

Arboricultural Impact Assessment

Merry England Nursery
Dappers Lane
Angmering
BN16 4EN

3rd June 2016



PJC ref: 3928/16-02

This report has been prepared by
PJC Consultancy Ltd
on behalf of
Stiles Harold Williams Partnership

Prepared by	Peter Davies FdSc Arboriculture M.Arbor.A Peter has a Foundation Degree in Arboriculture and is a professional member of the Arboricultural Association. He has ten years experience in the arboricultural industry, originally working as a groundsman and feller, and progressing into consultancy. He is a Lantra accredited professional tree inspector.
Checked by	Adam Earl BSc(Hons) MCIEEM Adam has received a BSc(Hons) in Applied biology and is a full member of the Chartered Institute for Ecology and Environmental Management. He has over five years experience in the ecology and arboriculture industry and is a Lantra accredited professional tree inspector.
Approved by	Nick Betts HND For M.Arbor.A Nick has attained an HND in forestry management and is a professional member of both the Arboricultural Association and the Consulting Arborists Society. He has worked in the arboricultural and forestry industries for 14 years. He started his career as a forestry worker before qualifying as a tree surgeon, working in both the private and commercial sectors. He has been a practising consultant since 2004. He is a Lantra accredited professional tree inspector.

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1 EXECUTIVE SUMMARY

1.1 This report should be read in conjunction with arboricultural survey ref. PJC/3928/16-01 and arboricultural method statement ref. PJC/3928/16-03.

1.2 **Site location:** The site is situated on the east side of Dappers Lane, on the north eastern outskirts of Angmering. It has a central OS grid reference of TQ073050. The surrounding land use is comprised commercial properties to the north and south, agricultural land to the east and residential properties opposite Dappers Lane to the west. The location of the site within its environs is shown in figure 1.



Figure 1: Location of Site and Environs

1.3 **Proposal:** A proposal has been outlined to demolish all existing buildings at the site and to replace them with eighteen new houses with parking and landscape areas.

1.4 **Tree removals:** Trees G4, T9, T11, T13 and sections of groups G2, G3 and G10 will be removed to facilitate the proposed development.

1.5 **Access facilitation pruning:** Groups G1, G10 and G14 will require access facilitation pruning to enable to proposed construction works.

1.6 **Works within root protection areas:** New permanent surfacing will be constructed within the root protection area of group G1.

2 INTRODUCTION

2.1 **Instruction:** PJC Consultancy has been instructed by Stiles Harold Williams Partnership to provide an arboricultural impact assessment for proposed construction works at Merry England Nursery in Angmering. The proposal is to construct a new residential development.

2.2 **Brief:** PJC Consultancy has been commissioned to compile an arboricultural impact assessment written in accordance with guidelines set out in BS5837: 2012 '*Trees in relation to design, demolition and construction – Recommendations*'.

2.3 **Scope of this report:** This report is concerned with all significant trees located within the site boundary and those located around the curtilage of the site with the potential to impact or be impacted by the proposed construction works.

2.4 **Contents of report:** This report includes the following:

- A schedule of trees to be retained/removed.
- A schedule of access facilitation pruning required for development.
- An assessment of the impact construction works will have on retained trees and mitigation measures to be implemented.
- An assessment of post development pressures on trees.
- Tree Constraints Plan and Tree Retention Plan.

2.5 **Documents and information provided:** The following documents were provided by the client to produce this report:

- Drawing ref. 25532/4546 – Topographical Survey
- Drawing ref. 0192-PL020 – Coloured Masterplan

3 INITIAL TREE SURVEY SUMMARY

3.1 Site visit: A site visit was carried out on 19th February 2016. The weather conditions at the time were light cloud. The visibility was adequate for visual tree inspection from ground level. The initial survey assessed the trees in the context of the existing land use, not in consideration of development proposals.

3.2 Survey methodology: Explanations for the measurements and information collected for each tree are described in arboricultural report ref. PJC/3928/16-01.

3.3 Site layout: The site comprises a detached residential dwelling and equine buildings with access to Dappers Lane on the western site boundary. The buildings are surrounded by a private garden in the south west corner of the site and a series of horse paddocks. Trees and scrub areas are located throughout the western half of the site. Details of each tree or tree group can be viewed in the Tree Survey Schedule in Appendix 2.

