

Arboricultural Impact Assessment & Method Statement

Land off St Marys Avenue, Overton on Dee

Prepared for:

PICKSTOCK HOMES

Our Ref: 23/AIA/WXM/316 (Rev A)

August 2024

Tree Solutions Ltd

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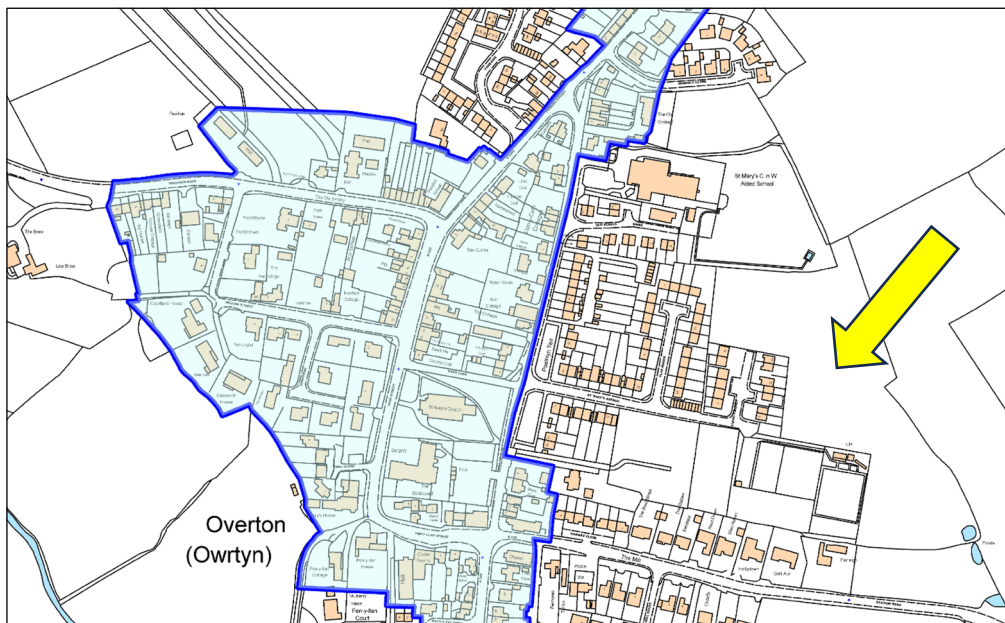
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1.0 INSTRUCTION

- 1.1 We have been instructed by Pickstock Homes (the applicant) to carry out an Arboricultural Impact Assessment (AIA) to assess the development proposal in relation to trees in accordance with the principles of British Standard 5837 'Trees in Relation to Design, Demolition & Construction - Recommendations' 2012.
- 1.2 We are instructed to prepare a report to provide information to assist all parties involved in the planning process to make balanced judgements regarding arboricultural features in relation to the proposed development on land off St Mary's Avenue, Overton on Dee. As such, all trees within influencing distance to the development proposal both on and adjoining the site have been surveyed and are listed within a Tree Survey Schedule (**Appendix 1**) and plotted on all accompanying plans.
- 1.3 The stage 1 tree survey was carried out on 28 November 2023 by Alistair Henderson, Consultant to Tree Solutions Ltd. Our appraisal of the mechanical integrity of trees on the site is enough to inform the current project. The assessment of trees is carried out from ground level without invasive investigation and the disclosure of hidden defects cannot therefore be expected. Whilst the survey is not specifically commissioned to report on matters of tree safety, we report obvious defects that are significant in relation to the existing and proposed land use. We do not carry out detailed safety inspections unless specifically instructed to do so in writing and have not carried out such inspections of trees on the proposal site.
- 1.4 Fifteen individual trees (T1–T15) and one group (G1) were surveyed and mapped on a Preliminary Tree Constraints & Impact Assessment Plan Ref: 23/AIA/WXM/316, Drawing No. 1 & 2 at **Appendix 2**. All arboricultural information recorded during the survey is presented within a schedule at **Appendix 1**.
- 1.5 The Arboricultural Impact Assessment is based on the proposed layout plan, Drawing No: 1522-sit-P01 (Rev O) provided by Pickstock Homes.

