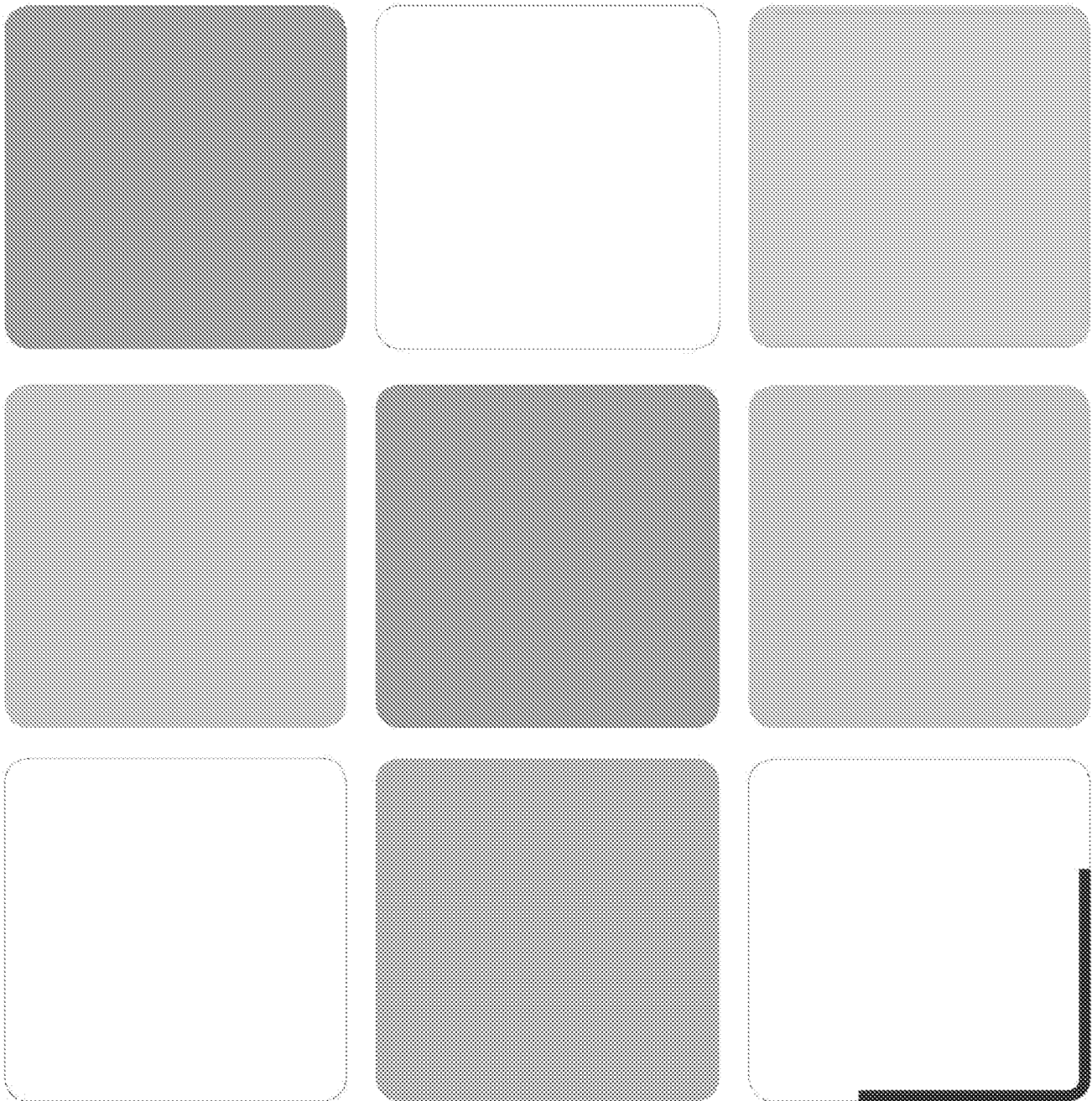




**Land off Nyton Nurseries**  
**Westergate**  
**Tree Survey Report**





20<sup>th</sup> July 2017

**Our Ref: JSL2869\_770**

**RPS**

Lakesbury House  
Hiltingbury Road  
Chandlers Ford  
Hampshire  
S053 5SS

# QUALITY MANAGEMENT

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|                                    |                       |
|------------------------------------|-----------------------|
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| Authorised by:                     | <b>Chris Chambers</b> |
| Date:                              | <b>July 2017</b>      |
| Project Number/Document Reference: | <b>JSL2869_770</b>    |
| Status:                            | <b>For Planning</b>   |

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SITE PHOTOGRAPHS

ARBORICULTURAL GLOSSARY

ARUN DISTRICT COUNCIL TPO/AL/1/13

# 1 INTRODUCTION

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- 1.1 This tree survey report was commissioned by Taylor Wimpey Southern Counties. A tree survey was undertaken on the 24<sup>th</sup> of June 2017. The weather conditions varied from overcast to sunny but generally visibility was good.
- 1.2 This Tree Survey Report is a qualitative survey of the existing trees bordering and within a parcel of land to the north of Nyton Road in Westergate, Chichester.
- 1.3 The purpose of the survey is to assess the landscape and visual amenity value of the existing trees and to identify the constraints associated with the trees prior to any potential redevelopment of the site. An assessment of the quality of the trees has been made, with reference to the categories and sub-categories listed within Table 1 - BS5837:2012<sup>1</sup>.

## 2 SITE INFORMATION

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- 2.1 The survey covered an area of land to the north of Nyton Road, Westergate, PO20 3UW. The survey site is centred on OS grid reference SU941057 and national grid field no. SU 9405 1673. Vehicular access is to the south- east via a lane off Fontwell Avenue or to the south-west via a lane off Nyton Road.
- 2.2 Westergate is located in south-east Sussex in the south- east of England. The city of Chichester lies approximately 4.5 miles to the west. The soilscape of the area that the survey site is within typically consists of ‘freely draining, slightly acid, loamy soils’<sup>2</sup>.
- 2.3 The survey site comprises fields used as pasture land to the east and north. The south-west of the site pertains to an area formerly used as a nursery and the greenhouse is still in place. The northern boundaries of the site are abutted by further pasture land and a vehicle salvage yard at the north-east corner. Fontwell Avenue (A29) borders the south-west corner of the survey site, whilst the rear gardens of properties pertaining to Barnett Close and Nyton Road lie on the southern border. An area of dense vegetation pertaining to ‘Jacaranda’ is also located in the south-west corner of the survey area. The rear of properties pertaining to Northfields Lane and Northfields Lane itself abut the western border of the survey area.