3.4 Tree categorisation summary: A total of six trees and eight tree/scrub groups were surveyed and recorded in the Tree Survey Schedule.

Table 1: Tree categorisation summary

Categorisation	Individual tree	Tree group
B	2	5
C	4	3
Total	6	8

3.5 Statutory tree protection: Arun District Council's online mapping service was used on 19th February 2016 to establish restrictions to tree works at the site. No Tree Preservation Order (TPO) protects the trees on this site on that date and the site is not located within a Conservation Area. However, 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.

3.6 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 ARBORICULTURAL IMPACT ASSESSMENT

4.1 Tree removals: Trees to be removed for the proposed development are shown with dashed outlines on the Tree Retention Plan in Appendix 1 and are shaded to indicate their BS5837 tree category. These include trees G4, T9, T11, T13 and sections of groups G2, G3 and G10.

4.2 The Proposed Masterplan indicates potential areas of soft landscaping around the curtilage of the site. The detailed specification for soft landscaping is to be confirmed on the date of this report. It is recommended that the section of group G10 to be removed be replaced with native hedging such as hawthorn or holly to provide low level screening between the parking area adjacent to plots 15 to 18 and the third party cattery located to the south. There will be adequate space to plant large tree species in the landscape strips on the northern and eastern boundaries (such as English oak or beech) if desired.

4.3 The trees proposed for removal (with the exception of the section of group G10) will not result in a loss of privacy or screening for the surrounding properties, notably the residential properties located along Dappers Lane.

4.4 Tree pruning: Trees requiring access facilitation pruning to enable the proposed construction works (based on the information currently available) or pruning works to minimise post development pressures comprise groups G1, G10 and G14. A summary of recommended pruning works is shown below.

Table 2: Summary of access facilitation pruning:

Tree number	Species	Works required	Reason for works
G1	Hornbeam	Crown raise to 4.5m on north side of group.	To avoid conflict with new parking area during construction and post development.
G10	Hornbeam	Reduced laterally by 2m over proposed garden of plot 16.	To increase useable garden area and reduce shade to rear garden post development.
G14	Hornbeam	Crown lift to 4.5m over gardens of plots 3, 4 and 5.	To increase usable post development garden space and to allow construction of new garden boundary fences.

4.5 All access pruning should be carried out in accordance with BS3998: 2010 'Tree works – recommendations'. Any additional requirements for access facilitation pruning that cannot be predicted at this stage in the design process (e.g. for contractor compound or movement of large/specialist plant) should be discussed at the pre-commencement meeting with the project arboriculturalist and agreed with the local authority arboricultural officer.

4.6 Works within root protection areas: All proposed buildings will be located outside the root protection areas of retained trees, therefore use of specialist foundations for root protection is not deemed necessary. NHBC guidelines on foundation depth in proximity to trees must still be followed. This will be determined by a structural engineer but should be guided by information in this report and appropriate sampling to determine soil profiles at the site.

4.7 The surface for the new parking area located west of plot 1 will encroach the collective root protection area of group G1. To ensure the trees to remain viable and stable, the section of the surface located within the root protection area (within 4.2m of any of the stems), will need to be constructed in a manner that avoids root pruning/severance, avoids localised compaction of the rooting medium and is permeable. The construction specification required to achieve this is described in the arboricultural method statement. Constructing part of the parking area to a no-dig specification will impact on the finished levels of the remaining section of the parking area. Account of this will need to be taken into account during the detailed design stage of the surface.

4.8 Proposed garden fences and hedgerows will encroach the root protection areas of T6, T8 and G14. The impact of installing these features will be minimised by following the practices described in the arboricultural method statement.

4.9 Services: Details of the routing of services for the proposed development are not currently available. Once details of the routing of new services become available, prior to commencement, these shall be reviewed by the project arboriculturalist. The arboriculturalist shall then confirm to the local authority arboricultural officer either that no works will be carried out within root protection areas, or provide details of the methodology required to ensure the works are carried out in accordance with NJUG10 '*Guidelines for the planning, installation and maintenance of utilities in proximity to trees*' and BS5837: 2012.

4.10 Tree shade: Plots 1-11 will be unaffected by tree shade. Plots 12-15 and 17-18 will be located to the north of hornbeam groups G10 and G12, however the houses will be located a suitable distance from the trees to avoid over-shading and only the southern half of the gardens in plots 12-15 should be affected by tree shade.

