



Tree Survey Report

Pre-Development Tree Survey in Support of Planning Application

1 Wardes Bungalows, Otham Street, Otham, ME15 8RW

Taj Khan

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Section 1.0: Introduction

1.1. Acornarb Limited was commissioned by Taj Khan to undertake an Arboricultural Survey of trees and tree groups located within the grounds of the existing property, 1 Wardes Bungalows, Otham Street, Otham, ME15 8RW, adjacent farmland.

1.2. This report has been completed by Thomas G Bevan, who holds a Level 4 Diploma in Arboriculture, is a Technician Grade member of the Arboricultural Association and has over 14 years' experience working within the arboricultural industry.

1.3. Where appropriate, recommendations of tree works are made to facilitate the proposed works or to improve the overall condition of the existing tree stock.

1.4. Advice given within this report is underwritten by our Professional Indemnity Insurance for the business practice of Arboricultural Consultancy in the sum of one million Pounds Sterling in each and every claim.

1.5. The scope considerations of the survey and report is to carry out an arboricultural survey to the specifications outlined within the 'BS 5837-2012-Trees in relation to design, demolition and construction of trees' to assess trees, hedges and major shrub groups growing on and within influencing distance of the site and to produce a schedule of trees, Tree Constraints Plan (TCP), Arboricultural Impact Assessment (AIA), Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP).

1.6. Where appropriate, recommendations of tree works are made in order to facilitate the proposed works or to improve the overall condition of the existing tree stock.

1.7. The documents that are likely to be referred to throughout this report are as follows.

- Survey base drawing – Topographical Survey
- British Standard 5837:2012 – BS5837
- Tree Survey Schedule – Acornarb TSS01
- Tree Constraints Plan (TCP) – Acornarb TCP01
- Tree Protection Plan (TPP) – Acornarb TPP01 – Base drawing provided by DRAFT Architecture - Drawing No. SP02 - Project No. 2214

1.8. Tree Survey

1.8.1 The tree survey was conducted on the 03rd of May 2023. The weather conditions on the day were dry with little to no wind.

1.8.2. No invasive or internal investigations, aerial inspections, soil samples, geological surveys, etc. were undertaken.

1.8.3. All trees were inspected from ground level using the 'Visual Tree Assessment' (VTA) method.

VTA is a method of tree diagnosis that is used worldwide and is seen as sound industry practice. VTA is a non-invasive method of examining the health and structural condition of individual trees. By using this method, it is possible to gather information on the condition of the tree's roots, trunk, main branch structure, crown, buds, and leaves. This information will then aid in the assessment and conclusions about the general condition, health, and vitality of the tree.

1.8.4. Equipment used to carry out the survey was as follows:

- Clinometer
- Nikon Forestry Pro II Laser Rangefinder
- Laser measurer
- Compass
- Diameter tape measure
- Computer tablet

1.8.5. A topographical survey was available and as such, all trees and tree groups positions have been referenced from the plan and added via AutoCAD.

1.8.6. Trees that were surveyed have been categorised using "Table 1 – Cascade chart for tree quality assessment" of the BS5837:2012 (see Appendix B).

1.8.7. Pre-development tree surveys make arboricultural management recommendations based exclusively upon the individual tree or group of trees condition relative to their present context (i.e., not in relation to the proposed development).

Section 2.0: Survey Methodology

2.1. The trees were surveyed and assessed by using the current recommendations, as detailed in British Standards 5837: 2012 'Trees in relation to design, demolition & construction — Recommendations'.

2.2. The following data was collected from the tree survey:

- Tree Number / Group Reference
- Species (given in its common name for easy reference)
- Stem diameter (measurement in millimeters)
- Height (in meters)
- Branch Spread (in meters taken at four cardinal points)
- Crown Clearance (in meters taken from ground level)
- Age Class
- Physiological Condition
- Structural Condition
- Estimated Remaining Life Span of the Trees (in years)
- Management Recommendations

2.3. Please see **Appendix A** for further clarification and survey explanatory notes.

2.4. All trees that have been surveyed have been given notional identification i.e. T1 — T10. All collected survey data and recommendations for works on individual trees is presented in the survey schedule which is part of **Appendix A**.

2.5. Root Protection Area (RPA)

2.5.1. The RPA is worked out by measuring the diameter of the tree stem at 1.5 meters from ground level, and then multiplied by twelve. The RPA will then generally form a Construction Exclusion Zone (CEZ). In most circumstances, the CEZ will be restricted from all types of development and workforce.

2.5.2. In some instances, it may not be possible to exclude all development from the CEZ due to sites conditions. Under certain circumstances it may be possible to build within these areas providing that appropriate specifications have been agreed between the local planning authority, the consulting arboriculturist and the developer/client.

2.6. Tree Categorization

2.6.1. During the undertaking of the tree survey on site a method stated in the BS 5837:2012 is used to identify the trees that are of the best quality and value. By using this, it is possible to score the trees A, B, C and U, with the subcategories 1 to 3 (example — A1 being the of the best quality and U being the poorest). Using this scoring system will allow an informed decision of which trees to protect and which trees to fell or prune to allow for the proposed development works due to their arboricultural and landscape values and cultural qualities.

2.6.2. Each of the tree's category can be found in **Appendix A**.

Section 3.0: Site Overview

3.1. The area that was surveyed 1 Wardes Bungalows, Otham Street, Otham, ME15 8RW and adjacent farmland.

3.2. The development proposals are briefly described as the demolition of the existing bungalow, development of a new dwelling positioned where the existing bungalow is currently.

3.3. The Maidstone Borough Councils' online interactive map¹ shows that there are no trees within the garden of 1 Wardes Bungalows subject to a Tree Preservation Order (TPO) and that the address is not within a Conservation Area (CA).

Figure 1: Aerial Image of Site



¹ Your property information (no date) Maps - Maidstone Borough Council. Available at: <https://services.maidstone.gov.uk/maps/astun.ishare.web/mymaidstone.aspx> (Accessed: 03 May 2023).