2.0 STATUTORY CONTROLS & PLANNING POLICY

- 2.1 Unfortunately Wrexham County Borough Council (WCBC) do not display their protected tree data on an interactive mapping layer and as such we have no information on Tree Preservation Orders. A search online did however show that the land does not fall within a designated Conservation Area.



P1 – Extract from WCBC Conservation Area maps showing site outside Overton Conservation Area

2.2 Protected Species

- 2.2.1 Mature trees often contain cavities, crevices and hollows that offer potential habitat for species such as bats and barn owls. Both are afforded protection under the Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), as well as The Conservation (Natural Habitats, &c) (Amendment) Regulations 2007.

2.3 Wildlife Habitats

- 2.3.1 Trees and hedgerows of most species provide valuable nesting sites for a wide range of birds, and it is likely that nesting birds will be present on the site during the period March to September.

3.0 THE SITE

- 3.1 The application site is agricultural land located to the east of St Mary's Avenue. There are residential dwellings to the south and west, primary school to the north and open countryside to the east.

4.0 DEVELOPMENT PROPOSAL

- 4.1 Residential development with associated vehicular access and parking.

5.0 GENERAL CONSTRAINTS DATA - CONSTRUCTION EXCLUSION ZONES (CEZ's)

5.1 GENERAL

- 5.1.1 During the development process for retention trees, there may be three and even four constraints to consider: Construction Exclusion Zone (CEZ's):

- CEZ 1: Root Protection Area (see 5.2)
- CEZ 2: Tree Crown Protection (see 5.3)
- CEZ 3: Tree Dominance (see 5.4)
- CEZ 4: New Tree Planting Zone (see 5.5)

CEZ's are explained below:

5.2 CEZ 1: ROOT PROTECTION AREA (RPA)

- 5.2.1 The RPA, calculated in m², should be protected before and during any demolition/construction works. This ensures the effective retention of trees by safeguarding a reliable quantum of functioning tree roots. The RPA is based on a radial measure from the centre of the tree stem, which is calculated by multiplying the stem diameter by a factor of twelve or by the (mean stem diameter²) x number of stems for multi-stemmed trees.
- 5.2.2 During the AIA 2, the derived radial measure is converted by the arboriculturalist into the actual area to be protected, having due regard to prevailing site conditions and how these may have affected the tree(s), particularly in relation to factors affecting their likely rooting disposition. The RPA for each tree should initially be plotted as a circle centred on the base of the stem. Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced. Modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution.
- 5.2.3 The means of protecting the RPA will include the installation of tree protective fencing prior to the start of any demolition or construction work on site. The prohibition of various activities within the RPA must be adhered to (e.g. mechanical excavation, soil stripping, fire lighting, material storage, lowering levels and creating excessive sealed surfacing) and may include the use of temporary ground protection and/or special engineering solutions where construction is proposed near to retention trees or within the RPA.

5.3 CEZ 2: TREE CROWN PROTECTION ZONE

- 5.3.1 All development and associated construction work is clear of tree canopies such that access facilitation pruning is not required to undertake any works. Tree protective fencing will be erected at the full extent of all canopies to ensure no contact and subsequent damage occurs.

5.4 CEZ 3: TREE DOMINANCE ZONE

- 5.4.1 The nearest trees to any dwellings are located to the north of plots 26-28. T14 to the rear of plot 26 is a Scots Pine with a small diameter crown spread that will not cause substantial shade to the rear garden area or plot. The canopy of T13 does however partially cover the garden areas of plot 28 and the applicant intends to undertake pruning works to alleviate this for future occupants. These plots do enjoy an unimpeded southernly aspect to the front and will receive morning and evening sunlight from an east and westerly aspect as they are also unimpeded by trees.

- 5.4.2 Group 1 is located to the south of plot 46 but adjacent to a blank gable wall, these trees are located off-site and have all been badly topped by the owner. They will not cast shade to the rear garden or plot. All other plots are located well clear of trees.
- 5.4.3 The trees on and adjoining this site offer an attractive mature landscape feature that will be cherished by future residents as well as existing users of the adjacent public rights of way. Other than usual annual leaf fall, we can see no substantial issues of over dominance that would lead to pressure by future residents to fell or prune the trees. Furthermore, the trees are predominantly located outside the site boundary and any necessary pruning works will be undertaken by Pickstock Homes prior to sales.