4.11 Plot 16 will be located directly north of group G10. Over-shading of this property will be avoided by removing the trees located directly adjacent to the dwelling and reducing the crowns of the retained trees. Additionally, the shade area created by G10 will be compensated by providing a larger garden area for this plot.

4.12 Post development tree pressures: The existing trees located directly adjacent to proposed parking bays and houses will be removed and the proposed garden boundaries are sited to avoid major encroachment by tree canopies. This will avoid the need for regular and harsh pruning works to avoid direct conflict between the trees and proposed site features. It will also negate post development nuisance from leaf detritus on cars or in roof guttering, summer branch drop, aphids on cars or by causing an overbearing presence for future residents.

5 CONCLUSIONS

5.1 One group and three trees, along with sections of three further groups will be removed to facilitate the proposed development. Three groups will require access facilitation pruning. The detailed specification for soft landscaping is to be confirmed, however there is ample space for extensive tree planting around the curtilage of the site if desired.

5.2 The proposed site layout involves construction of permanent surfacing within a previously un-surfaced portion of the root protection area for G1 and fencing/hedgerow planting within the root protection areas of T6, T8 and G14. An engineered solution and sympathetic construction methodologies will be used to minimise the impact on these trees, therefore allowing their retention and continued contribution to the site.

5.3 Based on the above assessment, trees recommended for retention in this report can be protected during the proposed construction works and successfully integrated into the site post development.

6 OTHER CONSIDERATIONS

6.1 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.

6.2 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.

6.3 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.

6.4 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.

6.5 The views and opinions contained within this report are entirely those of the author.

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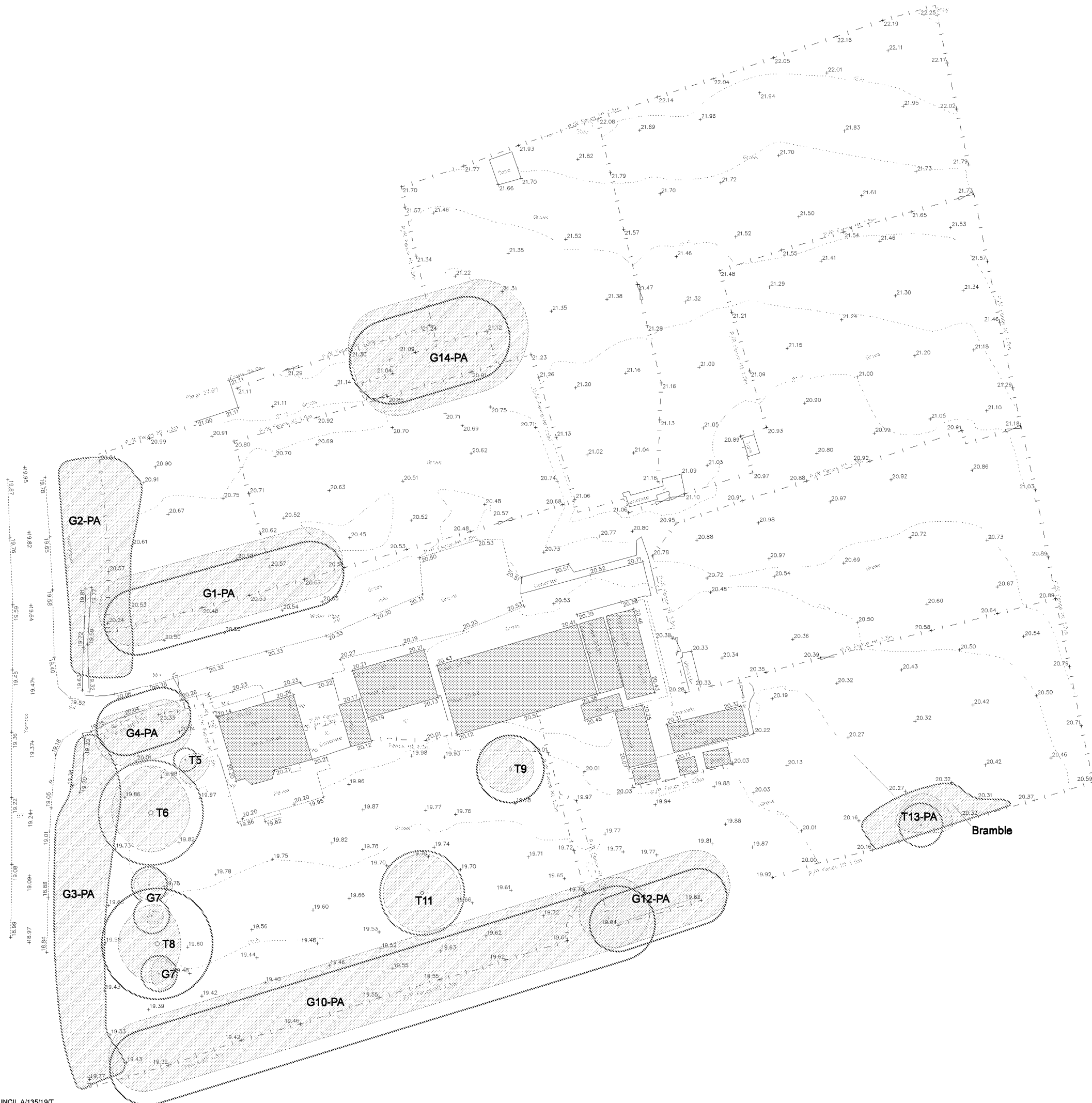
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Author: Peter Davies