Section 4.0: Summary of Findings

4.1. A total of fifteen (15) individual trees and four (04) tree groups, made up of approximately ninety (90) individual trees, have been surveyed. A break down in the number of trees in each of their retention category can be found in the table below.

Retention Category	Individual Trees	Groups of Trees
A High Quality	01	00
B Moderate Quality	03	00
C Low Quality	06	04
U Remove	05	00
Total	15	04

4.2. Category A and B trees under normal circumstances, are retained on development sites and influence and inform the design and site layout.

In some cases, specific construction methods will need to be used to protect them.

4.3. Category C trees under normal circumstances do not need to be retained in the development, unless they do not pose a constraint to the development proposal.

4.4. Category U trees should be removed due to reasons of health & safety or sound arboricultural practice, regardless of the development proposals.

Section 5.0: Arboricultural Implications Assessment and Site-Specific Working Methods

5.1. This report is required for submission and informs the LPA on how the layout will achieve the successful healthy preservation of those trees to be retained.

5.2. There are several main constraints posed by trees in relation to them being present on a development site.

The area of the tree's root system can pose a significant problem to the development due to potential root compaction and the desiccation by means of digging. It is important to put root protection areas (RPA) on the relevant drawings once the trees have been categorized.

RPA's will only take into consideration what is below the ground. The height and spread of the trees crown, species characteristics such as evergreen or deciduous, branch drop, foliage density, fruit fall, honeydew drip, etc. may also cause certain restraints. These attributes can significantly affect the living conditions or the land use. This may include the loss of light or even too much sunlight in one area.

5.3. Tree Preservation Orders (TPO) and conservation areas will play a part in the restraints in the planning application process, once the application is approved, they then become exempt.

5.4. The trees that are to be retained and their location will play a key role. It is important to take into consideration of the proposed development plan, if they are incompatible due to their location for the access of the machinery, scaffolding, barriers, etc. then there will be an issue regarding the tree's retention.

5.5. In the event of a large, over-mature or veteran tree, it is important that there is an adequate amount of space left to facilitate the longevity of the tree as well as any future maintenance.

5.6. Tree Constraints and Potential Impacts

Demolition of existing bungalow and development of dwelling

Potential Impacts:

5.6.1. The increase in vehicle traffic, plant and machinery produces a very real threat particularly to T1, however, will include the remaining trees and vegetation, due to machinery, plant and operatives that will be carrying out their duties whilst the proposed development works are ongoing, as well as the temptation to maximize space on the lawned areas for vehicles, machinery and plant, which may lead to building materials and chemicals being stored within the vicinity of the trees. Without adequate protection, the RPA of T1 and remaining vegetation may be infringed upon, resulting in soil compaction, and accidental injurious contact to tree stems and lower canopies.

5.6.2. T4, T5, T6, T14 and T15 are all dead.

Although all the trees do not pose a direct restraint to the development, they are all located directly adjacent to the public highway and have all died which will increase the likelihood of branch/tree failure that may result in harm or damage.

5.6.3. A large portion of G3 is in indirect and direct conflict with the proposed demolition and development. The current plans and site layout will result in their removal.

5.6.4. All landscaping, hard or soft, that enters within the RPA of the retained trees will increase the potential for soil compaction, root damage, and detrimentally affecting the root environment due to soil level changes, whether that is an increase of soil volume within the root area or removal of soil due to stripping.

5.6.5. Building materials stored within the RPA of T1 will lead to soil compaction, and potentially, soil contamination from chemicals.

5.7. Significance of Impacts

5.7.1. If significant root severance (severance to an overall volume to RPA of 20% or greater) was to occur to any vegetation and/or trees on site, it will likely lead to having a detrimental effect to the tree. Root loss of a tree reduces photosynthesis, thus slowing down the assimilation of CO² and the production of carbohydrates required for growing new roots. This will also put the trees at risk from

severe drought stress in the future, especially if there are several dry seasons. The recovery rate is terribly slow which means that the trees and vegetation will be vulnerable to drought spells for several years after the severance occurred – possibly five years or more.

5.7.2. As previously stated, several trees on site are at risk of soil compaction from plant, machinery and construction vehicles that may operate on site, and the constant footfall from the operatives carrying out their duties. The ideal soil mix for trees is 45% soil particles, 5% organic matter and 50% air and water. If there is excessive traffic or footfall on the tree's root zone, then the soil is squashed (compacted) reducing the space for air and/or water. This will ultimately lead to several symptomatic signs (sparse foliage on the tips of the branches, prolific epicormic in the inner tree crown, crown die-back/retrenching and significant deadwood) that compaction is having a detrimental effect on the tree.

5.7.3. If vehicles, plant, machinery and building materials were to make direct contact with a tree stem or lower canopy, there will almost certainly be damage caused to the tree and will likely lead to bark damage, branch rip wounds and broken hanging branches. Open wounds on tree stems or branches can often lead to infestations of pathogens or pests.

5.8. Recommended Protection Measures and Method of Working

5.8.1. All site operatives, builders and/or developers must be briefed on the Arboricultural Method Statement (AMS) within this report and informed of the consequences of breaches of planning conditions prior to any works commencing, all works agreed by the LPA within this report must be always adhered to, any deviation from some must be confirmed and authorized in writing by the LPA and Arboriculturalist.

5.8.2. All Category U trees (T4, T5, T6, T14 and T15) are to be removed prior to the commencement of the development.

5.8.3. A temporary access to be installed prior to the commencement of the development to allow access for heavy machinery, plant, construction vehicles. Access to be used throughout until development of the proposed dwelling is completed. *Please see Appendix E for location.*

5.8.4. Category C trees T2 and T3 are to be removed to facilitate temporary access to the site. Both T2 and T3 are of low quality and showing visible signs of decline.

5.8.5. Category C group G3 is to be removed to facilitate the development. G3 is of low quality and made up of small trees and shrubs that offer no visual impact to the immediate street scene aesthetics and generally not visible to the immediate neighbors.

