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Arboricultural Impact Assessment

for a proposed Garden Structure at

Wyndham Croft,

Selsfield Road,

Turners Hill,

Crawley, Sussex, RH10 4PS

On behalf of;-

Mr & Mrs Nathan,

Wyndham Croft,

Selsfield Road,

Turners Hill,

Crawley, Sussex, RH10 4PS

Document information

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Notice to Interested Parties

To achieve the study objectives stated in this report, we were required to base our conclusions on the best information available during the period of the investigation and within the limits prescribed by our client in the agreement.

No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. Thus, we cannot guarantee that the investigations completely defined the degree or extent of e.g., species abundances or habitat management efficacy described in the report.

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1.0 INTRODUCTION

1.1 Terms of Reference

1.1.1 Sutlieff Tree Services Limited has been commissioned on behalf of Mr & Mrs Nathan to survey significant trees in the garden that may be of material concern to an intended new structure at Wyndham Croft, Selsfield Road, Turners Hill, Crawley, Sussex, RH10 4PS.

1.1.2 The site survey was carried out on 22/05/2025. The relevant qualitative and quantitative tree data was recorded in order to assess the condition of the existing trees and include material constraints arising from existing trees that merit retention. This should be used to inform feasibility studies and design options for the proposed development.

1.1.3 Information is given on condition, age, size and indicative positioning of all the trees, both on and affecting the site. This is in accordance with the British Standard 5837:2012 Trees in relation to design, demolition and construction - Recommendations.

1.2 Scope of Works

1.2.1 The survey of the trees and any other factors are of a preliminary nature. The trees were inspected on the basis of the Visual Tree Assessment (VTA) method as developed by Mattheck and Breloer (1994). The trees were inspected from ground level with no climbing inspections undertaken. It is not always possible to access every tree and as such some measurements may have to be estimated. No samples have been removed from the site for analysis. The survey does not cover the arrangements that may be required in connection with the removal of existing underground services.

1.2.2 Whilst this is an arboricultural report, comments relating to non arboricultural matters are given, such as built structures and soil data. Any opinion thus expressed should be viewed as provisional and confirmation from an appropriately qualified professional sought. Such points are clearly identified within the body of the report.

1.2.3 An intrinsic part of tree inspection in relation to development is the assessment of risk associated with trees in close proximity to persons and property. Most human activities involve a degree of risk with such risks being commonly accepted, if the associated benefits are perceived to be commensurate. In general, the risk relating to trees tends to increase with the age of the trees concerned, as do the benefits. It will be deemed to be accepted by the client that the formulation of the recommendations for all tree management will be guided by the cost-benefit analysis (in terms of amenity) of the tree work.

2.0 THE SITE

2.1 Overview

2.1.1. The proposed site is the garden of Wyndham Croft, Selsfield Road, Turners Hill, Crawley, Sussex, RH10 4PS. This is an impressive residential property inside the High Weald AONB. The proposed site is in the upper lawn area of gently terraced grounds, sheltered behind a large brick wall.

2.2 Soils

2.2.1 The soil type commonly associated with this site are slightly acidic Loam, comprising mainly of intermediate sized particles, it is fertile, fairly well drained and holds more moisture than sandy soils, but are easily compacted. Loams are comprised of a mixture of clay and sand that avoid the extremes of clay or sandy soils and are usually well-drained. . The soil depth is deep to intermediate with the parent material being sandstone.

2.2.2 The data given was obtained from a desk top study which provides indications of likely soil types. By definition, this information is not comprehensive and therefore any decisions taken with regards the management, usage or construction on site should be based on a detailed soil analysis.

2.2.3 Further to item 2.2.2, this report provides no information on soil shrinkability. It may be necessary for practitioners in other disciplines (e.g. engineers considering foundation design) to obtain this data as required.

2.3 Statutory Tree Protection

2.3.1 Sutcliffe Tree Services Limited have been informed that at the date of the tree inspection the trees on the property are not subject to any Tree Preservation Orders.. It should also be noted that the site falls within the High Weald Area of Outstanding Natural Beauty (AONB) which does not confer any further protection to trees but may be a consideration. This information was sourced using the LPA's Online Mapping System and to our best knowledge was current and accurate at the time the information was accessed. However, before any tree work commences this must be checked directly with the LPA to confirm that their online mapping system is definitive.