### 3 SURVEY METHODOLOGY

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- 3.1 This report was authorised by Chris Chambers, a Chartered Forester, Chartered Landscape Architect And Senior Arborist of RPS Group.
- 3.2 The report and survey were carried out in general accordance with the requirements set out in BS 5837:2012 "Trees in Relation to Design, Demolition and Construction – Recommendations".
- 3.3 The tree survey involved a visual inspection from the ground of individual specimens and groups of trees in order to record their amenity value, management recommendations and dimensions. Where observed, the general condition of all the trees has been noted. The survey does not constitute a full arboricultural condition assessment involving the detailed inspection of trees in relation to their structural condition, decay, and any other physical and pathogenic defects.
- 3.4 The locations of the trees were based upon topographic survey (476-1012-T 01/02) produced by Wilmac Geomatics in October 2012.
- 3.5 The survey assesses individual trees and groups of trees for quality and benefits within the context of proposed development. The quality of each tree or group of trees has been recorded by allocating it to one of four categories as described in table 3.1. These categories have been differentiated on the tree survey plan (JSL2869\_700, Appendix 2) by colours.
- 3.6 The survey information was recorded on the attached schedule (Appendix 1) in general accordance with the guidance contained within Section 4 of BS 5837:2012 "Trees in Relation to Design, Demolition and Construction - Recommendations".
- 3.7 The information recorded is detailed in Table 3.1.

**Table 3.1 Tree characteristics recorded during survey**

|                                           |                                                                                                                                                                                                                                                             |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tree Ref No:</b>                       | Sequential reference number of trees or groups of trees. Avenues, woodlands and hedgerows were also recorded on the tree survey plan. # - denotes inaccessible trees (best estimates are made about the location, physical dimensions and characteristics.) |
| <b>Species</b>                            | Species listed by common name, with scientific names ( <i>italic lettering</i> ).                                                                                                                                                                           |
| <b>Height (m)</b>                         | Estimated height of canopy to nearest metre.                                                                                                                                                                                                                |
| <b>Branch Spread</b>                      | branch spread, taken as a minimum at the four cardinal points, to derive an accurate representation of the crown                                                                                                                                            |
| <b>Stem diameter @ 1.5 m (m)</b>          | Measured diameter of trunk at 1.5 m above ground level in metres unless otherwise indicated, multi-stemmed trees being measured in accordance with Annex C: BS5837                                                                                          |
| <b>Existing height above ground level</b> | To inform on ground clearance, crown/stem ratio and shading the estimated height of the first significant branch and direction of growth and canopy above ground level.                                                                                     |
| <b>Stem No.</b>                           | Number of stems (if necessary) of individual tree.                                                                                                                                                                                                          |

|                                                            |                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                    |                                             |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Life Stage                                                 | Expressed as:-                                                                                                                                                                                                                            | Y (Young)<br>SM (Semi-mature)<br>EM (Early-mature)<br>M (Mature)                                                                                                                                                                                                                                                   | OM (Over-mature)<br>V (Veteran)<br>D (Dead) |
| Structural/<br>Physiological<br>Condition                  | Apparent condition expressed as the following categories, based upon a brief visual inspection from the ground only:-                                                                                                                     |                                                                                                                                                                                                                                                                                                                    | Good<br>Fair<br>Poor<br>Dead                |
| Comments /<br>Management<br>Recommendations                | General observations, particularly of structural and/or physiological condition (e.g. the presence of any decay and physical defect), and/or preliminary management recommendations and potential for wildlife habitats (not exhaustive). |                                                                                                                                                                                                                                                                                                                    |                                             |
| Estimated<br>remaining<br>contribution<br>(years)          | Estimated remaining contribution, in years (<10, 10+,20+,40+)                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                    |                                             |
| Tree Quality<br>Assessment Value:<br><u>Category</u>       | Criteria grading with regards to Table 1: BS 5837:2012, expressed as:-                                                                                                                                                                    | A (Trees/Vegetation of high quality and value)<br>B (Trees/Vegetation of moderate quality and value)<br>C (Trees/Vegetation of low quality and value)<br>U* (Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years) |                                             |
|                                                            | * Category U trees can have existing or potential conservation value which might be desirable to preserve.                                                                                                                                |                                                                                                                                                                                                                                                                                                                    |                                             |
| Tree Quality<br>Assessment Value:<br><u>Sub - Category</u> | Criteria grading with regards to Table 1: BS 5837:2012, expressed as:-                                                                                                                                                                    | 1 (Trees with mainly <i>arboricultural</i> value)<br>2 (Trees with mainly <i>landscape</i> value)<br>3 (Trees with mainly <i>cultural / conservation</i> value)                                                                                                                                                    |                                             |

3.8 It is recommended that ongoing arboricultural assessments are undertaken in order to assess the full health and safety of all trees which may possess structural or pathogenic conditions.

3.9 A glossary of arboricultural terms is included in Appendix 4.

### Limitations

3.10 The findings of this survey are not valid following adverse or unpredictable weather conditions or for any failure due to 'force majeure' or unpredictable events.

3.11 Trees were not climbed or inspected below ground level and inaccessible trees will have best estimates made about the location, physical dimensions and characteristics.

3.12 Trees and woody vegetation were not assessed for their potential impact upon future construction issues such as foundation designs (r.e.: NHBC chapter 4.2<sup>3</sup>). Whilst this report may assist in assessing likely future impacts, it should not be classed as a comprehensive vegetation survey in relation to impact upon future designs.

## 4 APPRAISAL AND RECOMENDATIONS

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### Generally

- 4.1 The tree cover on site could be broadly divided into 4 main categories; Ornamental planting and dense self-sown native species pertaining to the former nursery and 'Jacaranda' in the south-west of the site, generally of moderate to low quality; linear groups of trees established as screening rows/ shelter belts, comprising ash, poplar and spruce; the high quality mature to veteran age class oak trees which were of prominent visual amenity on the site; and the low quality, pioneer species trees established at field boundaries or as remnant hedgerows.
- 4.2 The majority of the surveyed tree stock was of low quality, where loss could be easily mitigated and/ or replaced. However, a few notable exceptions were of moderate and high quality and efforts should be made to design around these in any potential re-development of the site, particularly the category A trees. Of the 60 trees, 18 tree groups and 4 hedgerows identified in the survey, the tree stock was classified in the following quantities of the BS5837:2012 tree grading criteria;
- 3 of category A (High quality);
  - 9 of category B (moderate quality);
  - 67 of category C (low quality);
  - and 4 of category U (unsuitable for retention).
- 4.3 Generally, trees were in a condition consistent with expectations for age/ management/ species. Much of the low quality category C tree stock comprised pioneer species such as elder, hawthorn and goat willow; species with typically short lifespans, consequently many such trees were approaching the end of their useful lifetime and were in a structurally poor condition (accordingly these were classified as having less than 10 years estimated remaining contribution and therefore merited a category U).