5.8.6. T1, and the remaining trees and vegetation on site are to be protected by barriers (default specification as outlined within BS 5837: 2012 Sec 6.2.2.2) before any materials or machinery are brought onto the site, and before any demolition, development or stripping of soil commences and remain in place until the completion.

The default specifications for the security fencing must consist of a vertical and horizontal scaffold framework, well braced to resist impact, as illustrated in Appendix C in accordance with the BS 5837: 2012. Vertical tubes should be spaced at a maximum of 3m and driven securely into the ground. Where the site circumstances and associated risk of damaging incursion into the RPA do not necessitate the default level of protection, stabilizer struts should be secured with ground pins or mounted on a block tray as shown figure b of the Appendix C

The protected areas of the development site should be regarded as sacrosanct, and once the barriers and ground protection are installed, should not be altered or removed without prior recommendation by the project arboriculturist and, where necessary, approval from the local planning authority.

(BS 5837: 2012 Sec 6.2.1.5) Arboriculturist to confirm barriers and stem protection has been correctly set out prior to any works commencing.

5.8.7. All skips, construction vehicles, plant and machinery, building materials and chemicals must be stored out of the development area, directly in front of the existing dwelling. *Please see Appendix E for location.* All construction vehicles, plant and machinery must be fueled in this area. Where fuel or other chemicals are stored on site, a risk assessment will be carried out to identify if emergency spillage kits are needed to restrict the environmental impact of accidents. Soil bunding or a supporting framework covered in heavy in duty plastic sheeting will be installed where there is a risk of spillages contaminating the trees RPA. This specifically applies to cement mixing areas. Building materials shall be ordered as when needed to accommodate the small area.

5.8.8

Order of Arboricultural Mitigation Works
<i>All works detailed above must be carried out in the order below, unless otherwise specified by the arboriculturalist</i>
1. T3 and T4 removed and temporary access installed
2. All tree and tree group removal to commence
3. Security fencing is installed
4. Primary demolition and development can commence
5. On completion of the development security fencing can be removed

Section 6.0: General Working Methods for Surveyed Trees

6. The following guidance offers general working methods in accordance with the following methods & measures and BS 5837:2012 guidance. Site specific method of working have been outlined within section 5 above and would prevail if there is any conflict with the below.

6.1. Barriers and Ground Protection

6.1.1. Existing trees that are being retained on site to be protected by barriers and ground protection where shown within the Appendix F (TPP) before any materials or machinery are brought onto the site, and before any demolition, development or stripping of soil commences and remain in place until the completion.

6.1.2. The protected areas of the development site should be regarded as sacrosanct, and once the barriers and ground protection are installed, should not be altered or removed without prior recommendation by the project arboriculturist and, where necessary, approval from the local planning authority.

6.1.3. (BS 5837: 2012 Sec 6.2.1.5) Arboriculturist to confirm barriers and stem protection has been correctly set out.

6.1.4. The default specifications should consist of a vertical and horizontal scaffold framework, well braced to resist impact, as illustrated in Appendix D in accordance with the BS 5837: 2012. Vertical tubes should be spaced at a maximum of 3m and driven securely into the ground. Where the site circumstances and associated risk of damaging incursion into the RPA do not necessitate the default level of protection, stabilizer struts should be secured with ground pins or mounted on a block tray as shown figure b of the Appendix D.

6.1.5. Existing hard surfacing within the RPA's of the existing trees that is not proposed for re-use as part of the proposed development should be retained to act as temporary ground protection during construction, rather than being removed during demolition where possible.

6.1.6. Where the option above is not achievable or unmade ground would be exposed to construction damage within the RPA's of the existing trees, RPA's to be protected by using inter-linked ground protection board placed on top of a 150mm depth woodchip, laid onto a geotextile membrane for pedestrian-operated plant up to gross weight of 2t. An alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice for wheeled or tracked construction traffic exceeding 2t gross weight.

6.2. Demolition and Removal of existing structures and hard surfacing within the RPA's

6.2.1. Where an existing hard surface or feature such as wall is scheduled for removal, care should be taken not to disturb tree roots that might be present beneath it. Hand-held tools or appropriate machinery should be used (under arboricultural supervision) to remove the existing surface, working backwards over the area, so that the machine is not moving over the exposed ground' as outlined within BS 5837: 2012 sec 7.3.6.

6.2.2. Where existing hard surface or wall is to be removed within the RPA's of the existing trees, no excavation to be carried out below the existing make up or foundation levels unless otherwise specified.

6.2.3. The initial 'breaking up' of any hard surface is to be undertaken with low impact pneumatic tools (not breakers attached to diggers or JCB's) or by hand if possible.

6.2.4. The removal of debris should be carried out by hand where possible.

6.2.5. All plant, machinery and vehicles that are operating on site that are engaged in the demolition should work outside the RPA's, on ground protection or existing hard surfaced areas.

6.2.6. Where trees stand adjacent to structures to be removed, the demolition should be undertaken inwards within the footprint of the existing building (often referred to as "top down, pull back").

6.2.8. Where demolition is proposed on a site where trees are to be retained, access facilitation pruning should be undertaken as necessary to prevent injurious contact between demolition plant and the tree(s). In some cases, working space may be provided by temporarily tying back tree branches. Pruning or tying should be undertaken in accordance with a specification prepared by an arboriculturist.

6.3. Avoiding Physical Damage to Roots

6.3.1. In accordance with BS 5837 2012 sec 7.2.2- 7.2.4) the following guidance is to be adhered to when retained tree roots are exposed.

6.3.2. All excavations work within the existing soft landscaped areas that are within the RPA's is to be undertaken carefully and with the use of hand tools and compressed air soil displacement methods.

6.3.3. 'Roots, whilst exposed, should immediately be wrapped or covered to prevent desiccation and to protect them from rapid temperature changes. Any wrapping should be removed prior to backfilling, which should take place as soon as possible.