3 METHODS

3.1 Arboricultural Survey

3.1.1 Only significant trees identified by the customer on or within the site boundary were surveyed and individually assessed from ground level in accordance with the British Standard 5837: 2012 Trees in relation to design, demolition and construction. A significant tree is defined as any tree with a diameter at breast height of more than 75 mm or in the case of woodlands or substantial tree groups any tree with a diameter at breast height of more than 150 mm.

3.1.2 Where trees grow as groups with a relatively uniform age, species mix, structural and physiological condition, these were assessed as a group unless differentiation between the individuals was deemed necessary (e.g. to highlight significant variation in attributes).

3.1.3 Each tree and group of trees assessed was allocated a category (A, B, C or U) based on the age class, condition and useful life expectancy of the tree. Categories A-C have three sub-categories to reflect the arboricultural (1), landscape (2) and cultural/conservation (3) qualities of each tree or group of trees. The table below provides a summary of the categories and of their implications for the development, full details of categorisation criteria are provided in Appendix 1.

Table 3.1 Summary of tree classification and implications for the development

Category	Definition	Implications for development
A	Trees of a high quality with an estimated remaining life expectancy of at least 40years.	These trees are a material consideration in the planning process. Every effort should be made to retain these trees.
B	Trees of a moderate quality with an estimated remaining life expectancy of at least 20 years.	These trees are a material consideration in the planning process. Every effort should be made to retain these trees.
C	Trees of low quality with an estimated life expectancy of at least 10 years or young trees with a stem diameter below 150mm.	These trees are a material consideration in the planning process. Where possible amendments to a proposed design or mitigation measures should be considered in preference to tree removal.
U	Trees in poor condition with an estimated remaining life expectancy of less than 10 years.	These trees are not a material consideration in the planning process and may need to be removed for the reasons of sound arboricultural management.

3.1.4 Each recorded tree and group was given a reference number which can be found within the Tree Survey Schedule in Appendix 4 and in Figures 1.

3.1.5 Branch spread was measured at the four cardinal points: north; east; south; west. Where possible, stem diameters were measured at 1.5m above ground using a measuring tape and current tree heights were measured manually.

3.1.6 Where direct access to trees was not possible due to local constraints such as impenetrable vegetation or tree location in private property, the trees' height and other parameters were estimated and marked with the symbol '#' in the tree survey schedule.

3.1.7 The root protection area (RPA) of each single stem tree was defined as a circle with a radius 12 times the stem diameter. For trees with more than one stem, the RPA was defined as a circle with a radius 12 times the sum of the stem diameters.

3.1.8 For trees with two to five stems, the RPA was defined as a circle with a radius 12 times the sum of the stem diameters. The combined stem diameter was calculated as follows:

$$\sqrt{(\text{stem diameter } 1)^2 + (\text{stem diameter } 2)^2 + (\text{stem diameter } 3)^2 + (\text{stem diameter } 4)^2 + (\text{stem diameter } 5)^2}$$

For trees with more than five stems the combined stem diameter was calculated as follows:

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

2.10 The resulting calculated stem diameter was then multiplied by 12 to give the RPA.

3.2 Ash dieback disease

3.2.1 Following the appearance of ash dieback disease caused by the fungus *Hymenoscyphus fraxineus* in 2012 there is concern over the future health of ash *Fraxinus excelsior* trees in the UK. Research available suggests that ash will be subject to mortality rates of 50-75%, by 2040-2045 – this mortality rate could however be much higher although this is not possible to substantiate for England. In this respect, at least half of all ash will be expected to die within the next 30 years. Because the effects of ash dieback are evident for usually years before mortality (as much as 15 years), it is therefore reasonable to estimate that at least 50% of all ash will be showing symptoms within a shorter time-frame. For ash showing symptoms already, mortality will likely be sooner than those not showing symptoms. Any categorisation of ash trees within this survey is based around the condition at the time of surveying and life expectancy in a normal environment.

3.2.2 Where ash trees are found to be affected by the disease they will fall into a C or U category (depending on contemporary research findings).

3.2.3 More information can be found on the Forestry Commission's web page:

<http://www.forestry.gov.uk/chalara>

3.3 Survey constraints and limitations

3.3.1 The arboricultural survey was undertaken from ground level and did not involve other specialist arboricultural inspections (e.g. root collar examination or sonic tomography). Where more detailed surveys/inspection of a tree were deemed necessary these are recommended in the tree survey schedule.