### Notable Surveyed Trees and Management Recommendations

- 4.4 There were 3 BS5837 category A trees identified in the survey. T49, T50 and T51 were all pedunculate oaks with high amenity value and a significant estimated remaining contribution of over 40 years (figs. 1a & 1b, appendix 3). T50 in particular exhibited veteran characteristics of high cultural value (fig 1c, appendix 3). Such trees would offer instant maturity and high landscape value to any built environment and it is recommended the physical constraints of these trees is considered in the design phase of any potential re-development and efforts are made to retain them in such a scheme. See paragraph 4.14 and 4.15 for planning considerations associated with mature trees.
- 4.5 It was apparent during the survey that T12 x45, the line of early- mature ash trees dividing the former nursery site from the rest of the survey site, have not been actively managed since they were planted. Consequently several possess structural defects such as included bark unions (fig. 2a and 2b) and hazard beams (fig 2c), as well as some pathogenic conditions such as bacterial canker (*Pseudomonas savastanoi* pv. *fraxini*, fig. 2d). A full hazard evaluation survey is beyond

the scope of this survey but in the event of increased pedestrian traffic within the context of potential site development, it is recommended such a survey is undertaken and risk abatement is carried out as necessary.

- 4.6 Likewise, it was beyond the scope of the survey to undertake a detailed hazard evaluation of the poplar trees within the shelterbelt at the north- west of the site, G16. Generally the northern row of the double row of trees comprised better quality trees. Some rot pockets were noted on the stems of some of the trees and as with T12 x45, it is recommended a hazard evaluation survey is undertaken and risk abatement is carried out on the trees as necessary in the context of site development and increased pedestrian traffic.
- 4.7 To the south of the greenhouse was an area of dense, overgrown vegetation (G3-G5, fig. 3 appendix 3) and consequently it was not possible to access the area and undertake a detailed inspection of the trees within. However, the composition was generally of native pioneer species with limited amenity value (BS5837 category C).
- 4.8 Three ash trees at the southern border of the site overhung the car park of the neighbouring veterinary practice. T20 showed symptoms of bacterial canker (fig. 4 appendix 3); it is recommended the tree is further monitored for signs of structural decline, should such decline be noted then remedial tree surgery is recommended as a matter of urgency. T21 is protected by TPO/AL/1/13 and was in apparent good condition. T22 was a multi-stemmed tree and had a large stem cavity in the plane of lean of one the stems, towards the veterinary practice (fig. 5a and 5b, appendix 3). The stem has a large end weight and it is recommended this stem is reduced to reduce the risk of failure.

### **Planning considerations & Tree Preservation Orders**

- 4.9 New tree planting opportunities should be considered as part of any potential redevelopment; this will help to broaden the age diversity and arboricultural interest of the tree cover within the area. Sufficient space should be provided for species with significant stature to grow out into maturity.
- 4.10 A desktop investigation into the planning constraints on this site using the Arun District Council GIS web map<sup>4</sup> confirmed that there is a Tree Preservation Order in place at the south- west corner of the site. TPO/AL/1/13 was served by Arun District Council in 2013. The TPO protects trees T21 and T15 (T1 and T2 in the TPO schedule). The TPO schedule and map are attached at appendix 5.
- 4.11 Trees covered by a Tree Preservation Order are protected under the Town and Country Planning Act 1990 (Trees Regulation 2012) and the local authority must be consulted and permission sought for any works that may affect them.
- 4.12 Under the UK planning system, local authorities have a statutory duty to consider the protection and planting of trees when granting planning permission for proposed development. The potential effect of development on trees, whether statutorily protected (e.g. by a tree preservation order or by their inclusion within a conservation area) or not, is a material consideration that is taken into account in dealing with planning applications.
- 4.13 Trees can offer many benefits, including the provision of visual amenity, softening or complementing the effect of the built environment, and adding maturity to new developments by

making places more comfortable in tangible ways e.g. contributing screening and shade, reducing wind speed and turbulence, intercepting snow and rainfall, and reducing glare.

- 4.14 Although no significant structural faults were identified on T49, T50 or T51, large mature oaks usually contain deadwood which is liable to drop. Deadwood is a valuable ecological habitat and retention should be encouraged<sup>5</sup>. Although oak deadwood generally takes a long time to decay<sup>5</sup>, consideration should be given to how the area within its crown spread is used.
- 4.15 Particular care is needed regarding the retention of large, mature trees which become enclosed within the new development (e.g. T49, T50 and T51). Where such trees are retained, adequate space should be allowed for their long-term physical retention and future maintenance.

### **Design and Site Layout Considerations**

- 4.16 A tree constraints plan defines the Root Protection Area (RPA) for each tree shown as a circle. This area may be adjusted should physical constraints or topographical features limit root activity in a particular area, however the total area should remain the same. Prior to any adjustment of the tree's RPA zones the changes should be assessed by an arboriculturalist. During any site planning exercises the current and future growth potential of the trees should be considered.
- 4.17 The RPA for single stem trees broadly equates to a radius 12 times the stem diameter of the tree at 1.5m above ground level or the extent of canopy spread, whichever is the greater. For multi-stemmed, low branching trees or those with trunks with an irregular girth the point of stem diameter measurement is adjusted in consideration of these factors and in accordance with the illustrations in BS5837:2012 (Annex C).
- 4.18 The RPA should become an exclusion zone during construction works and for any development. It should be fenced-off and protected in accordance with BS5837:2012. The canopy is likewise susceptible to damage during construction work and requires similar protection.
- 4.19 No activities that result in excavations, changes in level or soil compaction should take place within the RPA of any retained trees, especially older mature trees. This would include the storage of materials, any construction work, trafficking by vehicles or even excessive trafficking by pedestrians.
- 4.20 If some form of construction has to take place within the RPA then certain measures need to be adopted to avoid disturbance or damage to the roots and to maintain moisture infiltration and gaseous diffusion into the soil.
- 4.21 Services likewise should be routed outside the existing or potential root zone of trees. Where it is unavoidable, then certain measures should be employed to avoid damage to the trees larger roots.
- 4.22 The location and siting of new facilities near trees should consider the potential impact on and conflict with both tree roots and canopy. This should take into account the ultimate size of existing young and middle-aged trees at maturity. Conversely the impact of the tree on the activities should also be considered with regard to obstruction, shading, leaf fall and root action. These are problems that can be managed provided sufficient space is allowed for.

### **Trees and Management of Health and Safety**

- 4.23 It is recommended that a programme of periodic arboricultural assessments be undertaken in order to regularly assess the full health and safety of all trees both in full leaf and bare stemmed. The assessments should prioritise areas based on levels of access and presence of target (i.e. exposure of people to hazard) and accord with arboricultural advice, taking account of relevant factors (where known) that affect safety such as the age class, condition, size and species of the trees.