6.3.4. Roots smaller than 25 mm diameter may be pruned back, making a clean cut with a suitable sharp tool (e.g. bypass secateurs or handsaw), except where they occur in clumps. Roots occurring in clumps or of 25 mm diameter and over should be severed only following consultation with an arboricultural consultant as such roots might be essential to the tree's health and stability.

6.3.5. Roots bigger than 25mm diameter should not be cut as this would have major impact on the health and stability of the trees.

6.3.6. Prior to backfilling, retained roots should be surrounded with topsoil or un-compacted sharp sand (builders' sand should not be used because of its high salt content, which is toxic to tree roots), or other loose inert granular fill, before soil or other suitable material is replaced. This material should be free of contaminants and other foreign objects potentially injurious to tree roots'.

6.4. Permanent hard surfacing within the RPA's

6.4.1. Where an existing hard surface is to be replaced with new, no excavation is to be carried out beyond the existing make up levels.

6.4.2. All works to be carried out by hand-held tools or appropriate machinery.

6.4.3. Existing hard surface to be retained until new surface or topsoil to be laid in order to protect the RPA's of the existing trees.

6.4.4. Ground protection to be installed within the root protection areas within the RPA's of the existing trees if existing hard surface is removed.

6.4.5. The new surface to be constructed with machinery working forward from the surface as it is construction.

6.4.5. All excavation in relation to the installation of the new hard surfacing to be carried out in accordance with the section 4.3 and 4.4 above.

6.5. Additional precautions outside the exclusion zones

6.5.1. (BS 5837:2012 sec 6.2.4.2) 'Fires on sites should be avoided if possible. Where they are unavoidable, they should not be lit in a position where heat could affect foliage or branches. The potential size of a fire and the wind direction should be taken into account when determining its location and it should be attended at all times until safe enough to leave'.

6.5.2. (BS 5837:2012 sec 6.2.4.3) 'Any materials whose accidental spillage would cause damage to a tree should be stored and handled well away from the outer edge of its RPA'.

6.6. Arboricultural Site Supervision/ Monitoring

6.6.1. In accordance with BS 5837:2012 sec 6.3 there should be an 'audible system of arboricultural site monitoring. This should extend to arboricultural supervision whenever construction and development activity is to take place within or adjacent to any RPA'.

Appendix A:

Key to Survey Criteria and Headings

- Reference Number — Identification Given to individual trees (i.e. T1 to T4) / Groups (i.e. G1 to G4)
- Species (Common Name Reference) — Individual Tree Species Name
- Stem Diameter — Diameter of stem taken at 1.5 meters from ground level (taken in mm)
- Branch Spread — N (north) / E (east) / S (south) / W (west)
- Existing Height Above Ground Level — Branch (first significant branch and direction of growth) / Canopy
- Life Stage — Y = Young / SM = Semi-Mature / EM = Early Mature / M = Mature / OM = Over Mature
- General Observations — Structural / physiological condition & preliminary management recommendations
- Estimated Remaining Contributions (yrs.) — <10, 10+, 20+, 40+
- Category Grading — In accordance with cascade chart for tree quality assurance
- #T — Due to restricted access, partial or all tree data is an estimate

Main Category

U	Trees unsuitable for retention
A	Trees to be considered for retention
B	
C	

Sub Category





1	Mainly Arboricultural Qualities
2	Mainly Landscape Quality's
3	Mainly Cultural Values, Including Conservational

Reference Number	Common Species Name (Scientific name abbreviation)	Height (m)	Stem Diameter (mm)			Branch Spread (m)				Existing height above ground level		Life Stage (Age)	General Observations		Estimated Remaining Contribution (Yrs.)	Category Grading	Root Protection Area (m2)
			Multistem (MS)	Comb MS	Single stem (SS)	(N)	(E)	(S)	(W)	Branch & Direction	Canopy		Structural / Physiological condition	Preliminary Management recommendations			
T1	Silver birch (<i>Betula pendula</i>)	22			582	9	10	6.5	8	2.9 S	1	M	Minor deadwood	None at present	40+	A2	153
T2	Norway spruce (<i>Picea abies</i>)	16.1			505	2	1	3	3	3 S	2	EM	Prolific ivy throughout, crown dieback	None at present	10+	C1	115
T3	Norway spruce (<i>Picea abies</i>)	16.2			326	1.5	1.5	1.5	1.5	3 S	3	SM	Prolific ivy throughout, crown dieback	None at present	10+	C1	48
T4	Norway spruce (<i>Picea abies</i>)	16.2			583	1.5	1.5	1.5	1.5	3	3	SM	Dead tree, historic stem failure, prolific ivy on stem	Remove	<10	U	154
T5	Norway spruce (<i>Picea abies</i>)	16.1			328	1.5	1.5	1.5	1.5	3	3	SM	Dead tree, prolific ivy on stem, bark necrosis	Remove	<10	U	49
T6	Norway spruce (<i>Picea abies</i>)	16			358	2	2	2	2	4	2	EM	Dead tree, prolific ivy on stem, bark necrosis	Remove	<10	U	58
T7	False Acacia (<i>Robinia pseudoacacia</i>)	13.8			394	2.5	2.5	7.5	7	3.2 W	5	SM	Minor deadwood	None at present	20+	B2	70
T8	Hawthorn sp (<i>Crataegus</i> sp)	7.7			386	2	3	4	3	1.6 S	1.4	M	Prolific ivy throughout	None at present	10+	C1	67
T9	Sweet chestnut (<i>Castanea sativa</i>)		335	572		7.5	2	4	7	4 W	3.5	EM	Third party tree. Multi stem tree, bark damage to basil area	None at present	10+	C1	148
			279														
			371														
			0														

