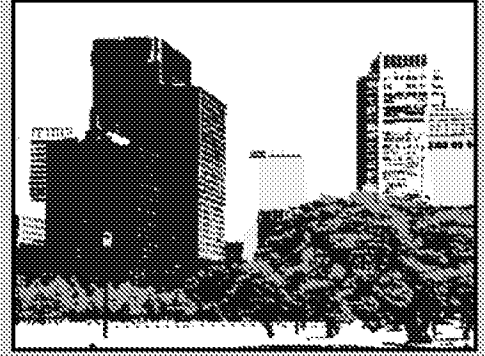
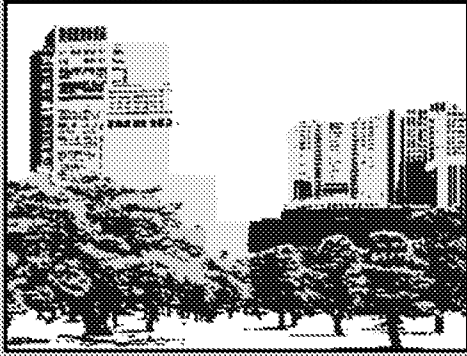




Arboricultural Implications Assessment and Method Statement



Land off Hook Lane, Westergate

Arboricultural Implications Assessment and Method Statement

LAND OFF HOOK LANE, WESTERGATE

Produced by:

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1 INTRODUCTION

- 1.1 **Instruction:** I am instructed by Metis Homes to report on trees that could be affected by a development proposal for land at Hook Lane, Westergate and prepare an Arboricultural Implications Assessment (AIA) and preliminary Arboricultural Method Statement (AMS) to support a planning application on the site.
- 1.2 **Document disclosure:** Initially, I was provided with a topographical survey (drawing reference '9DD2-Barnside'). This showed the positions of the significant trees on or near the site, together with the existing buildings and other important features. Subsequently, I was supplied with a copy of the proposed layout, (drawing reference '7632 – D01 – Site Plan_Preliminary') showing a new site configuration.
- 1.3 **Scope of report:** All my tree observations are of a preliminary nature, with the tree survey carried out from ground level without any investigations using invasive or diagnostic equipment. I was not able to fully view all the trees detailed in this report from all directions, as some were located on an adjacent private property, or in areas where access could not be achieved. I have therefore confined observations of them to what was visible from vantage points within the site. I have not checked the accuracy of the positions of the trees shown on the provided plans and I have estimated all dimensions unless otherwise indicated.
- 1.4 **The Tree Protection Plan:** This is included in Appendix 1 and is a composite drawing derived from the information provided. It shows the existing landscape features (from the land survey) in grey superimposed over the top of the proposed layout shown in black. This allows the relationship between the two to be clearly seen and an appropriate analysis of the implications of the proposed site changes to be undertaken. The Tree Protection Plan has also been annotated to show protection measures for the trees that could realistically be affected by the proposed development. It shows any activities in Root Protection Areas (RPAs) and if trees/hedges are to be removed, they are shown with a red dashed outline.

- 1.5 **Qualifications and experience:** This report is based on my site observations and I have come to my conclusions in the context of my experience as a former local government tree officer and a private practice arboricultural consultant. I have qualifications in both arboriculture and forestry and details of these, together with a career summary are provided in Appendix 6.
- 1.6 **Ecological issues and statutory tree protection:** Providing guidance on ecological issues is not within my sphere of expertise. However, trees and other vegetation can often provide nesting, roosting and feeding opportunities for protected species. Therefore, before any tree work proceeds on site, I advise that appropriate advice is sought to see whether the trees to be removed are being utilised by any protected species. At the time of writing, I have made no checks to ascertain whether any of the trees discussed are covered by tree preservation orders, or if the site is located in a conservation area. Therefore, any person intending to carry out any operations involving trees (before a formal planning consent is issued) should consult the council before any such works are undertaken.

2 SITE VISIT, DESCRIPTIONS, OBSERVATIONS AND SURVEY METHODOLOGY

- 2.1 **Site visit and description:** I visited the site most recently on 19 February 2019 to gather my tree data. The site is located in Hook Lane, which is situated in the village of Westergate. It is positioned on the western side of the road and consists of an area of land which is under grass and on which are standing a number of disused outbuildings. Most of the trees and hedges are located around, or close to the site margins, although there are a small number of trees located more internally within the site.
- 2.2 **Description of proposed development:** This development proposal is to demolish the existing outbuildings and construct fourteen new dwellings on the site.
- 2.3 **Soil assessment:** British Standard (BS) 5837: 2012 Trees in relation to design, demolition and construction – Recommendations advocates that a soil assessment should be carried out to inform decisions relating to Root Protection Areas (RPAs), tree protection, new planting and foundation design. I have consulted the British Geological Survey (BGS) website and their Geology of Britain viewer and this advises that the bedrock geology for the site is London Clay Formation - Clay, Silt and Sand. I did not undertake any excavations on site to confirm this and a full geotechnical site investigation may need to be undertaken to provide a more in-depth level of information regarding soil type for the site.
- 2.4 **Tree survey methodology:** My inspection of the trees was visual and did not involve any climbing or exploratory investigations. During my visit, I identified obvious hedges and groups where this was appropriate and I assigned an identification number to each, as shown on the plan in Appendix 1. I then collected the tree data included in Appendix 2 and placed the vegetation in one of four categories (U, A, B or C), as set out in British Standard (BS) 5837: 2012. I have included the BS categorisations in Appendix 5 for easy reference. Some of the trees were located in areas of understorey planting, or where ground conditions were boggy and full access was not possible. I have therefore relied on estimates of tree attributes in such situations given the clear limitations on survey efficacy. Where of relevance, I also estimated the crown spreads for each tree at the appropriate cardinal compass points and this information is also shown in the tree