## 5 REFERENCES

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- <sup>1</sup> British Standards Institute. *British Standard (BS5837) Trees in Relation to Design, Demolition and Construction - Recommendations*. 2012.
- <sup>2</sup> DEFRA. 'Magic Map Application'. [www.magic.gov.uk](http://www.magic.gov.uk). Accessed 3<sup>rd</sup> July 2017.
- <sup>3</sup> NHBC. 'Chapter 4.2- Building Near Trees'. *NHBC Standards 2016*. 2016.
- <sup>4</sup> Arun District Council 'Arun District Council Maps' [www.arun.gov.uk](http://www.arun.gov.uk). Accessed 3<sup>rd</sup> July 2017
- <sup>5</sup> Humphrey, J *et al.* *Life in the Deadwood- A Guide to Managing Deadwood in Forestry Commission Forests*. 2002.

## APPENDIX 1

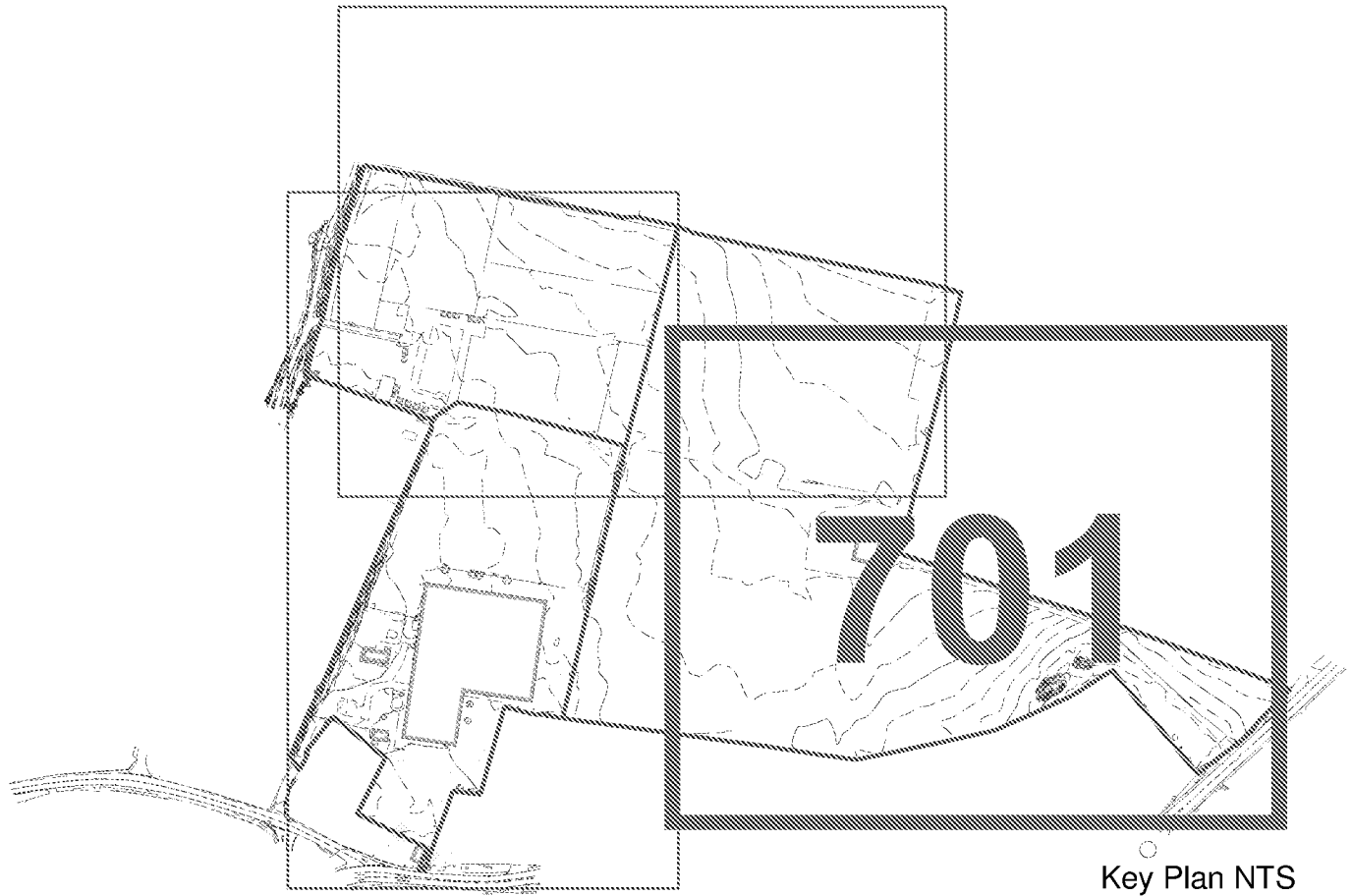
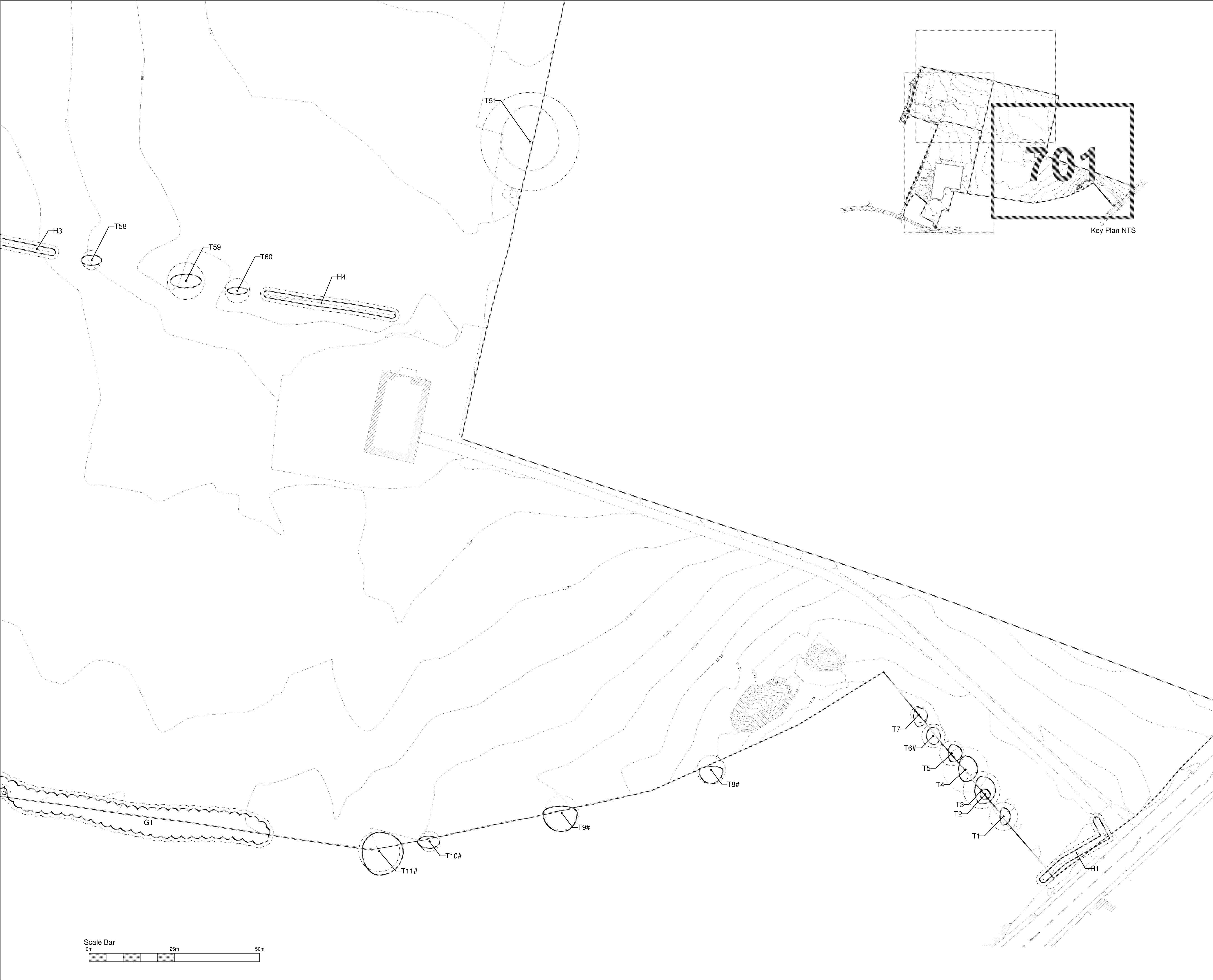
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Tree Survey Schedules JSL2869\_750