Reference Number	Common Species Name (Scientific name abbreviation)	Height (m)	Stem Diameter (mm)			Branch Spread (m)				Existing height above ground level		Life Stage (Age)	General Observations		Estimated Remaining Contribution (Yrs.)	Category Grading	Root Protection Area (m2)
			Multistem (MS)	Comb MS	Single stem (SS)	(N)	(E)	(S)	(W)	Branch & Direction	Canopy		Structural / Physiological condition	Preliminary Management recommendations			
T10	Ash (<i>Fraxinus excelsior</i>)		306	398		3	2	2	1	4 W	3.5	EM	Third party tree. Multi stem tree, bark damage to basil area	None at present	10+	C1	72
			255														
			0														
			0														
G1	10 x Sweet chestnut (<i>Castanea sativa</i>)	16			400	5	5	5	5	4 S	2.5	EM	Third party trees, data is an average of group. Historical stem failure, fire damage present to several trees, basil cavities	None at present	10+	C1	72
G2	30 x Sweet chestnut (<i>Castanea sativa</i>)	18			400	5	5	5	5	4 S	2	EM	Third party trees, data is an average of group. Historical stem failure, basil cavities	None at present	10+	C1	72
G3	Mixed species shrub and small tree group	2			100	1	1	1	1	0.1	0.1	EM	Data is an average of group.	None at present	10+	C2	5
T11	Yew (<i>Taxus Baccata</i>)	6.3			212	2	1	3	3	0.9 N	0.5	SM	None at present	None at present	20+	B1	20
T12	Yew (<i>Taxus Baccata</i>)	6			227	1	4	5.5	3.5	1.2 S	0.4	SM	Stub cuts on lower stem, crossing rubbing branches, low crown	None at present	20+	B2	23

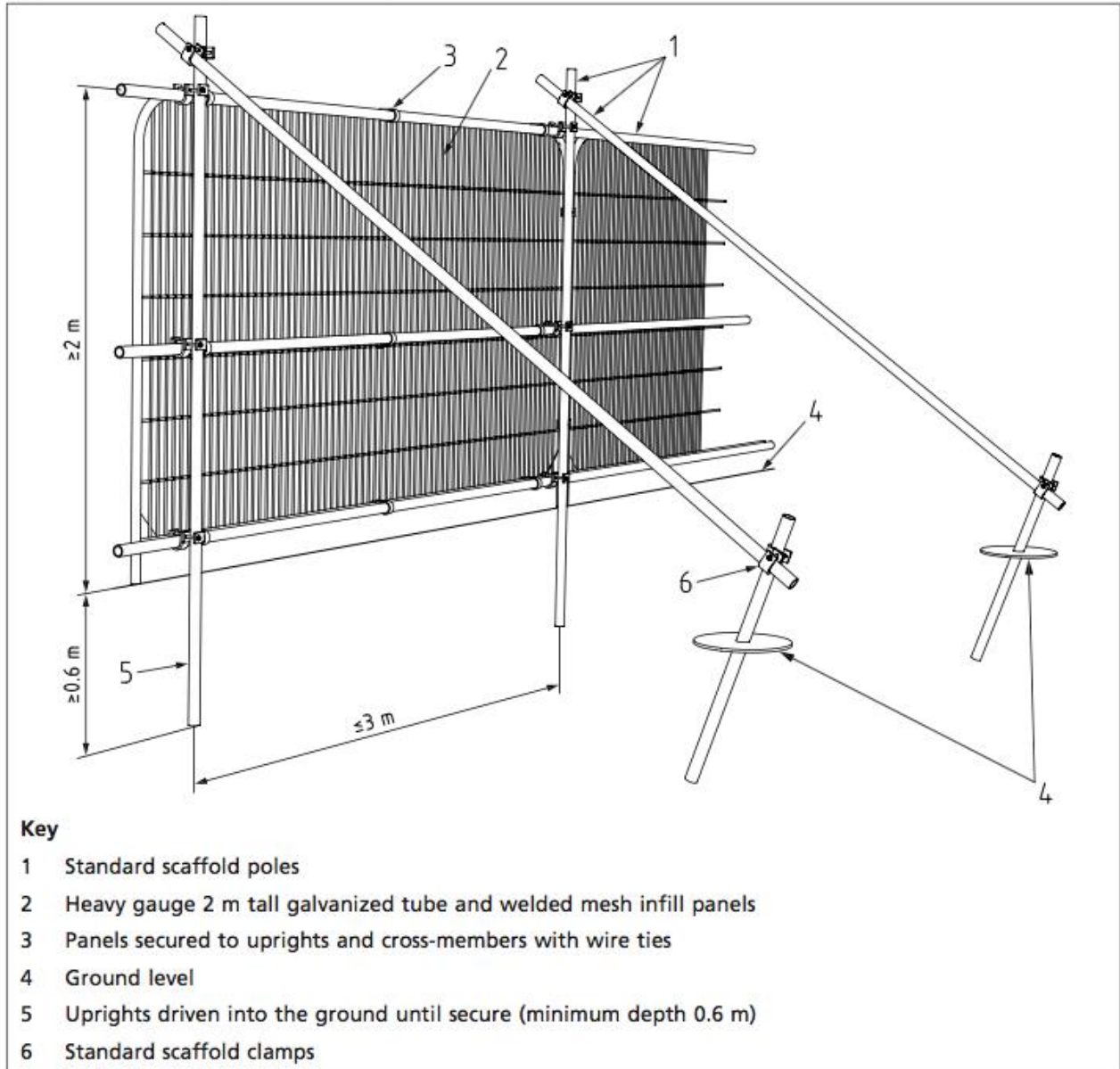
Reference Number	Common Species Name (Scientific name abbreviation)	Height (m)	Stem Diameter (mm)			Branch Spread (m)				Existing height above ground level		Life Stage (Age)	General Observations		Estimated Remaining Contribution (Yrs.)	Category Grading	Root Protection Area (m2)
			Multistem (MS)	Comb MS	Single stem (SS)	(N)	E	(S)	(W)	Branch & Direction	Canopy		Structural / Physiological condition	Preliminary Management recommendations			
T13	Leyland cypress (<i>Cupressus x leylandii</i>)	6.8			184	2.5	2	2	2	0.6 S	0.2	Y	None at present	None at present	10+	C1	15
G4	40+ x Sweet chestnut (<i>Castanea sativa</i>)	19			400	5	5	5	5	0.5 S	0.2	EM	Third party trees, data is an average of group. Historical stem failure, basal cavities	None at present	10+	C1	72
T14	Norway spruce (<i>Picea abies</i>)	16			158	1.5	1.5	1.5	1.5	2	2	SM	Poor vitality, crown dieback, broken hanging branch	Remove	<10	U	11
T15	Norway spruce (<i>Picea abies</i>)	16.8			389	1.5	1.5	1.5	1.5	1	1	EM	Dead tree, prolific ivy on stem	Remove	<10	U	68