schedule in Appendix 2. Although this document is not a full and detailed report on tree health and safety, any significant visible structural defects or physiological conditions identified, together with preliminary tree works, are also noted in the appropriate columns in the tree schedule in Appendix 2. However, a full post development tree inspection is recommended to establish that the trees retained pose acceptable levels of risk once the development has been completed.

- 2.5 **Data interpretation:** The Root Protection Area (RPA) calculations are included in Appendix 2. As set out in paragraphs 4.6.2 and 4.6.3 of the BS, the RPAs may have been adjusted as a matter of arboricultural judgement, to indicate the estimated likely position of tree roots. These modified (or unmodified) RPAs dictate the location of the tree protection barriers (which encompass the Construction Exclusion Zones - CEZs) and also determine the position of any ground protection measures. Tree protection details are shown on the plan included in Appendix 1. Where there is a need for incursions into RPAs, an assessment of the implications of these activities is set out in Section 3 (Arboricultural Implications Assessment) of this report. Where appropriate, details of suitable work methodologies to mitigate any impact are set out in Section 5 (Arboricultural Method Statement).

3 ARBORICULTURAL IMPLICATIONS ASSESSMENT

- 3.1 **Introduction to the implications of the development proposal on trees:** BS 5837: 2012 sets out in some detail how trees on development sites should be managed. It is usually accepted amongst arboriculturists that Category A (high quality) and Category B (moderate quality) trees are potential constraints on any development proposal, whereas vegetation belonging to Category C (low quality) is considered to be generally less important. Category U trees/hedges are in such poor condition that they are considered unsuitable for retention. This is because they cannot realistically be retained in an acceptable condition for longer than 10 years. Therefore, these can be effectively discounted in the context of a planning application. On this site a total of TWENTY ONE individual trees, groups and hedges were recorded during the tree survey and were assigned to the BS 5837 (2012) categories, as set out in Table 1 below:

Category A and B trees	A total of THREE trees/groups (G9, T13 and G15) were rated Category B
Category C trees	A total of SEVENTEEN trees, groups and hedges (H1, T2, T3, H4, G5, G7, G8, T10, T11, G12, G14, G16, G17, T18, T19, T20 and G21) were rated Category C
Category U trees	A total of ONE tree (T6) was rated Category U

Table 1: Tree numbers and BS categories

No Category A trees were recorded during my survey and I have focussed on the implications of the development proposal mainly on the Category B trees on or near the site and also on any Category C trees present. Of the total of TWENTY ONE trees, groups and hedges surveyed, only FIVE are scheduled to be wholly or partially removed to facilitate this development proposal. Additionally, ONE group will have activities arising from the development occurring within their RPAs. I have summarised the development related implications on trees in Table 2 below and set these aspects out in more detail in the following paragraphs.

Trees to be removed for development		Activities in RPAs arising from the development proposal	
Category A and B	Category C	Category A and B	Category C
n/a	H1 (partial removal), T2, H4, G16 and T18	n/a	G15 (ground protection provision)

Table 2: Trees lost and activities in RPAs arising from the development proposal

3.2 Direct implications of the development proposal - Tree retention and tree loss

3.2.1 **BS Category B trees to be retained (trees of moderate quality):** All the Category B trees surveyed will be retained and protected in accordance with the guidance set out in BS 5837 (2012). Consequently, no high or moderate category trees will need to be removed to facilitate this development proposal.

3.2.2 **BS Category C vegetation to be removed (or those of low quality):** As discussed, trees belonging to Category C are not normally retained where they would impose a significant constraint on the development or redevelopment of a site. In this instance, FIVE Category C trees, groups or hedges (see Table 2) are scheduled to be wholly or partially removed to facilitate the development proposal. I set out my view on the implications of the loss of this vegetation, as follows:

- **Hedge H1:** A section of this hedge will need to be removed to allow the new access into the site to be formed. At the same time, existing natural gaps along its length will be reinforced with new planting. The removal of the section will be noticeable in the locality. However, when seen in the context of the additional planting to reduce its current visual porosity and improve its appearance in the longer term, then I feel that the loss of the section indicated is not a particularly significant issue.