## APPENDIX 2

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Tree Survey Drawing JSL2869\_701-703



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**Key**

- Application site boundary.
- Tree with numbered reference. Canopy spread and BS5837:2012 tree quality category as shown below.
- Tree (in off-site or estimated location) with numbered reference. Canopy spread and BS5837:2012 tree quality category.
- Vegetation group with numbered reference. Canopy extents and BS5837:2012 tree quality category as shown below.
- Hedge with numbered reference. Width and BS5837:2012 tree quality category as shown below.

BS 5837:2012 Tree Quality Categories - Table 1

- Category A - High quality
- Category B - Moderate quality
- Category C - Low quality
- Category U - Unsuitable for retention

- Tree protected by Tree Preservation Order AL/1/13 served by Arun District Council in 2013. Bracketed number reference relates to the TPO Schedule.
- Root protection area (RPA). Calculated in accordance with Section 4.6 - BS5837:2012

**NOTES:**

- Refer to RPS Tree Survey Report & Schedule for further details.
- Survey based on a visual inspection from the ground and is not intended as a full arboricultural inspection.
- Plan produced in accordance with recommendations set out in BS 5837:2012 - 'Trees in Relation to design, demolition and construction'.
- Due to the legal protection afforded to breeding birds vegetation removal should not take place during the bird nesting period; generally, although not restricted to, March - August inclusive.
- Survey based upon topographic survey produced by Wimax Geomatics Ltd. in Shrewsbury, October 2012.

| Rev | Description | Date | Initial | Checked |
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Client **Taylor Wimpey Southern Counties**

Project **Land at Nyton Nurseries Westergate**

Title **Tree Survey Drawing Sheet 1 of 3**

|                        |                     |                            |
|------------------------|---------------------|----------------------------|
| Status<br>For Planning | Drawn By<br>JB/ JMB | PM/Checked by<br>CC        |
| Job Ref<br>2869        | Scale @ A1<br>1:500 | Date Created<br>07/07/2017 |
| Drawing Number<br>701  |                     | Rev<br>-                   |



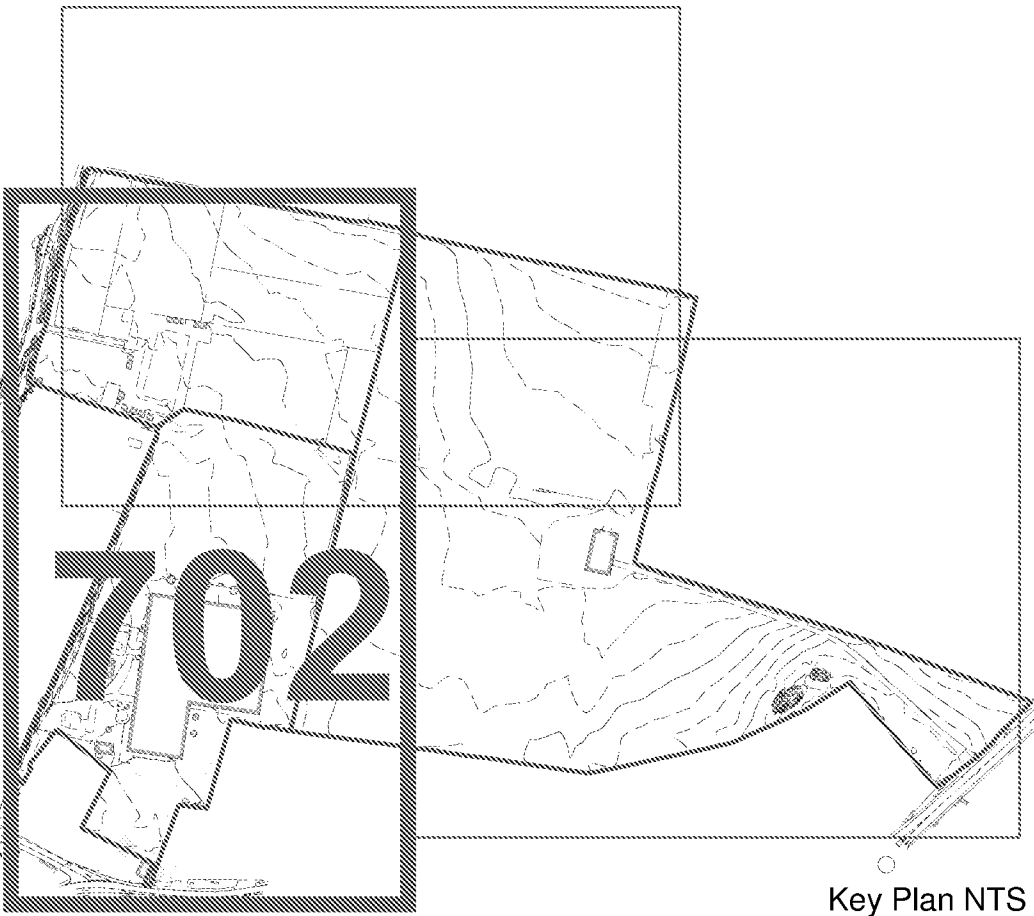
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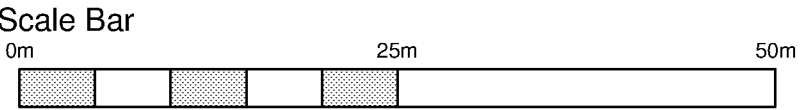
Key