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)	Identification on plan
Trees unsuitable for retention (see Note)		
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	<ul style="list-style-type: none"> Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unusable after 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 infested 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 <p><i>NOTE</i> Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</p>	
Trees to be considered for retention		
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	1 Mainly arboricultural qualities 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)	
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	2 Mainly landscape qualities 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	
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	3 Mainly cultural values, including conservation Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture) Trees with material conservation or other cultural value 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	

Appendix C:

Figure 2 Default specification for protective barrier



TREE PROTECTION AREA KEEP OUT!

**TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND ARE SUBJECT OF A
TREE PRESERVATION ORDER
(TOWN & COUNTRY PLANNING ACT 1990)**

CONTRAVENTION OF TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION

THE FOLLOWING MUST BE OBSERVED BY ALL PERSONS:-

THE PROTECTIVE FENCING MUST NOT BE REMOVED

NO PERSON SHALL ENTER THE PROTECTIVE AREA

NO MACHINE OR PLANT SHALL ENTER THE PROTECTION AREA

NO MATERIALS SHALL BE STORED IN THE PROTECTION AREA

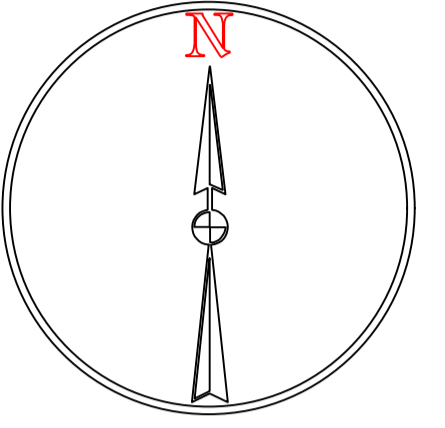
NO SPOIL SHALL BE DEPOSITED IN THE PROTECTION AREA

NO EXCAVATION SHALL OCCUR IN THE PROTECTION AREA

**ANY INCURSION INTO THE PROTECTED AREA MUST BE
WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY**

Appendix D

Tree Constraints Plan (TCP)



BS 5837 Legend

●	Category A Tree
●	Category B Tree
●	Category C Tree
●	Category U Tree
●	Category C Group
	Root Protection Area
	Tree Canopy

TREE SURVEY SCHEDULE FORM

Client: **Wardes Properties**
Date of Survey: **15/05/2023**
Arboricultural Surveyor: **Thomas Borer**

Tree ID	Category	Species	DBH	Height	Health	Location	Notes
Ref. T1	A	...	...	...	...	...	...
Ref. T2	C	...	...	...	...	...	...
Ref. T3	C	...	...	...	...	...	...
Ref. T4	U	...	...	...	...	...	...
Ref. T5	U	...	...	...	...	...	...
Ref. T6	U	...	...	...	...	...	...
Ref. T7	B	...	...	...	...	...	...
Ref. T8	C	...	...	...	...	...	...
Ref. T9	C	...	...	...	...	...	...
Ref. T10	C	...	...	...	...	...	...
Ref. T11	B	...	...	...	...	...	...
Ref. T12	B	...	...	...	...	...	...
Ref. T13	C	...	...	...	...	...	...
Ref. T14	U	...	...	...	...	...	...
Ref. T15	U	...	...	...	...	...	...

BS5837:2013 Trees in relation to construction - Categories and definitions

Tree Categories:

- Category A:** Trees of exceptional quality and value. These trees are considered to be of high amenity value and are likely to be protected by law.
- Category B:** Trees of high quality and value. These trees are considered to be of high amenity value and are likely to be protected by law.
- Category C:** Trees of medium quality and value. These trees are considered to be of medium amenity value and are likely to be protected by law.
- Category U:** Trees of low quality and value. These trees are considered to be of low amenity value and are likely to be protected by law.