P1 – Tree numbers 13-14 located to north of plots 26-28

5.5 CEZ 4: NEW PLANTING ZONE

- 5.5.1 Refer to landscape proposals.

6.0 SURVEY METHODOLOGY

- 6.1 The method used in the preparation of this report is based on the principles of BS 5837: 2012.
1. Tree heights were surveyed to the nearest 1m
 2. Trunk diameters were measured by use of forestry girth tape
 3. The category assessment (Table 1) on which the trees is based include current and long-term arboricultural, landscape, cultural and conservation values (BS5837: 2012). This table can be found at **Appendix 1**
 4. For clarity, the grading system is summarised from **Table 2** of the BS as follows:

U grade – trees for removal, effective for less than 10 years

A grade – trees of high quality and value, effective for more than 40 years

B grade – trees of moderate quality and value, effective for more than 20 years

C grade – trees of low quality and value, effective for 10 years

Note: We have indicated colour coding on the drawing and therefore a monochrome copy should not be relied on.

6.2 SOIL ASSESSMENT

6.2.1 A soil assessment should be undertaken by a competent person to inform decisions relating to:

- the root protection area (RPA)
- tree protection
- new planting design; and
- foundation design to take account of retained, removed and new trees (potential soil subsidence/heave)

Tree Solutions do not undertake soil assessments and the client is advised to seek specialist advice in this respect.

7.0 JUXTAPOSITION OF TREES AND STRUCTURES

7.1 Below ground constraints

7.1.1 The below ground constraints are generally summarised as the root protection area (RPA). The shape of the RPA and its exact location will depend upon arboricultural considerations including likely tolerance of the tree to root disturbance; morphology and disposition of the roots when known influenced by past or existing site conditions; soil type and structure; and topography and drainage.

7.1.2 The purpose of the RPA is to prevent physical damage to tree roots and to prevent damage to the soil structure. Tree roots are damaged by soil compaction, changes in soil levels or soil contamination which could reduce tree health and/or stability.

7.1.3 Root patterns are affected by topography and characteristics of the soil or substrate. Where trees are located within proximity to existing hard standing or underground physical barriers, they are unlikely to have an even distribution of lateral roots due to restrictions in root growth created by compacted sub-grades beneath. The RPA of tree numbers 2 & 3 have been modified and are shown running around the adjacent garage and 2m within the road and extending further within the site where a more favourable rooting environment exists. The RPA of all other trees have all been plotted unmodified as there were no underground barriers to prevent good radial root spread.

7.2 Underground Services

7.2.1 The proposed surface water drain alignment has been amended following on-site consultation with Tree Solutions. It now runs on the outer periphery of the RPA of tree number 8 with a maximum incursion of 1.5m. The necessary trench is 250mm wide and 900mm deep and will be excavated by a mini-tracked excavator working off ground protection boards laid within the necessary easement area as indicated on the Tree Protection Plan at Appendix 4. All works will be undertaken under the direct supervision of the contract Arboricultural Clerk of Works (ACoW) with any roots encountered carefully pruned back to a suitable available inner node. We are confident that with careful working practices and appropriate supervision that these works will have no adverse impact to the health and vitality of tree number 8.



P2 – Proposed surface drain alignment 13m from T8

- 7.2.2 We have considered the broad implications of the provision of all other underground services but the locations of existing and proposed were not identified on the plans supplied and, in this regard, our advice is of a general nature.
- 7.2.3 Drainage and service runs may need to be constructed within the rooting areas of retained trees. If this is a requirement of the development it will be necessary to retain significant roots and methods of excavation, such as thrust boring or hand digging, may need to be adopted to ensure that these impacts are acceptable
- 7.2.4 As with foundation design, low impact construction methods for services installation are now well established. For more information regarding underground services, reference should be made to the National Joint Utilities Group (NJUG) Publication No. 10. Volume 4 '*Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees*' 2007