- **Tree T2:** This tree occupies a prominent position at the front of the site and its loss will have some implications. However, the tree is not in the best structural condition, with conjoined stems which suggests a somewhat limited safe and useful life expectancy. In my view, it would be appropriate to accept the loss of the tree now in order to allow a sensible site layout to be achieved and provide additional tree planting elsewhere on the site to mitigate its loss, as shown on the landscape architects drawings (see section 3.4.2).
- **Hedge H4:** This conifer hedge runs along the southern site boundary. It does not have to be removed to facilitate development. However, in my view it is rather incongruous given the countryside feel to the site and so it has been decided within the design team that it should be removed and replaced with new planting, as shown on the landscape architects drawings. The loss of the hedge will obviously be noticeable, but I feel that its removal and proposed replanting would actually be an improvement on the current situation and provide attractive boundary treatment in this area. However, if the council disagree, then the hedge could be retained (with appropriate tree surgery works) and the tree protection plan included in Appendix 1 adjusted accordingly.
- **Group G16:** This group of entwined and small sized trees is located well within the site and as such I feel that it makes no particular contribution to local amenity. Consequently, I do not believe that its loss will have any particular amenity or landscape implications.
- **Tree T18:** This rather unremarkable tree is located close to the common boundary between plots 1 and 2. The nearby dwellings and garages appear to be outside its RPA and so in principle it could probably be retained in a satisfactory condition within the development. However, its positioning would make the tree protection arrangements slightly awkward in respect of the nearby structures and so I have shown it to be removed. Again, its loss would be mitigated by the proposed new tree planting elsewhere on the site. But, as with hedge H4, if the council disagree and wish to see it retained, then the tree protection plan in Appendix 1 could be updated accordingly.

3.3 Additional implications arising from the development proposal

3.3.1 **BS Category B trees and activities in RPAs:** Ground protection measures will need to be deployed close to the trees in group G15 to allow sufficient room for the positioning of scaffolding and to provide suitable space for the movement of materials and personnel around the new building during its construction. This will be installed at the same time as the erection of the barriers and before any clearance or construction work starts on site. The provision of ground protection to allow pedestrian access in RPAs is supported in paragraph 6.2.3 of BS 5837 (2012) and I do not perceive this to be a particular problem provided it is implemented correctly and remains in situ during the construction phase of the project.

3.4 Additional site tree issues

3.4.1 **New tree planting:** As discussed, a small number of low category trees and hedges are proposed to be removed. New tree planting proposals are set out on the landscape plans prepared by TGD Landscape Ltd and submitted to the council under a separate cover. These proposals include suitable new tree planting that would be able to attain a significant size in the long term and help integrate the site into the local landscape. In my view, the new proposed planting is sensible and would successfully mitigate the trees and hedges to be removed.

3.4.2 **Tree protection during development:** A preliminary Arboricultural Method Statement is included in Section 5 and it details the various issues associated with successful tree protection in a development context on this site. If deemed appropriate by the council, this can be specifically referred to in a suitably worded planning condition attached to any subsequent consent.

4 SUMMARY OF THE IMPLICATIONS OF THE DEVELOPMENT ON TREES

- 4.1 **Summary:** Of the total of TWENTY ONE trees, groups and hedges surveyed, only FIVE are scheduled to be wholly or partially removed to facilitate this development proposal. Additionally, ONE group will have activities arising from the development occurring within their RPAs. The extent of the tree and hedge losses are modest and whilst noticeable in some instances, any removals will be mitigated by the provision of new planting elsewhere on the site as part of a comprehensive new landscape scheme for the project. Provided the new planting and tree protection measures set out in this report are realised, then the proposed development is arboriculturally acceptable and there will be a low risk of adverse impact on the trees and hedges scheduled to be retained.

5 PRELIMINARY ARBORICULTURAL METHOD STATEMENT

5.1 Tree protection issues

5.1.1 Tree Protection Plan (TPP): The plan in Appendix 1 is illustrative, but is based on the layout drawings and topographical survey provided. Therefore, all scaled measurements should be checked against the original design documents. The attached plan and all other information in this report should only be used for dealing with the tree protection issues and all other uses are prohibited, unless authorised by Ecourban Ltd. Normally, all the existing trees will have been numbered, with higher categories (A and B) highlighted in green and blue rectangles and low categories (C and U) highlighted in grey and red respectively. However, on this site no Category A trees were recorded. The plan also shows the locations of the proposed protective measures and any vegetation to be removed are indicated with a red dashed outline. The TPP is an important document and a copy of it should be kept on site for reference whilst the development is under construction.

5.1.2 Protective barriers: The approximate location of the barriers is illustrated on the plan in Appendix 1 and information on barrier design based on BS 5837 (2012) guidance is included in Appendix 3. The protective barriers will be erected before any materials or machinery are brought onto the site and before any clearance or construction activities occur. With the exception of the barrier positions around trees in group G9 (see below), once the protective barriers have been positioned, these will stay in situ for the duration of the construction, unless previously agreed with the arboricultural consultant or council's tree officer. There will be no access into the protected area and the storage of excavated debris and building materials will be prohibited, unless authorised by the arboricultural consultant, after discussion with the council's tree officer. No fires or fuel storage will be allowed within or near to protected areas under any circumstances.