3.3.2 Although obvious structural defects and the condition of trees were noted, this report does not constitute a full tree risk assessment or management plan.

3.3.3 Formal assessments of topography, drainage, service conduits and soil conditions including specific laboratory investigations of soil properties (i.e. plasticity index, moisture content, suction pressure) were not undertaken and are beyond the scope of this report.

3.3.4 Trees are living organisms and their health and condition change with time. Therefore, this assessment remains valid for 12 months from the date of inspection, or until a severe storm is experienced, after which time a new inspection is required. For the purpose of this report, a severe storm is defined as a period of violent weather, involving rain, hail, wind, snow, lightning or any combination of these, likely to cause damage to trees.

4 SURVEY RESULTS AND RECOMMENDATIONS

4.1 A total of 6 individual trees were surveyed at Wyndham Croft . The hedges and shrubs were not considered to be of material consideration as their stem diameter was less than 150mm.

4.2 According to the Mid Sussex District Council planning register there are no preservation orders on any trees on the property itself or in the surrounding area, that may be affected.

4.3 One tree would benefit from tree surgery or additional investigation, be it for health and safety, cultural, aesthetic, or structural reasons as detailed. The item requiring the intervention is as follows:

T02	Slight asymmetric growth towards proposed structure.	Uplift crown and lightly reduce western spread towards development.
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5 SUMMARY AND CONCLUSIONS

5.1 The development proposals comprise the construction of a new garden structure

5.2 A total of 6 trees and were surveyed during the Arboricultural Impact Assessment of the new structure.

5.3 Summary of trees surveyed by category:

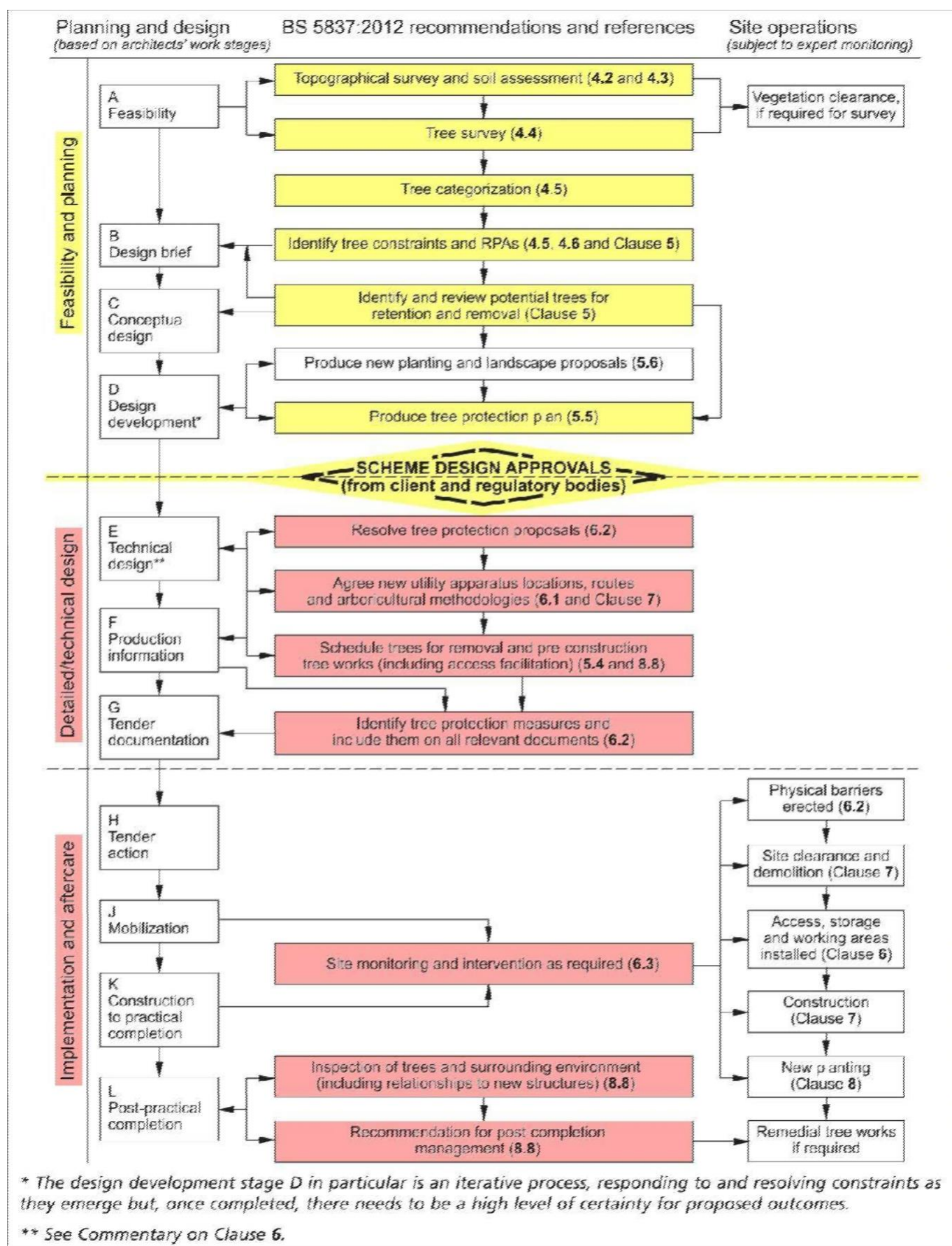
Category A	0
Category B	4
Category C	2
Category U	0