8.0 DEVELOPMENT IMPACT TO TREES

- 8.1 Tree Solutions carried out a stage one preliminary tree survey and provided the project architect with a report in which all existing trees and their respective Root Protection Areas (RPA) were identified and plotted on a tree constraints and impact assessment plan. The layout has been amended to ensure no significant adverse impact to retained trees following on-site consultation with Tree Solutions. We are satisfied that the with the proposed special engineering solutions, the design has taken the long-term future of the trees into account and is in accordance with WCBC Planning Policy EC4, Local Planning Guidance Note 17 and recommendations contained with BS5837: 2012.
- 8.2 No trees require removal to accommodate the development as the design has been determined to retain them within the context of the housing site to provide an attractive mature tree lined landscape. By doing so the amenity and landscape value they afford will be radically enhanced post completion of the development.
- 8.3 Whilst unnecessary to facilitate any works we have identified tree number 7 as hazardous due to a significant longitudinal crack in the main stem either side of the main union. As a result, this tree has been categorized as 'U' grade as it is in such a condition that it cannot realistically be retained in the context of the current land use for longer than 10 years. This tree has therefore been marked for removal for H&S reasons and will be replaced by new planting as detailed in the landscape proposals.



P3 – Crack below union on T7

9.0 PROPOSED REVISIONS TO THE SCHEME

9.1 We advise that all proposed revisions having implications for trees should be referred to us for review.

10.0 CONCLUSIONS

10.1 BS 5837: 2012 contains clear and current recommendations for a best practice approach to the assessment, retention, and protection of trees on development sites. The proposed development has followed this guidance by:

- Seeking arboricultural advice and undertaking a phase 1 preliminary tree survey to inform the layout and design of the proposed development
- Respecting the constraints posed to development of the site by high or moderate quality trees
- Acting upon arboricultural advice throughout the design process to obtain the best development proposal whilst considering the current and future tree requirements
- No trees to be removed for development
- Canopy encroachment into the site can be overcome by appropriate pruning in accordance with BS3998: 2010
- Works will be overseen by a project Arboricultural Clerk of Works (ACoW) to ensure all protection measures prescribed are adhered to.
- Taking the above into consideration, we can see no viable Arboricultural grounds for refusal.

11.0 LIMITING CONDITIONS

- Unless stated otherwise:
- Information contained in this report covers only those trees that were examined and reflects the condition of those trees at the time of the inspection.
- The inspection is limited to visual examination of the subject trees from ground level only and without dissection, excavation, probing or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject trees may not arise in the future.
- This report has been prepared for the sole use and benefit of the client. Any liability of Tree Solutions shall not be extended to any third party.
- No part of this report can be reproduced without the authorisation of *Tree Solutions Ltd*.

Appendix One
Tree Survey Schedule

TREE SURVEY SCHEDULE (BS5837: 2012)

Tree Solutions

Arboricultural Consultants

SITE:	LAND OFF ST MARY'S AVENUE, OVERTON ON DEE
CLIENT:	PICKSTOCK HOMES
BRIEF:	ARBORICULTURAL IMPACT ASSESSMENT & METHOD STATEMENT