- 5.1.3 **Temporary repositioning of barriers:** With regard to the trees in group G9, the barriers are positioned around the pond area for expediency and extend beyond the RPAs of these trees. I understand from my discussions with the drainage engineer that there will be a need for works to the pond to increase its holding capacity and to possibly fit flow control measures on the western side of the pond, where it will drain into the nearby ditch. The extent of these modifications has not been fully elucidated at the time this report was written, but controlled access beyond the tree protection barriers will obviously be required to allow this work to proceed. Consequently, selected barrier panels in this location will be temporarily displaced to allow access for this work to proceed under arboricultural supervision. However, the movement of the barriers will only occur immediately prior to the commencement of these potentially tree sensitive works, so as to reduce the risk of any incidental construction related damage occurring to any trees scheduled for retention.
- 5.1.4 **Ground protection measures:** Where the positioning of tree protection barriers is not feasible due to the need for construction access, then ground protection measures will be needed to safeguard RPAs. The position of ground protection is shown on the plan included in Appendix 1, with guidance for ground protection design from BS 5837 (2012) included in Appendix 4. The ground protection will be installed before any materials or machinery are brought onto the site and before any clearance or construction activities occur. In this instance it is proposed that the ground protection will consist of closely spaced scaffold boards over a compressible layer. Again, once the ground protection has been positioned, it will stay in situ for the duration of the construction phase, unless previously agreed with the arboricultural consultant or council's tree officer.
- 5.2 **Additional tree-related issues**
- 5.2.1 **Site supervision:** Site personnel will be properly briefed regarding the tree protection issues before any work starts, and the tree protection will be inspected periodically to ensure the retained trees are protected in accordance with this document and any conditions imposed by the council.

- 5.2.2 **Installation of new services or upgrading of existing services:** Final details relating to services are traditionally left until after planning consent has been granted by the council. Where practicable, all new services will be outside RPAs, but where existing services within RPAs require upgrading or new provision is required, great care will be taken to minimise any disturbance. Trenchless installation will be the preferred option, but if this is not feasible, any excavation will be carried out by hand in accordance with the guidelines set out in NJUG Volume 4 - Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.
- 5.2.3 **Storage of materials, cement mixing and washing points:** All construction storage areas, cement mixing and washing points for equipment and vehicles will be outside RPAs, unless otherwise agreed with the council.
- 5.2.4 **Contractors car parking, site offices and welfare facilities:** Whilst it is possible to have site offices and welfare facilities within RPAs, care is needed in their positioning and also in the connection of water, electricity and drainage to service them. Therefore, these will generally be sited outside the RPAs, unless agreed previously with the council. Contractor's car parking facilities will also be located away from retained trees.
- 5.2.5 **Tree works:** Any tree pruning or tree removal operations are set out in the tree schedule included in Appendix 2. Additionally, those trees scheduled for removal are also shown on the Tree Protection Plan included in Appendix 1.
- 5.2.6 **Planning, communication and preliminary timing of events:** It is not unusual for the details of timing of operations that could impact on important trees to only be finalised once planning consent has been given. Site managers, clearance and construction teams, and other important personnel are normally only appointed at this stage and it is these people who will be crucial in delivering the tree protection detailed in this report. My experience is that the pre commencement site meeting is critical in terms of avoiding damage to trees and this particular aspect, along with tree protection issues should be specifically referenced in a suitably worded planning condition imposed by the council. In the intervening time I propose the following preliminary cascading timetable of events to help minimise any risk of impact on important trees. However, the following schedule

may be modified at the pre-commencement meeting, subject to discussion with all parties and agreement with the council:

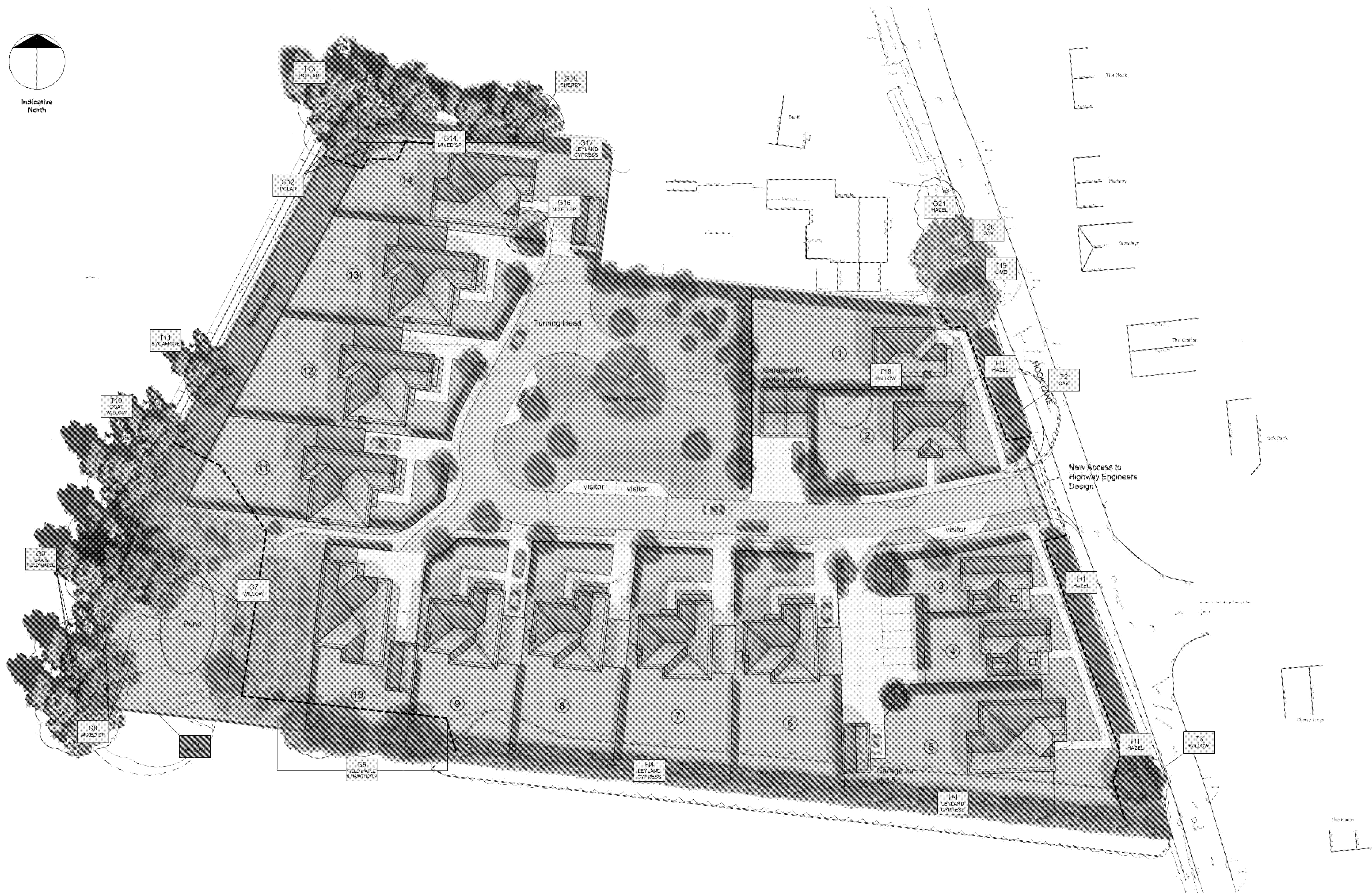
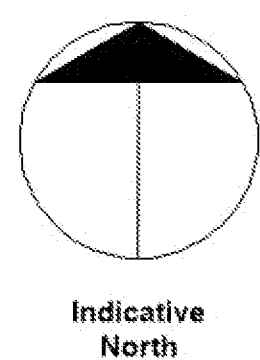
1. Pre-commencement site meeting
2. Extent of arboricultural supervision agreed
3. Tree works undertaken
4. Protective barriers erected before any clearance or construction activities occur on site and notification to the council that this is in place
5. Ground protection installed before any clearance or construction activities occur on site and notification to the council that this is in place
6. Temporary displacement of barriers under supervision to allow access to pond area for upgrade works
7. Tree protection only removed at the end of the construction phase when there is no longer any risk to trees

Barrie Draper BSc (Hons) Arb TechCert(ArborA) CertArb(RFS)
Arboricultural Consultant

Date: **20 March 2019**

APPENDIX 1: TREE PROTECTION PLAN

1 A1 plan



APPENDIX 2: TREE SCHEDULE AND INVENTORY

Background fill colour represents BS 5837 (2012) categories: A Category trees have green backgrounds, B Category trees have light blue backgrounds, C Category trees have grey backgrounds and U Category trees have red backgrounds.

Tree No.	Species	Ht (m)	Single stem diameter at 1.5m (cm)	Est. Dia. *	STEM DIAMETERS (Multi Stem)							Branch Spread (m)				Height above ground (m)	Age class	Notes	Management proposals	BS cat.	RPA area (m²)	RPA radius (m)	
					Multi stemmed trees with 1 - 5 stems (cm)					Multi stemmed trees with 1 - 5 stems combined (cm)	Multi stemmed trees >5 stems												
					1	2	3	4	5		Mean stem dia (cm)	No. of stems	N	E	S								W
All Trees																				Crown lift to 4m over site where needed and crown clean canopies			
H1	Mainly hazel with some hawthorn and elder	2	-	*Average	-	-	-	-	-	-	3	25	-	1	-	1	n/a	MA	Boundary hedge Severely pruned, gappy in places. 2.8Mwie	Remove section (see plan)	C1	10	1.8
T2	Oak	10	-	-	37	26	-	-	-	45	-	-	6	5	6	7	4	Y/MA	Twin stemmed, conjoined trunks. Some crown asymmetry.	Fell	C1	93	5.4
T3	Willow	16	30	*	-	-	-	-	-	-	-	-	5	6	3	4	4	MA	Influenced by proximity to adjacent trees. Limited access, brambles.		C1	41	3.6
H4	Leyland cypress	16	40	* Largest	-	-	-	-	-	-	-	-	4	-	-	-	2	MA	Unremarkable and undermanaged domestic conifer type planting.	Remove	C1	72	4.8