Date: 3rd June 2016

APPENDIX 1

Tree Constraints Plan and Tree Retention Plan



Key:

-  RPA for CAT B Tree*
-  RPA for CAT C Tree*
-  Tree canopy
-  CAT C* scrub 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 ref. no. PJC/3928/16-01 contains further information for each tree.

This drawing should be viewed in colour.

Tree numbers suffixed with PA indicate the tree position is approximate.

Drawing no: PJC/3928/16/A Rev: 01 Sheet number: 1 of 1

Client and site:
Stiles Harold Williams Partnership

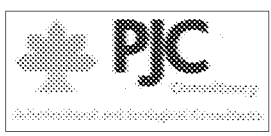
Merry England Nursery
Dappers Lane
Angmering

Drawing title: Tree Constraints Plan

Date drawn: 19/02/2016

Scale: 1:500 at A3

Drawn by: PD **Checked by:** AE



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Key:

-  RPA for CAT B Tree* to be retained
-  RPA for CAT C Tree* to be retained
-  Canopy of tree to be retained
-  CAT C* scrub group to be retained
-  Canopy of CAT B* Tree to be removed
-  Canopy of CAT C* Tree to be removed
-  Encroachment of new surfacing into RPA

* 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 ref. no. PJC/3928/16-02 contains further information for each tree.

This drawing should be viewed in colour.

Tree numbers suffixed with PA indicate the tree position is approximate.

Drawing no: PJC/3928/16/B Rev: 01 Sheet number: 1 of 1

Client and site:
Stiles Harold Williams Partnership

Merry England Nursery
Dappers Lane
Angmering

Drawing title: Tree Retention Plan

Date drawn: 02/06/2016

Scale: 1:500 at A3

Drawn by: PD

Checked by: NB



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APPENDIX 2

Tree Survey Schedule

Tree Survey Schedule

				Client: Stiles Harold Williams Partnership Site: Merry England Nursery, Angmering Survey date: 19/02/2016 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	Management recommendation	Category grading	Root Protection Area (m ²)	Root Protection Radius (m)
G1	Hornbeam (Carpinus betulus)	12-14 average	Up to 350 average	N: 6 E: 4 S: 3 W: 4	9 south and 2 north (crown)	Mature	Good	Fair	Densely spaced tree line (drawn up growth habits). Some ivy lad trees. Minor deadwood.	Crown raise group to 4.5m on north side.	B2	55.4 average	4.2 average
G2	Elm, cherry and bramble	1-5 average	Up to 75 average	1.5 average	0.5 average	Young	Good	Fair	Self set tree saplings on road frontage.	Clear section shown on Tree Retention Plan to facilitate construction of new parking area.	C1	2.5 average	0.9 average
G3	Elm, bramble, cherry laurel and buddleia	1-4 average	Up to 75 average	1.5 average	0 average	Young	Fair	Fair	Scrub and tree saplings on road frontage. Some elm stems appear damaged from adjacent ditch clearance works.	Remove section shown on Tree Retention Plan for new access road. Monitor for Dutch elm disease.	C2	2.5 average	0.9 average
G4	Hornbeam (Carpinus betulus)	13-14 average	Up to 300 average	N: 2 E: 3 S: 5 W: 4	5 average	Mature	Good	Fair	Densely spaced tree line (drawn up growth habits). Some ivy lad trees. Minor deadwood.	Remove to facilitate construction of new access road.	B2	40.7 average	3.6 average
T5	Magnolia (Magnolia grandiflora)	4	80, 70, 50, 50	N: 0.5 E: 3 S: 3 W: 0.5	Crown: 0.5 south Branch: N/A	Semi mature	Good	Fair	Multi-stemmed. South east lean. Suppressed by group G4.	No action required on date of survey, or for development.	C1	7.4	1.5
T6	Horse chestnut (Aesculus hippocastanum)	10	560	N: 6 E: 5 S: 5 W: 5	Crown: 2 west Branch: 2.5 average	Mature	Fair	Fair	Minor deadwood. Bark dysfunction - bleeding canker resulting increased chance of branch failure.	Monitor for evidence of Phytophthora infection. No action required for development.	C1	141.9	6.7