SURVEYOR:	A HENDERSON
ASSESSMENT DATE:	28 NOV 2023
VIEWING CONDITIONS:	GOOD
JOB REFERENCE:	23/AIA/WRM/316

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TREE NO. T - Tree G - Group H - Hedge	SPECIES (COMMON NAME)	AGE	HEIGHT (m) + CROWN CLEARANCE/ DIRECTION OF GROWTH (N.S.E.W)	RADIAL CROWN SPREAD (m)				STEM/ MULTI-STEM* DIA.(mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB-CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m²)
				N	S	E	W						
T1	Leyland Cypress	M	12	3	3	3	3	270 350 (442)	G	- Off-site tree with twin stem from base - Topped in past - E.R.C. 10	3rd party tree, no works	C3	5.3 88m²
T2	Oak	M	17 5N	6	10	7	7	1150	G	- High quality tree located on amenity space on Oak Drive - Crown to north either failed of has been removed resulting in asymmetric form and large wound - E.R.C. 40	3rd party tree, no works	A1	13.8 598m²
T3	Maple	SM	9 3E	2	2.5	2	2	240	G	- Small tree located off site - E.R.C. 20	3rd party tree, no works	B2	2.9 26m²
T4	Sycamore	EM	8	6	2.5	3	2	300 260 (327)	M	- Tree has uprooted in past and now leans 45° north or vertical with rootplate exposed - Would be best removed or pollarded due to being retained within area of public open space - E.R.C. 10	Remove and replace with new tree – recommend Oak	C3	4 48m²
T5	Sycamore	EM	10	4	4	4	4	350	M	- Reduced vigour with dieback and dead wood throughout crown - E.R.C. 10	Remove all dead wood	C2	4.2 55m²

HEADINGS & ABBREVIATIONS

TREE NO.	REFERENCE NUMBER. REFER TO PLAN OR NUMBERED TAGS WHERE APPLICABLE (T = TREE, G = GROUP, H = HEDGE)
SPECIES:	COMMON NAME (LATIN NAMES AVAILABLE ON REQUEST)
AGE RANGE/LIFE STAGE:	Y = YOUNG, SM = SEMI MATURE, EM = EARLY MATURE, M = MATURE, PM = POST MATURE
HEIGHT:	ESTIMATED AND RECORDED IN METRES. APPROXIMATELY 1 IN 10 TREES ARE MEASURED USING A CLINOMETER AND THE REMAINDER ESTIMATED AGAINST THE MEASURED TREES
CROWN SPREAD:	MAXIMUM CROWN RADIUS MEASURED TO THE FOUR CARDINAL COMPASS POINTS FOR SINGLE SPECIMENS ONLY (MEASUREMENT FOR TREE GROUPS - MAXIMUM RADIUS OF THE GROUP)
CROWN CLEARANCE & DIRECTION OF GROWTH:	HEIGHT IN METERS OF CROWN CLEARANCE ABOVE ADJACENT GROUND LEVEL (TO INFORM ON GROUND CLEARANCE, CROWN/STEM RATIO AND SHADING)
STEM DIA/MULTI-STEM DIA:	STEM DIAMETER - MEASURED AT APPROXIMATELY 1.5 METRES ABOVE GROUND LEVEL OR A COMBINATION OF STEMS FOR MULTI-STEMMED TREES
VITALITY:	A MEASURE OF PHYSIOLOGICAL CONDITION. D = DEAD, MD = MORIBUND, P = POOR, M = MODERATE, G = GOOD
E.R.C. = ESTIMATED REMAINING CONTRIBUTION:	RELATIVE USEFUL LIFE EXPECTANCY (YEARS)
BS 5837 CATEGORY & SUB-CATEGORY GRADING:	A = HIGH QUALITY AND VALUE, B = MODERATE QUALITY AND VALUE, C = LOW QUALITY AND VALUE, U = UNSUITABLE FOR RETENTION (SUB-CATEGORY REFERS TO ARBORICULTURAL, LANDSCAPE AND CULTURAL/CONSERVATION VALUES)
BS 5837 RADIUS & BS 5837 RPA:	PROTECTIVE DISTANCE - RADIUS FROM THE CENTRE OF THE STEM TO THE LINE OF TREE PROTECTION (CONSTRUCTION EXCLUSION ZONE - CEZ) AND PROTECTIVE BARRIER ROOT PROTECTION AREA - BS 5837 (2012) ANNEX D (THE RECOMMENDATIONS STATE THAT THE RPA SHOULD BE CAPPED AT 707 M²) NOTE – ALL CALCULATIONS ROUNDED TO NEAREST DECIMAL

TREE SURVEY SCHEDULE (BS5837: 2012)

Tree Solutions

Arboricultural Consultants

SITE:	LAND OFF ST MARY'S AVENUE, OVERTON ON DEE
CLIENT:	PICKSTOCK HOMES
BRIEF:	ARBORICULTURAL IMPACT ASSESSMENT & METHOD STATEMENT