APPENDIX 2: TREE SCHEDULE AND INVENTORY

Tree No.	Species	Ht (m)	Single stem diameter at 1.5m (cm)	Est. Dia. *	STEM DIAMETERS (Multi Stem)							Branch Spread (m)				Height above ground (m)	Age class	Notes	Management proposals	BS cat.	RPA area (m²)	RPA radius (m)	
					Multi stemmed trees with 1 - 5 stems (cm)					Multi stemmed trees with 1 - 5 stems combined (cm)	Multi stemmed trees >5 stems												
					1	2	3	4	5		Mean stem dia (cm)	No. of stems	N	E	S								W
G5	Field maple and hawthorn	9	-	* Largest	-	-	-	-	-	-	7	20	5	-	-	-	3	MA/M	Linear grouping of small trees, some canopies covered in bramble. Located in wet boggy area, no direct access to survey. Poor structural frameworks and some dead bark on main stems.		C2	44	3.8
T6	Willow	9	-	*If standing	60	55	-	-	-	81	-	-	7	5	-	6	2	OM	Twin stemmed, partially collapsed tree.	Coppice and create habitat log piles in the locality	U	300	9.8
G7	Willow	9	-	* Largest	-	-	-	-	-	-	3	20	3	3	3	3	2	Y	Small multi stemmed trees. Coppiced regrowth.		C2	8	1.6
G8	Oak, goat willow and elder	4	28	* Largest	-	-	-	-	-	-	-	-	3	3	3	3	2	Y	Small trees and shrubs.		C2	35	3.4
G9	Mainly oak with field maple	15	95	* Largest	-	-	-	-	-	-	-	-	-	6	-	-	5	MA/M	Linear grouping of offsite trees. Deadwood throughout canopies and some indications of declining vitality. Ditch between stems and site.	Monitor.	B2	408	11.4
T10	Goat willow	9	-	*	-	-	-	-	-	-	13	8	4	5	4	-	3	M	Small, multi stemmed tree, poor structural framework.		C1	61	4.4

ARBORICULTURAL IMPLICATIONS APPRAISAL FOR LAND OFF HOOK LANE, WESTERGATE

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APPENDIX 2: TREE SCHEDULE AND INVENTORY

Tree No.	Species	Ht (m)	Single stem diameter at 1.5m (cm)	Est. Dia. *	STEM DIAMETERS (Multi Stem)							Branch Spread (m)				Height above ground (m)	Age class	Notes	Management proposals	BS cat.	RPA area (m²)	RPA radius (m)	
					Multi stemmed trees with 1 - 5 stems (cm)					Multi stemmed trees with 1 - 5 stems combined (cm)	Multi stemmed trees >5 stems												
					1	2	3	4	5		Mean stem dia (cm)	No. of stems	N	E	S								W
T11	Sycamore	8	35	*	-	-	-	-	-	-	-	-	3	3	3	-	3	Y	Small self-sown tree close to building. Tree located in dense area of brambles. No access to survey, or clear line of sight.		C1	55	4.2
G12	Poplar	13	18	*Average	-	-	-	-	-	-	-	-	1	1	1	-	4	Y	Young, progeny of nearby large tree. Offsite and located in dense area of bramble. No access to survey, or clear line of sight.		C1	15	2.2
T13	Poplar	22	60	*	-	-	-	-	-	-	-	-	-	5	5	-	5	MA	Offsite tree, no access to survey and no clear line of sight.		B1	163	7.2
G14	Mixed species including hazel, bay and privet	8	-	* Largest	-	-	-	-	-	-	3	25	-	3	-	-	n/a	M	Unremarkable and under managed boundary planting. Gappy in places.		C2	10	1.8
G15	Cherry	11	28	* Largest	-	-	-	-	-	-	-	-	-	5	4	3	3	Y/MA	Closely spaced offsite trees. No access to survey.		B2	35	3.4
G16	Oak and fruit	5	-	* Largest	11	11	-	-	-	16	-	-	2	2	2	2	2	Y	Small, multi stemmed and closely spaced trees. Poor structural framework.	Fell	C1	11	1.9
G17	Leyland cypress	9	14	* Average	-	-	-	-	-	-	-	-	-	-	3	-	n/a	Y	Unremarkable, offsite domestic conifer type planting.		C2	9	1.7

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					Multi stemmed trees with 1 - 5 stems (cm)					Multi stemmed trees with 1 - 5 stems combined (cm)	Multi stemmed trees >5 stems												
					1	2	3	4	5		Mean stem dia (cm)	No. of stems	N	E	S								W
T18	Willow	9	38	*	-	-	-	-	-	-	-	3	3	3	3	3	Y/MA	Small tree, covered in brambles. No direct access to survey and restricted line of sight. Unremarkable.	Fell	C1	65	4.6	
T19	Lime	11	-	* Main stems	-	-	-	-	-	-	15	6	-	-	5	3	3	Y/MA	Multi stemmed, poor structural framework.		C1	61	4.4
T20	Oak	8	36		-	-	-	-	-	-	-	-	5	2	2	3	Y	Small tree, unbalanced.		C1	59	4.3	
G21	Hazel, hawthorn and holly	7	-	* Largest	-	-	-	-	-	-	7	15	-	4	2	1	2	MA/M	Small trees and shrubs, severely pruned.		C1	33	3.3

ABBREVIATIONS:

Abbreviations	Meaning	Abbreviations	Meaning	Abbreviations	Meaning
T	Individual tree	M	Mature	RPA	Root Protection Area
G	Groups of trees	MA	Maturing	<	Less than
H	Hedge	Y	Young	>	More than

