G31	3x cypress (Cupressocyparis leylandii)	10 average	Up to 400 average	3 average	3 average	Mature	Good	Good	Third party trees. Previously crown lifted to allow view of field from garden.	No action required on date of survey.	B2	72.4 average	4.8 average
T32	Flowering cherry (Prunus spp.)	4	50, 80 est	N: 1 E: 1 S: 1 W: 1	Crown: 1 average Branch: 1 south	Young	Good	Good	Third party small tree.	No action required on date of survey.	C1	4.0	1.1
T33	Silver birch (Betula pendula)	8	150, 150, 150, 150, 150 est	N: 3 E: 3 S: 2 W: 1	Crown: 2 south Branch: 1.5 average	Early mature	Good	Good	Third party multi-stemmed tree.	No action required on date of survey.	B1	50.9	4.0
T34	Sorbus spp.	3	200, 200, 150 est	N: 2 E: 2 S: 2 W: 2	Crown: 1.5 average Branch: 2 average	Semi mature	Good	Good	Third party tree, heavily reduced to formal shape.	No action required on date of survey.	C1	46.4	3.8
H35	Cherry laurel (Prunus laurocerasus)	1.5 average	N/A	0.5 average	0 average	Semi mature	Good	Fair	Third party formal hedgerow, recently heavily reduced.	No action required on date of survey.	C2	N/A	1 from face of hedgerow
T36	Eucalyptus (Eucalyptus spp.)	6	280	N: 3 E: 3 S: 1 W: 2	Crown: 0 east 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

ARUN DISTRICT COUNCIL CM/1/17/OUT

Tree Survey Schedule

Client: Phlorum
Site: Church Lane, Climping
Survey date: 03/07/2015
Surveyor: Peter Davies

T: Individual tree or shrub
G: Group of 2 or more trees
H: Hedgerow
W: Woodland block

Tree ref. no.	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 (m2)	Root Protection Radius (m)
G37	Silver birch, cherry laurel, cherry, Eucalyptus	3-5 average	Up to 100 average	2 average	0 average	Young-semi mature	Good	Good	Small trees and shrubs.	No action required on date of survey.	C1/2	4.5 average	1.2 average
G38	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.	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 south Branch: 1.5 north	Mature	Good	Good	Ivy inhibits inspection. No major visible defects.	Sever ivy for future inspections.	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	North east lean due to suppression from T40, Small stem cavity.	No action required on date of survey.	C1/2	61.9	4.4
G42	Sumach, silver birch, various willows, red Norway maple, oak, cypress	Up to 8 average	Up to 300 average	Up to 4 average	1 average	Semi mature-mature	Good	Good	Third party trees only viewed from site. Appear of good condition.	No action required on date of survey.	B1/2	N/A	2m from field boundary

ARUN DISTRICT COUNCIL CM/1/17/OUT

Tree Survey Schedule

Client: Phlorum
Site: Church Lane, Climping
Survey date: 03/07/2015
Surveyor: Peter Davies

T: Individual tree or shrub
G: Group of 2 or more trees
H: Hedgerow
W: Woodland block

Tree ref. no.	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 (m2)	Root Protection Radius (m)
G43	Silver birch (Betula pendula)	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 (Salix caprea)	5	340, 190, 320, 290	N: 3 E: 3 S: 6 W: 6	Crown: 1 west Branch: 1 average	Mature	Good	Fair	Multi-stemmed. Possible third party specimen.	No action required on date of survey.	C1	153.0	7.0
G45	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.	No action required on date of survey.	C2	28.3 average	3.0 average
T46	Horse chestnut (Aesculus hippocastanum)	8	350, 200, 200 est	N: 3 E: 3 S: 3 W: 3	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	Leyland cypress dominant and Monterey cypress	Up to 12 average	Up to 400 average	Up to 3 over site	0 average	Mature	Good	Fair	Third party tree belt, flailed along field boundary.	No action required on date of survey.	B2	72.4 average	4.8 average
G48	Elm (Ulmus spp.)	Up to 6 average	Up to 75 average	Refer to drawing	0 average	Semi mature	Good	Fair	Third party elm suckers	Monitor for Dutch elm disease and clear as necessary.	C1	2.5 average	0.9 average

ARUN DISTRICT COUNCIL CM/1/17/OUT

Tree Survey Schedule

Client: Phlorum
Site: Church Lane, Climping
Survey date: 03/07/2015 & 22/04/2016
Surveyor: Peter Davies

T: Individual tree or shrub
G: Group of 2 or more trees
H: Hedgerow
W: Woodland block

Tree ref. no.	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 (m2)	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)	8	100 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	4.5	1.2
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	Blackthorn and elder	Up to 4 average	Up to 75 average	Refer to drawing	0 average	Semi mature-mature	Good	Fair	Scrub (sporadic in places) along road frontage.	No action required on date of survey.	C2	2.5 average	0.9 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).	No action required on date of survey.	C1	46.3	3.8

ARUN DISTRICT COUNCIL CM/1/17/OUT

Tree Survey Schedule

Client: Phlorum
Site: Church Lane, Climping
Survey date: 22/04/2016
Surveyor: Peter Davies

T: Individual tree or shrub
G: Group of 2 or more trees
H: Hedgerow
W: Woodland block

Tree ref. no.	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 (m2)	Root Protection Radius (m)
T55	English oak (Quercus robur)	11	510	N: 3 E: 6 S: 7 W: 4	Crown: 2 east Branch: 2 east	Mature	Good	Good	1 sided crown and slight south lean. Located on road frontage.	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: 1 west	Mature	Good	Fair	Tree leans south towards road. Previously crown lifted over drainage ditch.	No action required on date of survey.	B2	83.8	5.2
T57	English oak (Quercus robur)	11	530	N: 2 E: 3 S: 7 W: 6	Crown: 2 south Branch: 2 south	Mature	Good	Good	Low deadwood. Slight south lean. No major visible defects.	No action required on date of survey.	B1/2	127.1	6.4
T58	English oak (Quercus robur)	7	370	N: 0 E: 3 S: 5 W: 2	Crown: 2 south Branch: 2 average	Semi mature	Good	Good	1 sided crown. Slightly suppressed by T57. No major visible defects.	No action required on date of survey.	B2	61.9	4.4
T59	English oak (Quercus robur)	7	330	N: 0 E: 3 S: 5 W: 2	Crown: 1 south Branch: 3 south	Early mature	Good	Fair	Strong south lean. Previously crown lifted over drainage ditch.	No action required on date of survey.	B2	49.3	4.0

ARUN DISTRICT COUNCIL CM/1/17/OUT

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, 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 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 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 150 mm	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

CALCULATING THE RPA

For single stemmed trees

$$\textbf{RPA (m2)} = \frac{\textbf{(stem diameter (mm) @ 1.5 m x 12)}^2 \textbf{ x 3.142}}{\textbf{1000}}$$

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

$$\sqrt{\textbf{(stem diameter 1)2 + (stem diameter 2)}^2 \textbf{ ... + (stem diameter 5)}^2}$$

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

$$\sqrt{\textbf{(mean stem diameter)}^2 \textbf{ x number of stems}}$$

Appendix E:
Photographs

Photograph 1: Trees G11 and T12.	
Photograph 2: Woodland W22.	
Photograph 3: Woodland W27.	

Photograph 4: Woodland W29.



Photograph 5: Group G42.



Photograph 6: Group G47.



Photograph 7: Tree T59.



Photograph 8: Tree T54.



Photograph 9: T57 and T58.



Photograph 10: T57-T58 (foreground) and T56 (background)