Tree Survey Schedule

				Client: Stiles Harold Williams Partnership Site: Merry England Nursery, Angmering Survey date: 19/02/2016 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	Management recommendation	Category grading	Root Protection Area (m2)	Root Protection Radius (m)
G7	Mixed fruit trees	2-4 average	Up to 190 average	2 average	1-2 average	Semi mature	Good	Fair	Small fruit trees. Centre tree pollarded to 1m.	No action required on date of survey, or for development.	C1	16.3 average	2.3 average
T8	Cherry (Prunus avium)	13	590	N: 5 E: 3 S: 5 W: 5	Crown: 2 west Branch: 1 north	Mature	Good	Good	Dense ivy prevents thorough inspection of stem. No major visible defects.	No action required on date of survey, or for development.	B1/2	157.5	7.1
T9	Apple	3	230, 280	N: 4 E: 3 S: 3 W: 4	Crown: 1 west Branch: 1.5 average	Mature	Good	Good	Heavily reduced. Good overall condition,	Remove to facilitate construction of dwellings in plots 14 and 15.	B1	59.4	4.3
G10	Hornbeam (Carpinus betulus)	14-16 average	Up to 400 average	N: 8 E: 4 S: 5 W: 4	3 over site average	Mature	Good	Fair	Densely spaced tree line (drawn up growth habits). Some ivy lad trees. Minor deadwood.	Remove section shown on Tree Retention Plan. Reduced retained trees laterally by 2m on north side.	B2	72.4 average	4.8 average
T11	Portugal laurel (Prunus lusitanica)	7	200 average x5 stems est	N: 5 E: 5 S: 5 W: 5	Crown: 0 average Branch: 0 average	Mature	Good	Good	Large multi-stemmed shrub in centre of lawn.	Remove to facilitate construction of parking area.	C1	90.5	5.4
G12	Hornbeam (Carpinus betulus)	8-12 average	Up to 300 average	N: 6 E: 4 S: 3 W: 4	2 over site average	Early mature	Good	Fair	Densely spaced tree line (drawn up growth habits). Some ivy lad trees. Minor deadwood.	No action required on date of survey, or for development.	B2	40.7 average	3.6 average

Tree Survey Schedule

				Client: Stiles Harold Williams Partnership Site: Merry England Nursery, Angmering Survey date: 19/02/2016 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	Management recommendation	Category grading	Root Protection Area (m ²)	Root Protection Radius (m)
T13	Blackthorn (Prunus spinosa)	4	150, 150, 100 est	N: 4 E: 4 S: 1 W: 3	Crown: 1 east Branch: 0 average	Mature	Fair	Poor	Multi-stemmed shrub smothered by bramble and ivy. Poor condition.	Remove due to poor condition.	C1	24.9	2.8
G14	Hornbeam (Carpinus betulus)	7-9 average	Up to 450 average	N: 7 E: 8 S: 7 W: 5	2 average	Mature	Good	Fair	Tree line. Bark damage (animal) on stems,	Crown lift to 4.5m over gardens of plots 3, 4 and 5.	B2	91.6 average	5.4 average

APPENDIX 3

Photographs



Photograph 1 – Groups G1 and G4



Photograph 2 – Tree T6



Photograph 3 – Trees T7 and G8



Photograph 4 – Trees G10 and T11



Photograph 5 – Tree T9



Photograph 6 – Group G14