APPENDIX 2: TREE SCHEDULE AND INVENTORY

TREE SCHEDULE GUIDANCE NOTES:

Tree number	Assigned during the site visit and also referenced on the plan in Appendix 1.
Species	Common name and referenced to scientific name in the above list. Where I have some doubt over the actual tree species, the genus will have been noted followed by sp. Where trees are numerous and present in groups, not every individual species may have been noted.
Height	Measurement of total tree height using a laser hypsometer to nearest metre or where clear line of site is not possible then an estimate based on interpolation of heights of nearby measured trees.
Stem diameters	Measurement of stem diameter either at 1.5m above ground (or in accordance with BS guidance where trees have multiple stems) with a forester's girth measuring tape. Diameters followed by asterisk symbol indicate estimated diameters because of access difficulties, presence of ivy or other obstructions. Where trees are present in a group, the tree with the largest stem diameter within the group will have been measured/estimated.
Est. Dia.	Estimated diameters due to access restrictions are indicated with an asterisk
Branch spread	Where appropriate and where ground conditions allow, an estimate of the crown spread at each of the cardinal compass points. Where only part of the site is affected by trees, measurement may be in one or two directions only
Existing height above ground level	Distance in metres to first significant branch or canopy or a height above which crown lifting operations would not be appropriate
Age class	Simplistic estimate of tree age in one of FOUR categories (young, maturing, mature or over mature).
Notes	Although this document is not intended to be a full and detailed report on tree health and safety, any significant structural defects or physiological conditions have been identified where these were visible. Where no entries are recorded, this indicates no observable issues were identified. Where there is restricted access to the base of a tree, its attributes are assessed from the nearest point of access. Climbing inspections are not carried out during a walkover tree survey and, if heavy ivy is present, tree condition is assessed from what can be seen from the ground.
Management proposals	The inspection of all trees was of a preliminary nature and only defects visible from the ground have been identified. Each individual tree may not have been inspected closely because of access difficulties and only defects visible from the inspection point have been identified. Monitoring may be indicated where tree risk can be adequately managed by increased frequency of site inspections. Further investigation may be indicated where additional data may be required beyond a purely visual assessment. However, a full post development tree inspection is recommended to establish that the trees retained during construction pose acceptable levels of risk once the development has been completed.

APPENDIX 2: TREE SCHEDULE AND INVENTORY

BS 5837 (2012) Category	<i>Either U, A, B or C based on the BS 5837 (2012) guidance.</i>
RPA and RPA radius	<i>RPA and RPA radius calculations have been undertaken in accordance with the guidance set out in BS 5837 (2012).</i>

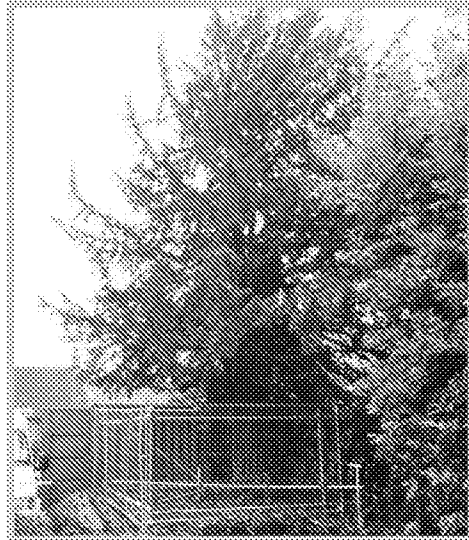
TREE INVENTORY:

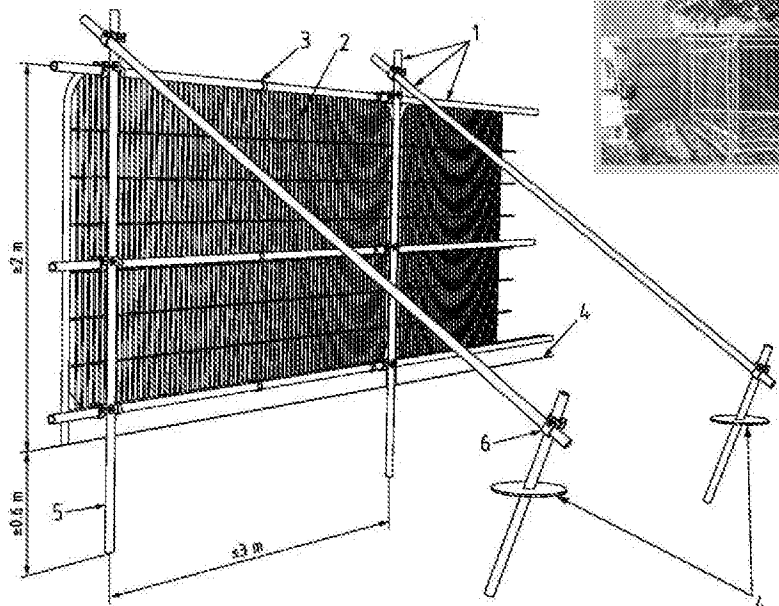
Common Tree Names	Scientific Tree Names		Common Tree Names	Scientific Tree Names
Bay	<i>Laurus nobilis</i>		Holly	<i>Ilex aquifolium</i>
Cherry	<i>Prunus</i> sp		Leyland cypress	x <i>Cupressocyparis leylandii</i>
Elder	<i>Sambucus nigra</i>		Lime	<i>Tilia</i> sp
Field maple	<i>Acer campestre</i>		Oak	<i>Quercus robur</i>
Fruit	<i>Malus</i> sp, <i>Prunus</i> sp or <i>Pyrus</i> sp		Poplar	<i>Populus</i> sp
Goat willow	<i>Salix caprea</i>		Privet	<i>Ligustrum ovalifolium</i>
Hawthorn	<i>Crataegus monogyna</i>		Sycamore	<i>Acer pseudoplatanus</i>
Hazel	<i>Corylus avellana</i>		Willow	<i>Salix fragilis</i>