5.4 No tree RPA appeared to be in direct conflict with the footprint of the proposed building. No trees will need be felled to facilitate it's construction. It may be necessary for protection measures to be installed to safeguard the RPA of retained trees, although given the small scale of the structure and the corresponding light equipment needed, these may not be required.

APPENDIX 1 – Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)		
Category 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.	- 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 removal of other U category 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		
Category and definition	1 Mainly arboricultural qualities	2 Mainly Landscape qualities	3 Mainly cultural values, including conservation
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 of 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)
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable 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
Category C Those of low quality and value with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm Unremarkable	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 landscape value, and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value

APPENDIX 2 - Flow Chart – Design and Construction & Tree Care



APPENDIX 3 – Glossary of terms

Age Class Life stage i.e. young, semi-mature, early mature, mature, over-mature and veteran.

Arboricultural Impact Assessment (AIA) A 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) The methodology for the implementation of any aspect of development that has potential to result in loss of or damage to a tree.

Construction Exclusion Zone Area based on the RPA (in square metres) identified by an arboriculturalist, to be protected during development, including demolition and construction work, by the use of barriers and/or ground protection fit for purpose to ensure the long-term retention of a tree.

Crown clearance The height or spread in metres of the lowest significant branches above ground level.

Diameter Trunk diameter measured at 1.5m above ground level or at the base of trees where they are twin or multi-stemmed.

DBH Diameter at breast height.

Height The height of a tree measured using a clinometer.

Management recommendations General comments on the condition of the tree, group or woodland and recommendations for future works.

Pruning The removal of living or dead parts of a tree. Such parts may be soft growth (leaves) branches limbs or sections of the trunk or stem.

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 square metres.

Species The species is based on field observation and lists the common and botanical name of the specimen.

Spread Measurement of the largest extent of the trees branch growth.

Tree Constraints Plan (TCP) Plan prepared by an arboriculturalist for the purpose of layout design showing the RPA.

Tree Protection Plan (TPP) Scale drawing prepared by arboriculturalist showing the finalised layout proposals, tree retention and tree and landscape protection measures detailed within the AMS, which can be shown graphically.

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

APPENDIX 4 – Tree Survey Schedule

Ref	Species	Height (m)	Age class	No. of Stems	Stem dia. (mm)	Crown spread (m)				Height to 1 st branch (m)	Quality	Estimated remaining Contribution (years)	Comments	RPA radius (m)
						N	E	S	W		Category			
T01	Norway Maple	12	SM	1	224	3	3	2	4	2.0	B	20+	Handsome tree.	2.69
T02	Oak	14	SM	1	418	6	5	5	6	2.2	B	40+	Would benefit from a crown lift and/or light reduction	5.02
T03	Yew	8	EM	4	282,228, 185,241	4	5	3	6	2.0	C	20+	Suppressed and unbalanced. Foliage thin.	4.73
T04	Yew	8	EM	3	218,226,285	5	4	4	3	1.6	C	20+	Suppressed and unbalanced. Foliage thin.	4.24
T05	Lawson's Cypress	16	EM	1	~ 435	2	3	3	3	0	B	20+		5.22
T06	Cedar of Lebanon	18	EM	1	689	6	6	8	7	0	B	20+	Slight dieback of tips. Foliage patchy. Sited at a lower level to lawn.	8.26