PROJECT NAME
1 WARDES BUNGALOWS

PROJECT No

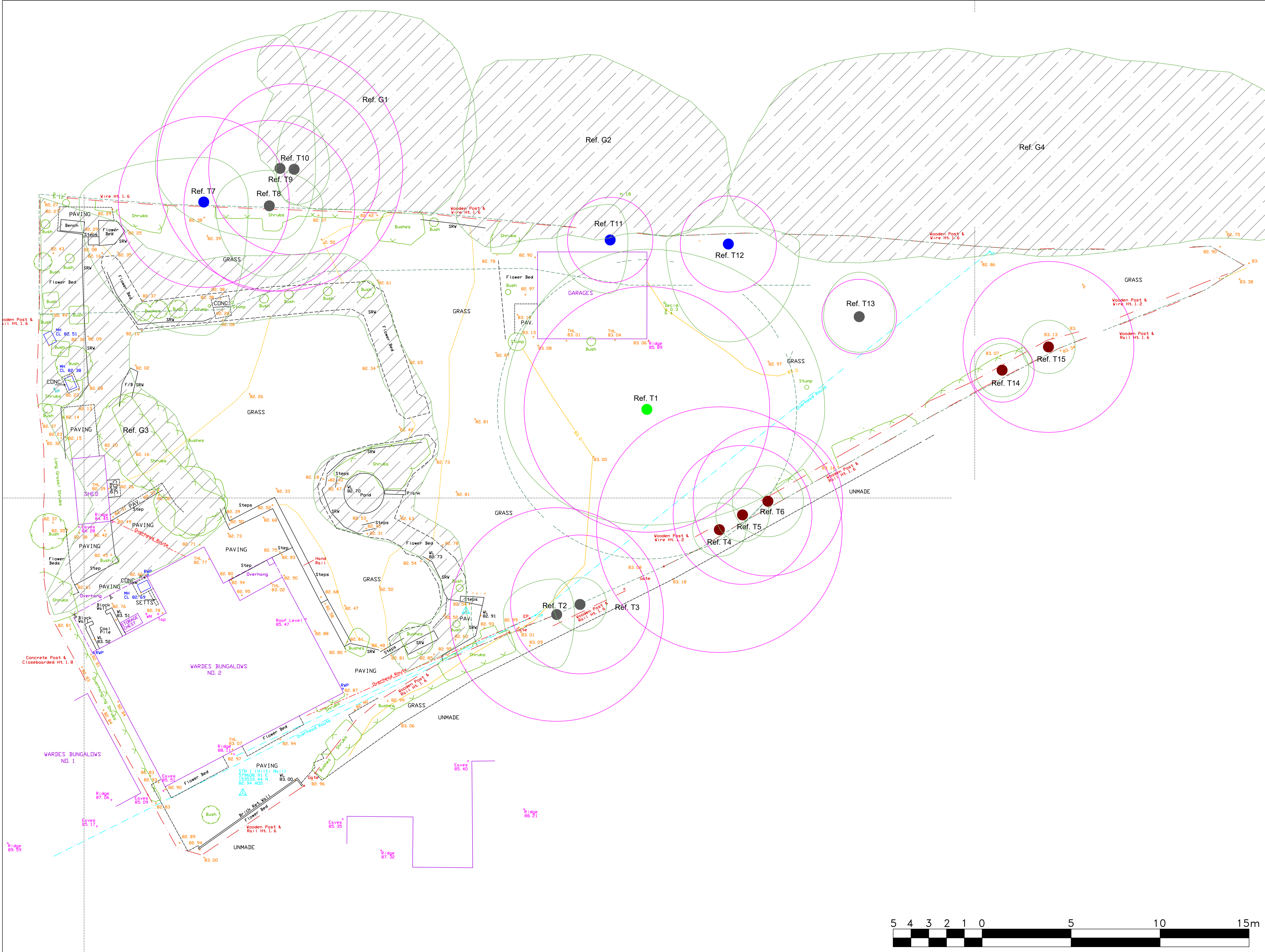
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CHK'D
TGB

DRAWING NAME
Tree Constraints Plan

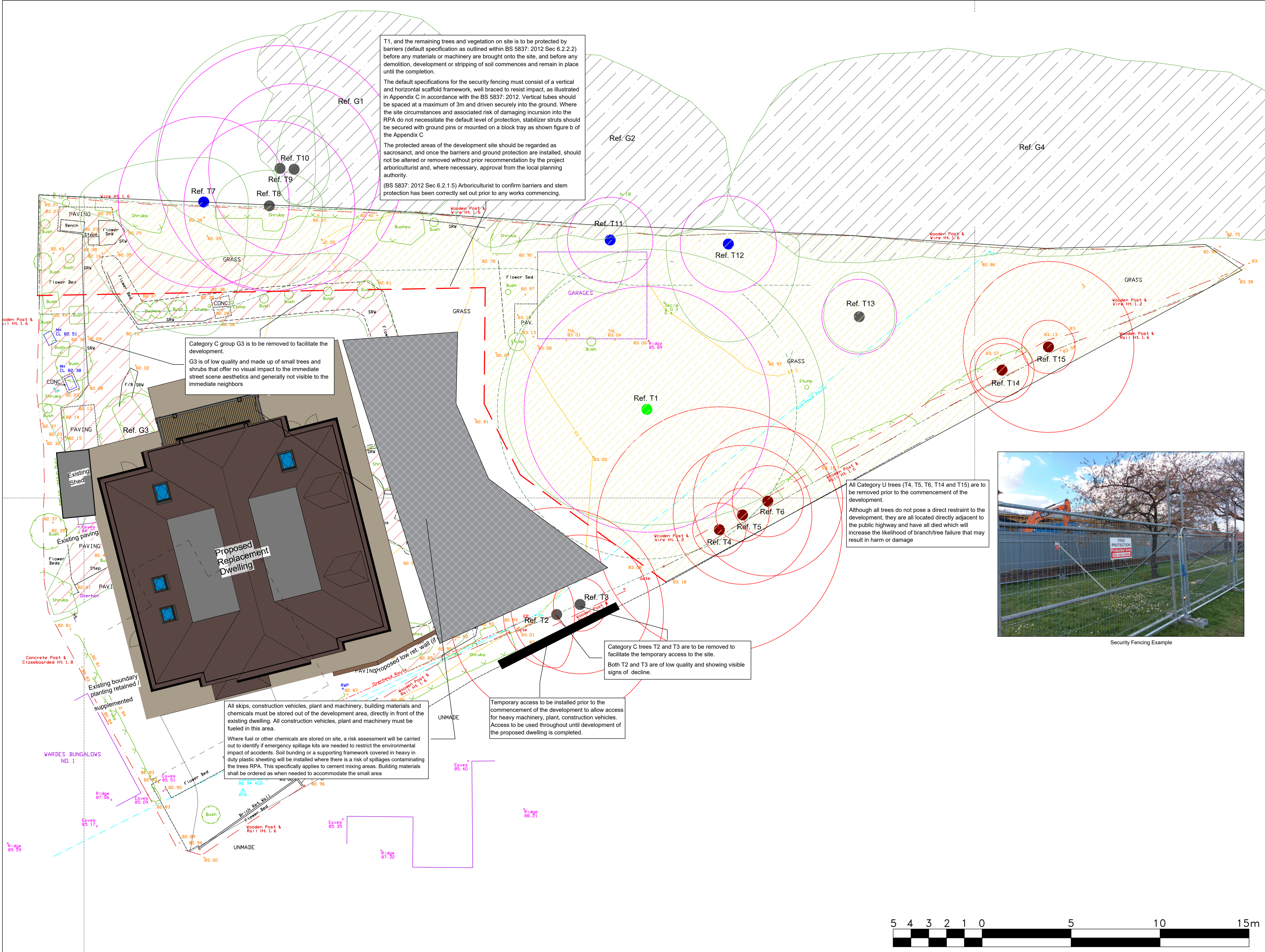
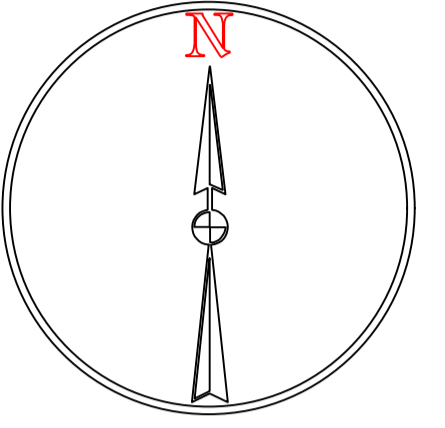
DWG No
TCP01