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				N	S	E	W						
T6	Maple	EM	10 4W	5	4.5	4.5	4.5	350	G	- No obvious defects - Well established - E.R.C. 20+	No works	B2	4.2 55m²
T7	Maple								P	- Large crack in main stem either side of compression union - Hazardous and liable to complete failure	Remove for H&S	U	N/A
T8	Oak	M	17 4.5W	8.5	10	9	9	1250 +	G	- Large important field boundary tree with high amenity and landscape value to the locale - Large diameter dead wood and past multiple tear out wounds typical of species and age - Owl box erected on stem to north - E.R.C. 40+	No works	A1 & 2	15 707m²
T9	Oak	M	17	7	6	7.5	7.5	1130	G	- Important field boundary Oak - Dead wood and dieback throughout crown - E.R.C. 40+	No works	A1 & 2	13.5 578m²
T10	Oak	M	15	6	9.5	6	8	1250 +	G	- Entire northern side of tree has failed in past leaving open stem hollowed out - May require crown reduction to alleviate loading on stem - E.R.C. 40+	No works at present	B2	15 707m²
T11	Alder	M	13	5	5	5	5	≤450	G	- Multiple stems - Located on edge of drainage ditch - E.R.C. 40	No works	C3	5.4 92m²
T12	Willow (Crack)	M							P	Partially collapsed	Coppice	U	N/A

TREE SURVEY SCHEDULE (BS5837: 2012)

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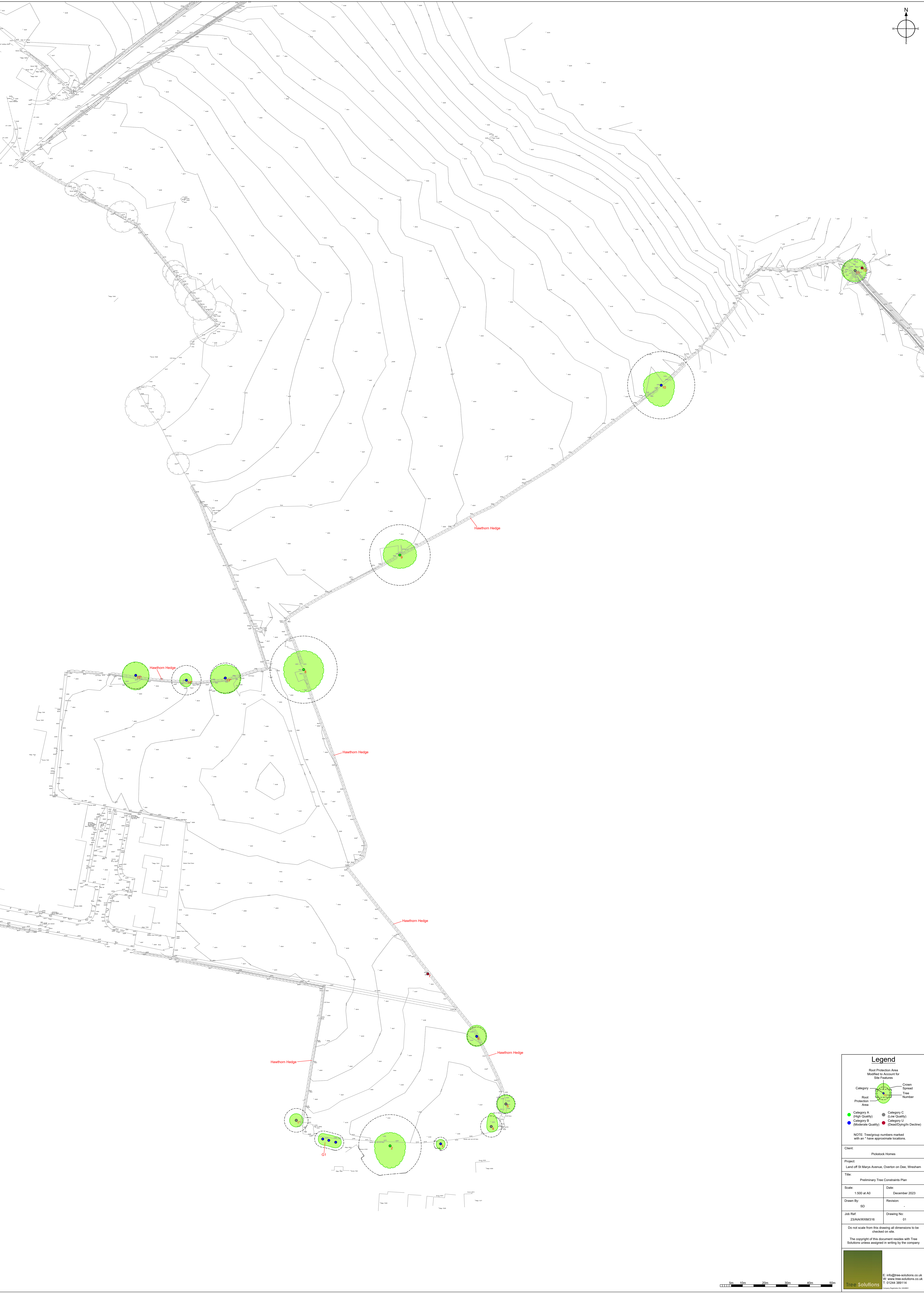
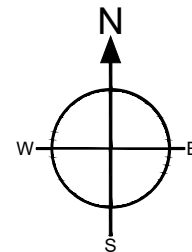
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				N	S	E	W						
T13	Oak	EM	13 3S	6	7	7	6.5	560	G	- Good quality tree forming part of wooded copse on edge of school grounds - E.R.C. 20+	Reduce southern canopy by 2m and crown lift to provide better easement for rear gardens of plots 27 & 28plot	B2	6.7 142m²
T14	Pine	M	15	3	3	2.5	3	550	G	- Within wooded copse area off site - Pine tree to east recently failed, would recommend risk assessment undertaken to this tree - E.R.C. 20	Undertake risk assessment	B2	6.6 137m²
T15	Oak	EM	13	6	6.5	6	6	500	G	- Well established within off-site wooded copse area - E.R.C. 20+	No works	B2	6 113m²
G1	Birch x 3	EM	13	2.5	2.5	2.5	2	≤300	G	- Linear mixed group located within adjacent garden to south - All badly topped in past leaving unattractive and poor crown form liable to further crown loss - E.R.C. 20	3rd party trees – no works	B2	3.6 41m²