ARBORICULTURAL IMPLICATIONS APPRAISAL FOR LAND OFF HOOK LANE, WESTERGATE

REPORT REF: 181090 - AIA 3

APPENDIX 3: ILLUSTRATIVE SPECIFICATION FOR TREE PROTECTION BARRIERS



Key

- 1 Standard scaffold poles
- 2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
- 3 Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6 m)
- 6 Standard scaffold clamps

Illustration taken from British Standard 5837 (2012): Trees in relation to design, demolition and construction – Recommendations.

The default specification should consist of a vertical and horizontal scaffold framework, well braced to resist impacts. The vertical tubes should be spaced at a maximum interval of 3 m and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed.

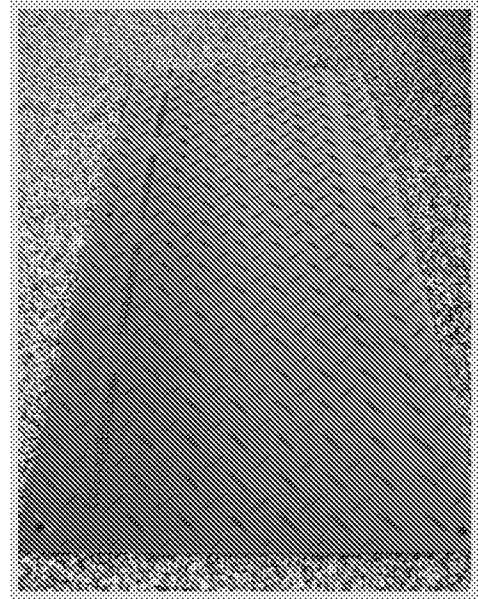
– BS 5837 (2012)

Ref: Tree Protection Barriers (Type 1)	Drawing No. TPB1
Scale: N/A	

APPENDIX 4: ILLUSTRATIVE SPECIFICATION FOR GROUND SURFACE PROTECTION IN RPAs



Photograph 1



Photograph 2 (courtesy
www.groundtrax.com)

New temporary ground protection should be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil.

NOTE The ground protection might comprise one of the following:

- a) for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame (**Photograph 1**), so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane;*
- b) for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards (**Photograph 2**), placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane;*
- c) for wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.*

– BS 5837 (2012)

Ref: Ground Protection	Drawing No. GP1
Scale: N/A	

APPENDIX 5: BS 5837 (2012) – ASSESSMENT CATEGORIES

TREES FOR REMOVAL				
Category and definition	Criteria			Identification on plan
<u>Category U</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 category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve.</i>			RED
TREES TO BE CONSIDERED FOR RETENTION				
Category and definition	Criteria — Subcategories			Identification on plan
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
<u>Category A</u> Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	GREEN
<u>Category B</u> Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though 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	BLUE
<u>Category C</u> Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	GREY

APPENDIX 6: QUALIFICATIONS AND EXPERIENCE OF BARRIE DRAPER

- 1 **Qualifications:** I have a BSc degree (with Honours) in Arboriculture from the University of Central Lancashire. I also hold a BTEC Higher National Diploma (HND) in Forestry (Lowland Management), the Arboricultural Association's Technician's Certificate in Arboriculture (Tech Cert), the Royal Forestry Society's Certificate in Arboriculture (Cert Arb) and the National Examinations Board Certificate in Forestry.

- 2 **Career experience:** I began my arboricultural career in 1993 as an arborist with Portsmouth City Council. During my time with the council I worked for both the direct labour organisation and for a private contractor where I obtained valuable hands on experience in all aspects of arboriculture. From 1999 to 2002 I was employed as Senior Arborist by Parchment Housing Group, a housing association based near Portsmouth. I managed the Groups' tree stock on their behalf, carrying out tree inspections and practical management operations. I have also worked in local government, spending time with Thurrock Borough Council in Essex where I was the Tree and Landscape Officer, and with Winchester City Council, where I was Arboricultural Officer for a period of 2 years. During my time working in local government I was responsible for making Tree Preservation Orders, administering applications to work on protected trees and advising on planning applications when trees were considered material constraints on development. Working within a planning environment allowed me to gain valuable experience in the management of trees in development situations and an understanding of the planning process and how it relates to trees. From January 2005 I worked for Barrell Tree Consultancy Ltd advising clients on a wide range of tree related issues. I left the company in September 2008 and set up ecourban ltd, where I am currently the sole practitioner.



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