REV No



Appendix E

Tree Protection Plan (TPP)



BS 5837 Legend

	Category A Tree
	Category B Tree
	Category C Tree
	Category U Tree
	Category C Group
	Root Protection Area
	Tree Canopy
	Tree to be Removed
	Category C Group to Remove
	Construction Exclusion Zone
	Security Fencing
	Storage Area

TREE SURVEY SCHEDULE FORM

Client: Wades Bungalows
Date of Survey: 15/05/2023
Arboriculturist: Tom Thomas

Ref	Tree Category	Tree Name	Tree ID	Tree Status	Tree Health	Tree Location	Tree Protection	Tree Removal
Ref. T1	Category A	...	...	...	...	...	...	...
Ref. T2	Category C	...	...	...	...	...	...	...
Ref. T3	Category C	...	...	...	...	...	...	...
Ref. T4	Category U	...	...	...	...	...	...	...
Ref. T5	Category U	...	...	...	...	...	...	...
Ref. T6	Category U	...	...	...	...	...	...	...
Ref. T7	Category B	...	...	...	...	...	...	...
Ref. T8	Category C	...	...	...	...	...	...	...
Ref. T9	Category C	...	...	...	...	...	...	...
Ref. T10	Category C	...	...	...	...	...	...	...
Ref. T11	Category B	...	...	...	...	...	...	...
Ref. T12	Category B	...	...	...	...	...	...	...
Ref. T13	Category C	...	...	...	...	...	...	...
Ref. T14	Category U	...	...	...	...	...	...	...
Ref. T15	Category U	...	...	...	...	...	...	...



Security Fencing Example

BS 5837: 2012 Trees in relation to construction - Categories and definitions

Tree Categories:

- Category A:** Trees of high quality and value that are considered to be at risk of significant damage or loss.
- Category B:** Trees of medium quality and value that are considered to be at risk of significant damage or loss.
- Category C:** Trees of low quality and value that are considered to be at risk of significant damage or loss.
- Category U:** Trees that are dead or dying and are considered to be at risk of significant damage or loss.

PROJECT NAME
1 WARDES BUNGALOWS

PROJECT No

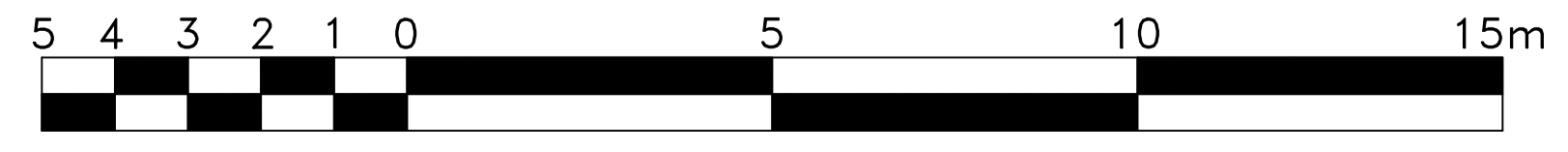
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A1 @ 1:100

CHK'D
TGB

DRAWING NAME
Tree Protection Plan

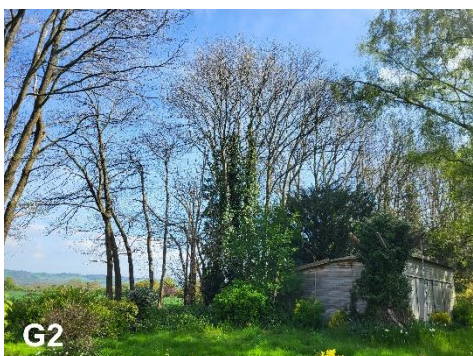
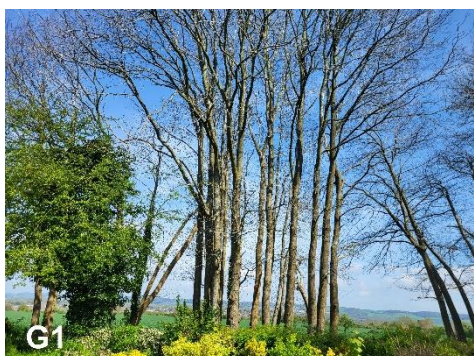
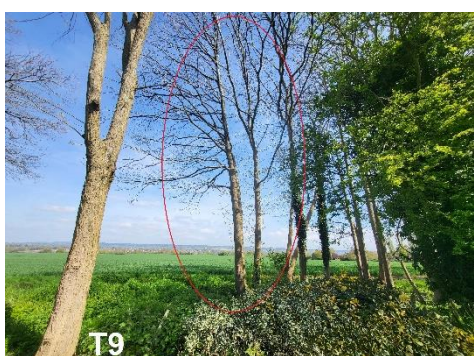
DWG No
TPP01

REV No



Appendix F

Photo Gallery





Appendix G

Site Notes

1329m

T1
O4013

19110

G1

G2

G4

T12
O4012

113

115

T14

O4015

T1

O4013
O4014
O4015

O4014

O4015



Assumed boundary