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- Tree with numbered reference. Canopy spread and BS5837:2012 tree quality category as shown below.
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- Vegetation group with numbered reference. Canopy extent and BS5837:2012 tree quality category as shown below.
- Hedge with numbered reference. Width and BS5837:2012 tree quality category as shown below.
- BS 5837:2012 Tree Quality Categories - Table 1
  - Category A - High quality
  - Category B - Moderate quality
  - Category C - Low quality
  - Category U - Unsuitable for retention
- Tree protected by Tree Preservation Order AL1113 served by Arun District Council in 2013. Bracketed number reference relates to the TPO Schedule.
- Root protection area (RPA) Calculated in accordance with Section 4.6 - BS5837:2012

- NOTES:
- Refer to RPS Tree Survey Report & Schedule for further details.
  - Survey based on a visual inspection from the ground and is not intended as a full arboricultural inspection.
  - Plan produced in accordance with recommendations set out in BS 5837:2012 - 'Trees in Relation to design, demolition and construction'.
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  - Survey based upon topographic survey produced by Wilmac Geomatics Ltd. in Shrewsbury, October 2012.



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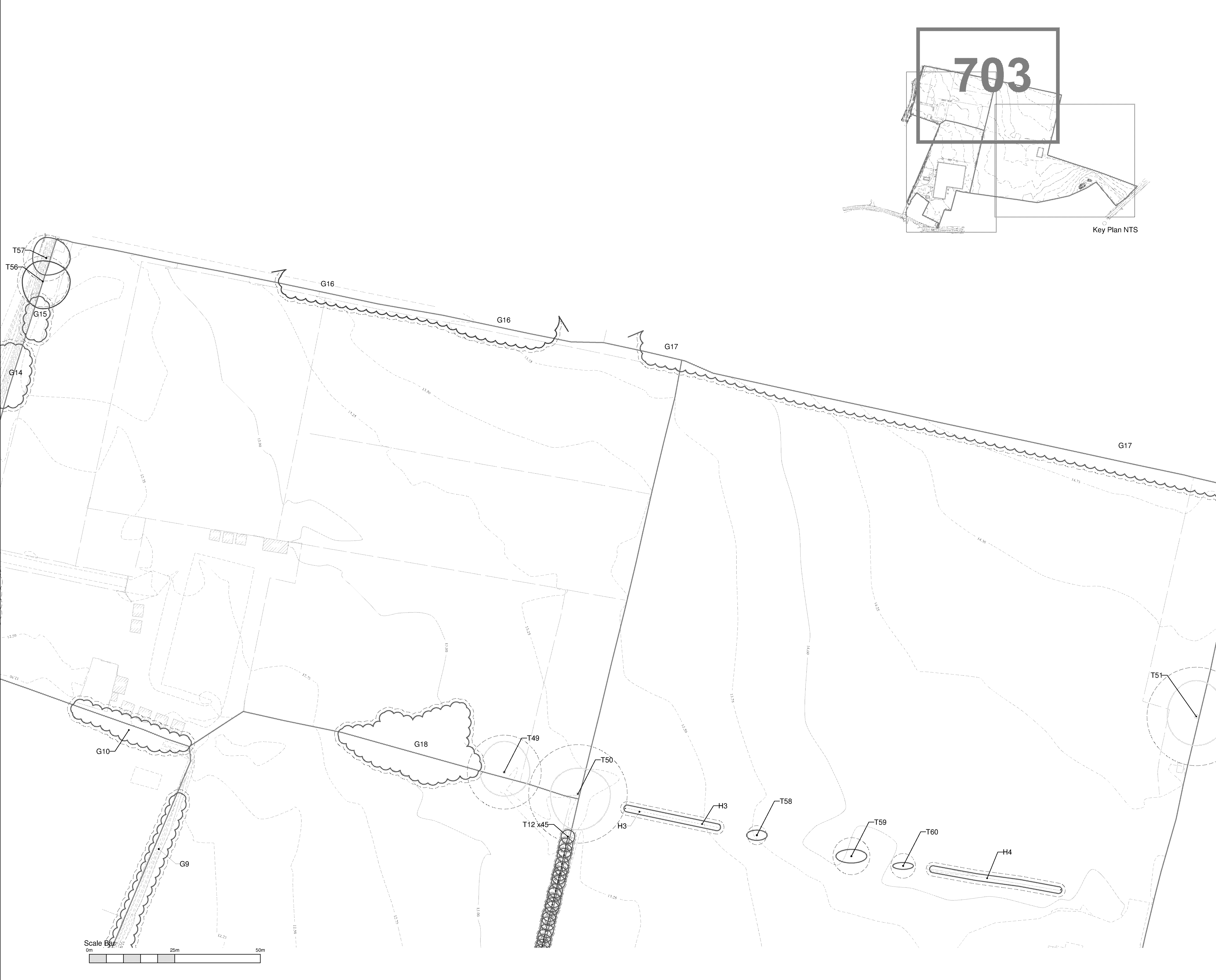
Project **Land at Nyton Nurseries Westergate**

Title **Tree Survey Drawing Sheet 2 of 3**

Status **For Planning** Drawn By **JB/ JMB** PMI/Checked by **CC**

Job Ref **JSL2869** Scale @ A1 **1:500** Date Created **07/07/2017**

Drawing Number **702** Rev **-**



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**Key**

Application site boundary.

Tree with numbered reference.  
Canopy spread and BS5837:2012 tree quality category as shown below.

Tree (in off-site or estimated location) with numbered reference. Canopy spread and BS5837:2012 tree quality category.

Vegetation group with numbered reference. Canopy extents and BS5837:2012 tree quality category as shown below.

Hedge with numbered reference. Width and BS5837:2012 tree quality category as shown below.

BS 5837:2012 Tree Quality Categories - Table 1

Category A - High quality

Category B - Moderate quality

Category C - Low quality

Category U - Unsuitable for retention

Tree protected by Tree Preservation Order AL/1/13 served by Arun District Council in 2013. Bracketed number reference relates to the TPO Schedule.

Root protection area (RPA). Calculated in accordance with Section 4.6 - BS5837:2012

**NOTES:**

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- Survey based on a visual inspection from the ground and is not intended as a full arboricultural inspection.
- Plan produced in accordance with recommendations set out in BS 5837:2012 - 'Trees in Relation to design, demolition and construction'.
- Due to the legal protection afforded to breeding birds vegetation removal should not take place during the bird nesting period; generally, although not restricted to, March - August inclusive.
- Survey based upon topographic survey produced by Wimax Geomatics Ltd. in Shrewsbury, October 2012.