Figure 1. Tree Constraints Plan - Root Protection Areas of retained trees

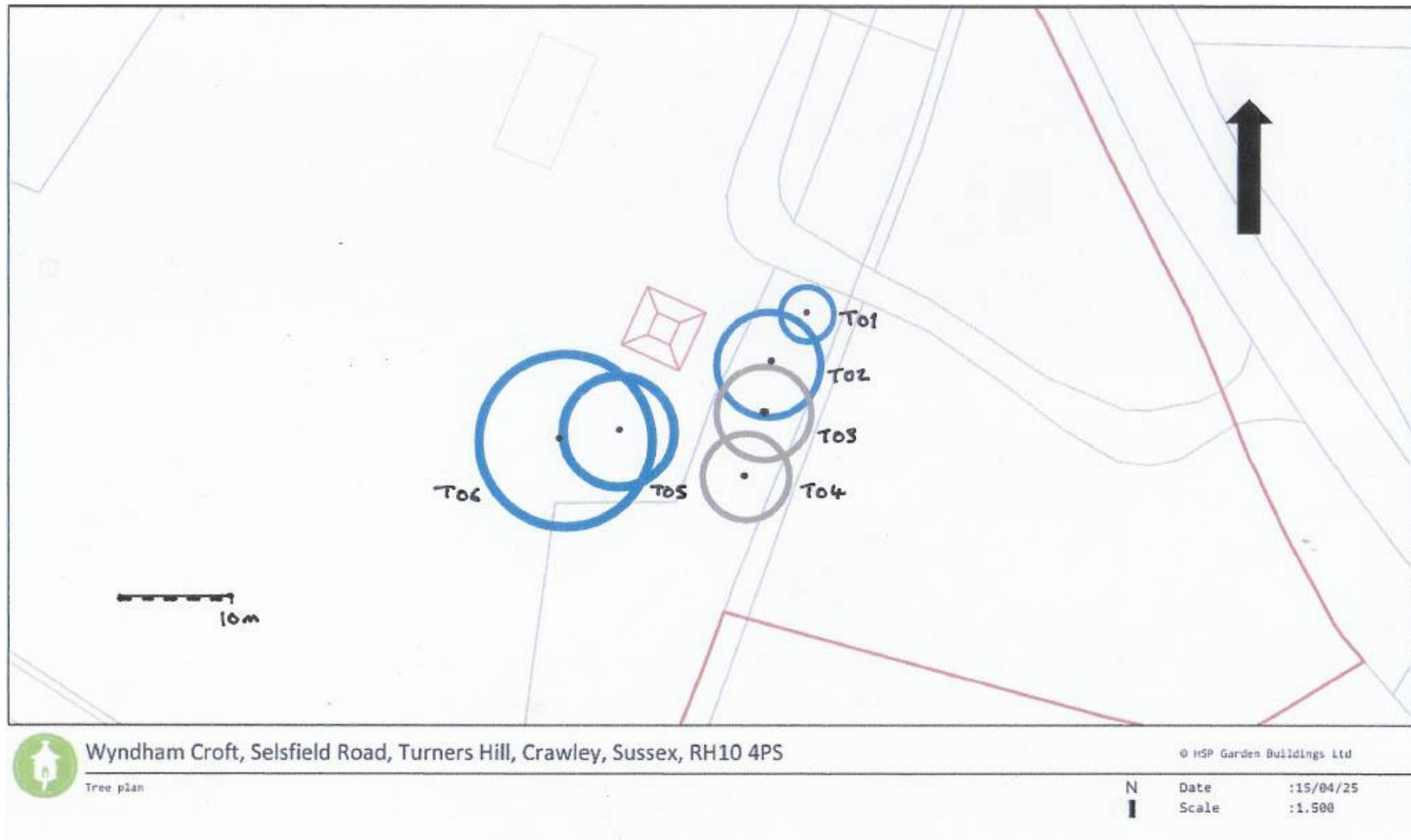


FIGURE 2. Photographs