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Project **Land at Nyton Nurseries Westergate**

Title **Tree Survey Drawing Sheet 3 of 3**

Status **For Planning** Drawn By **JB/ JMB** PM/Checked by **CC**

Job Ref **2869** Scale @ **A1 1:500** Date Created **07/07/2017**

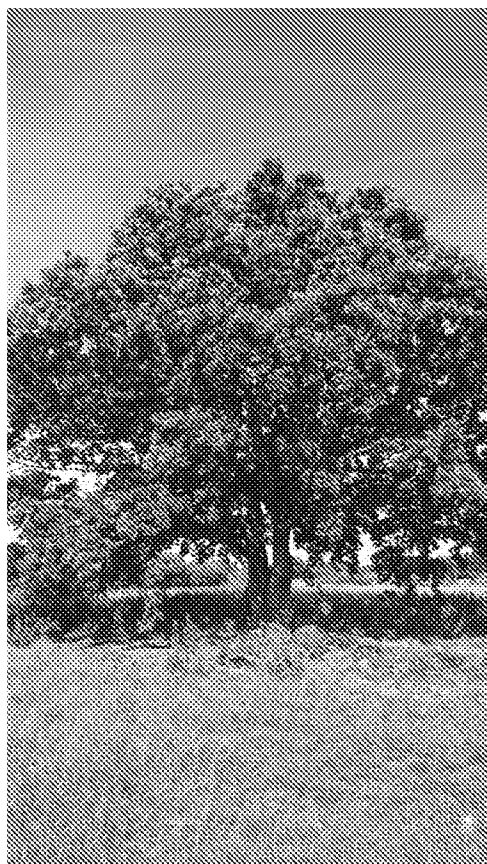
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## APPENDIX 3

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### Site photographs



Figures 1a (top, T49 and T50), 1b (bottom left, T51) T49, T50 and T51 were high quality BS5837 category A oak trees with high amenity value.

Figure 1c (bottom right). T50 was the highest amenity tree on site and exhibited veteran characteristics.

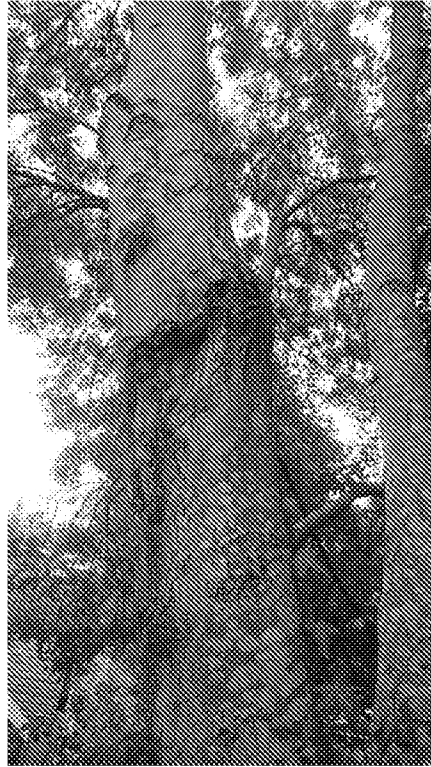


Figures 2a (top left) and 2b (top right). Included growth unions were present on several trees within T12 x45. Figure 2c (bottom left). A hazard beam was also noted on a major limb on one of the trees within T12 x45. Figure 2d (bottom right). Bacterial canker (*P. savastanoi* pv. *fraxini*) was present on some trees within T12 x45, causing cankers and vertical splits.



Figure 3 (top). G3- G5 comprised an area of dense pioneer vegetation. Access was limited and therefore it was not possible to undertake a detailed survey of the area, however the trees within were of low quality pertaining to a category C2 of the BS5837 tree grading criteria.

Figure 4 (bottom). T20 showed symptoms of bacterial canker (*P. savastanoi pv. fraxini*) and its structural condition should be further monitored.



Figures 5a (top) and 5b (bottom). T22 had multiple stems and one had a stem cavity in the plane of its lean, a potential structural weakness. The stem was also leaning towards the veterinary practice, pictured in 5b. The stem also had a heavy crown weight which was biased towards the veterinary practice. It is recommended the stem is reduced.

## APPENDIX 4

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### Arboricultural Glossary

**Age-class** - A general classification of the tree into either - young, semi-mature, early mature, mature, over-mature, or veteran.

**Apical Bud/Shoot** – The apical bud, also known as the leading shoot, is responsible for shoot extension and is dominant.

**Apical Dominance** – A singular, leading shoot remains dominant.

**Arboreal** - In connection with, or in relation to, trees.

**Arboriculturalist** – Person who has, through relevant education, training and experience, gained recognised qualifications and expertise in the field of trees in relation to construction.

**Arboricultural Implications Assessment (AIA)** – Study, undertaken by an arboriculturalist, to identify, evaluate and possibly mitigate the extent of direct and indirect impacts on existing trees that may arise as a result of the implementation of any site layout proposal.

**Arboricultural Method Statement (AMS)** – Methodology for the implementation of any aspect of development that has the potential to result in the loss of or damage to a tree. Note The AMS is likely to include details of an on-site tree protection monitoring regime.

**Asymmetric crown**- Crowns that have a morphological bias in a particular direction. This can give the tree an aesthetically unfavourable appearance, but can also subject the tree to uneven wind- loading forces and potentially result in failure.

**Basal** – Referring to the bottom part of a tree's stem.

**Basifugal mortality** – A natural process seen in trees in an advanced life stage whereby the trees extremities die back and the inner crown expresses new growth, in order to conserve energy reserves.

**Bifurcated** - A growth characteristic, where two stems of similar size grow from the same point. Can create an inherent weakness.

**Branch union/junction** - The point at which a branch joins a larger stem. Can be a point of weakness, especially in certain species.

**Brown Rot**- Decay caused by certain species of fungus which results in the affected wood becoming brittle and liable to suddenly 'break out', especially if in key structural areas.

**Buttress flares** – Extensions of the basal stem of a tree that provide additional structural support. See reaction wood.

**Bifurcated**- A growth characteristic, where two or more stems of similar size grow from the same point. Can create an inherent weakness.

**Cable braces** – Cable braces used to support the crown of a tree, reduce impacts caused by wind- throw oscillation.

**Canker** – A clearly defined area of dead and sunken or malformed bark, caused by bacteria or fungi. Can have a bearing on structural integrity of infected limb(s) depending on size and location.

**Central leader**- See apical dominance.

**Chlorosis**- yellowing of leaves which can be caused by a range of factors, often an indicator of nutrient deficiency.

**Compaction** - The compressing & hardening of soil around tree root systems, due to vehicular/pedestrian use etc. Loss of pore space between soil granules limits water movement and gaseous exchange, and inhibits root growth.

**Companion shelter**- Shelter provided by neighbouring trees in groups to one another, factors such as wind throw are reduced due to supporting branches and interlocking root systems. Removing individual trees on the peripheries of such groups can expose neighbouring trees to environmental factors they have not previously been subjected to and can lead to individual failure.

**Competent person** – Person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached

Note 1 A competent person understands the hazards and the methods to be implemented to eliminate or reduce the risks that can arise. For example, when on site, a competent person is able to recognise at all times whether it is safe to proceed.

Note 2 A competent person is able to advise on the best means by which the recommendations of this British Standard may be implemented.

**Condition** – Assessment based on a visual and professional view giving consideration to many factors such as tree health, structural integrity and suitability of its position.

**Conservation dead- wooding**- Removal of deadwood using ‘coronet cuts’ that mimic the way a branch would naturally break off, maximising deadwood habitat availability for invertebrates.

**Coppice** - The method of managing trees by cutting the stems at between 1.0 inch and 1.0 foot from the ground level on a regular cycle, the cut stumps of the trees or shrubs are allowed to re-grow many new stems.

**Crown spread** - Gives distances between extreme limits of the crown and the stem, usually along the four compass points. Helps to show crown symmetry.

**Crown Reduction** – The removal of branch ends to reduce the extreme limits of a trees branch spread and height.

**Crown Thin** – The removal of selected branches within the crown to thin the internal branch structure.

**D.B.H.** - 'Diameter at Breast Height', an industry standard to gauge tree stem size and development. Within arboriculture, breast height is taken to be 1.5m above ground level.

**Dieback** - The reduction in crown vigour and extension growth progressing to death of distal parts; often associated with decline.

**Epicormic growth** - New growth from dormant buds that can often form tenuous attachments. Although some species readily form such shoots, it can be an indication of stress.

**Form** - A general assessment of the shape and position of the tree within its environment.

**Hanger** – Term used to describe a branch that has become detached and is being supported by other branches. Can be a hazard to persons and property below.

**Hazard Beam** – After the loss of a distal part, a limb concentrates growth upwards creating adverse end weights that can render the limb susceptible to failure. .

**Included bark** – Growth characteristic usually caused when two or more stems/branches growing in close proximity 'fuse' together entrapping the bark from when the parts were separate in the middle, creating a structural weakness.

**Invertebrate tower** – Pollarding of a (usually dead) tree to a safe height that leaves part of the main stem as a deadwood habitat for invertebrate species.

**Occlusion/Occluded** – Normally used to describe the overgrowth of a wound. Also, immovable foreign objects in contact with a tree part can become encased or 'occluded' by the tree as it grows incrementally.

**Pathogen** - An agent that causes disease, especially a living microorganism such as a bacterium or fungus.

**Phototropic growth** – Growth responding to a light stimulus i.e. the sun. This can influence the form of a tree, particularly where other factors e.g. buildings or other trees, affect the amount/ direction light is received.

**Pollard** – The removal and subsequent regular re-removal of the crown of a tree above animal browsing height. Can be an effective method of controlling the size of trees in urban areas. This is ideally begun in the trees early stages and maintained throughout its life.

**Reaction wood** - Essentially additional wood laid down by the tree to compensate for structural defects such as cavities.

**Rhizosphere** - The rhizosphere is the narrow region of soil that is directly influenced by root secretions and associated soil microorganisms. In particular, mycorrhizal fungi form a symbiotic relationship with trees and assist in the assimilation of phosphates essential to the trees health.

**Ring barking/Girdling** – the removal of bark around the entire circumference of a stem or branch, causing the death of all distal parts.

**Root Protection Area (RPA)** – Layout design tool indicating the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree, shown in plan form in m<sup>2</sup>.

**Scaffold limbs** - The main structural branches within the crown.

**Tree protection plan** – scale drawing prepared by an arboriculturalist showing the finalised layout proposals, tree retention and tree and landscape protection measures detailed within the arboricultural method statement (AMS), which can be shown graphically.

**U.L.E** – ‘Useful Life Expectancy’ is an estimate based on currently known factors of the possible remaining life of the tree as an asset. AKA ‘Estimated remaining contribution’.

**Veteran tree** – Tree that, by recognised criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

**Vigour** - A general classification, as to the present and future potential growth and development of a tree. A comment regarding the health status of the tree specific to its species.

**White Rot** - A type of decay caused by certain species of fungi which results in the affected wood becoming flexible with little compressive strength.

## **APPENDIX 5**

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Arun District Council Tree Preservation Order AL/1/13

Map and Schedule

## TPO APOGEE CORPORATION LTD APOGEE HOUSE NYTON ROAD WESTERGA



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Arun District Council 100018487.

Scale 1/1250

Date 20/5/2013

Centre = 493969 E 105623 N

**SCHEDULE 1****SPECIFICATION OF TREES****Trees specified individually**  
(encircled in black on the map)

| <i>Reference on Map</i> | <i>Description</i> | <i>Situation*</i> |
|-------------------------|--------------------|-------------------|
| T1                      | Ash Tree           |                   |
| T2                      | Evergreen Oak      |                   |

**Trees specified by reference area**  
(within a dotted black line on the map)

| <i>Reference on Map</i> | <i>Description</i> | <i>Situation*</i> |
|-------------------------|--------------------|-------------------|
|-------------------------|--------------------|-------------------|

**Groups of Trees**  
(within a broken black line on the map)

| <i>Reference on Map</i> | <i>Description</i> | <i>Situation*</i> |
|-------------------------|--------------------|-------------------|
|-------------------------|--------------------|-------------------|

**Woodlands**  
(within a continuous black line on the map)

| <i>Reference on Map</i> | <i>Description</i> | <i>Situation*</i> |
|-------------------------|--------------------|-------------------|
|-------------------------|--------------------|-------------------|

*\*Complete if necessary to specify more precisely the position of the trees.*

|                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------|
| <b>Primary Address</b>                                                                                                             |
| Owner/Occupier, Apogee Corporation Ltd, Apogee House, Nyton Road, Westergate, West Sussex, PO20 3UN                                |
| Owner/Occupier, Jacaranda, Nyton Road, Westergate, West Sussex, PO20 3UN                                                           |
| <b>Secondary Addresses</b>                                                                                                         |
| Church Commissioners for England, Church House, Great Smith Street, London SW1P 3AZ                                                |
| Jason Patrick Collins and Barry Trevor Ferdinand, Apogee House, 8 Willow Lane Business Park, willow Lane, Mitcham, Surrey, CR4 4NA |
| Jason Patrick Collins and Barry Trevor Ferdinand, The Old Town Hall, Wimbledon, London, SW19 8YA                                   |
| Anthony Michael Olliff and Paula Caryn Olliff, Jacaranda, Nyton Road, Westergate, West Sussex, PO20 3UN                            |