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	- 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; see 4.5.7.</i>			See Table 2
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
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 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)	See Table 2
Category B 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	See Table 2
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	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	See Table 2

Appendix Two

Preliminary Tree Constraints Plan



Legend

Root Protection Area
Modified to Account for
Site Features

Category

Root
Protection
Area

Category A
(High Quality)

Category B
(Moderate Quality)

Category C
(Low Quality)

Category U
(Dead/Dying/In Decline)

NOTE: Treegroup numbers marked
with an * have approximate locations.

Client:

Project:

Title:

Scale:

Drawn By:

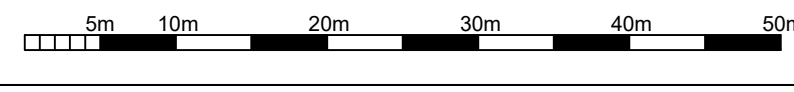
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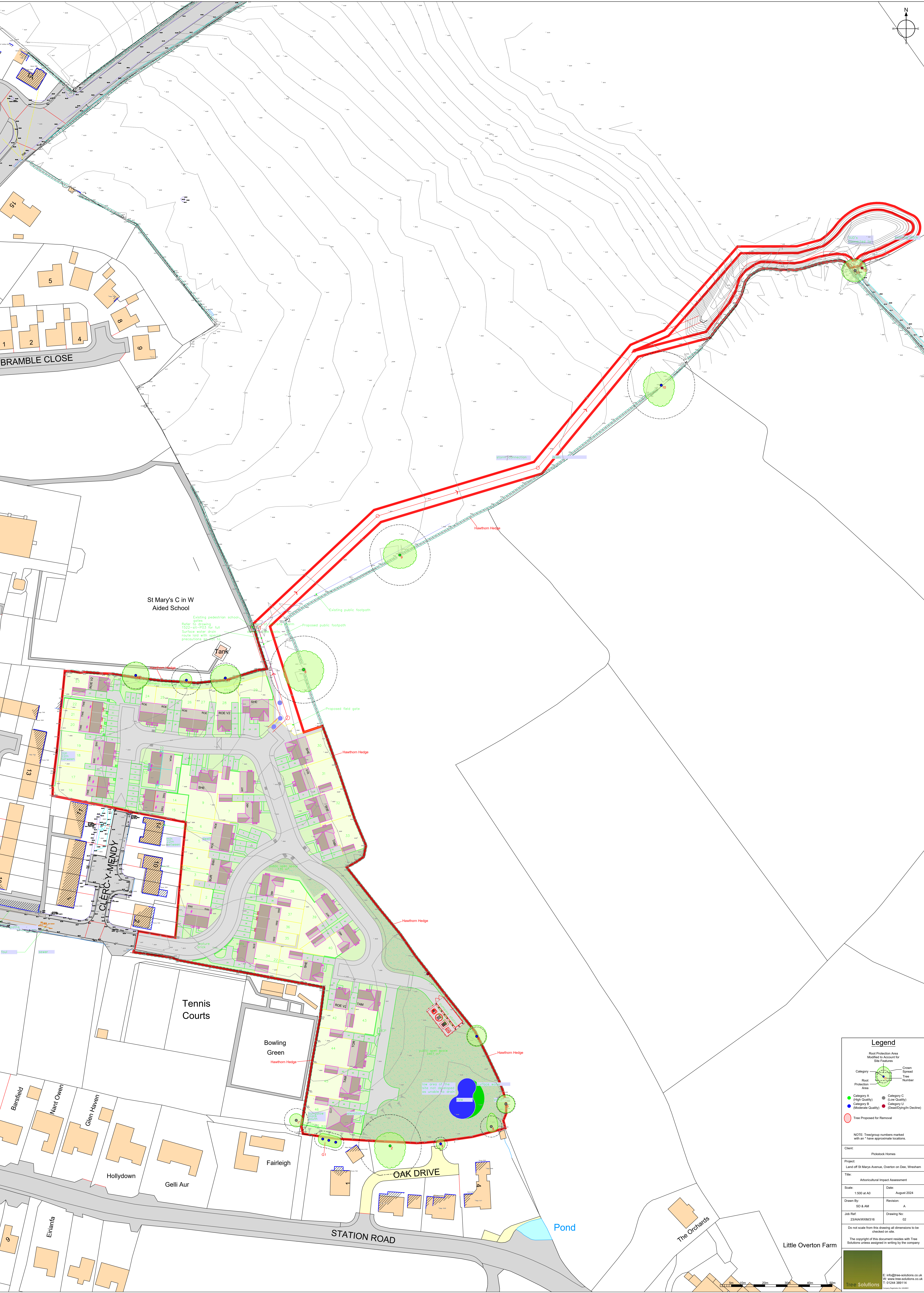
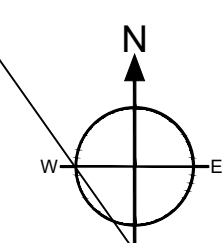
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Appendix Three

Impact Assessment Plan



Legend

Root Protection Area
Modified to Account for
Site Features

Category A (High Quality)
Category B (Moderate Quality)
Category C (Low Quality)
Category D (Dead/Dying/In Decline)

Tree Proposed for Removal

NOTE: Treegroup numbers marked with an * have approximate locations.

Client: Pickstock Homes

Project: Land off St Marys Avenue, Overton on Dee, Wrexham

Title: Arboricultural Impact Assessment

Scale: 1:500 at A0
Date: August 2024

Drawn By: SD & AM
Revision: A

Job Ref: 230A/AW/M316
Drawing No: 02

Do not scale from this drawing all dimensions to be checked on site.

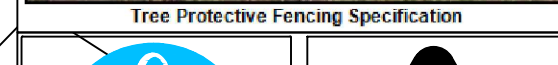
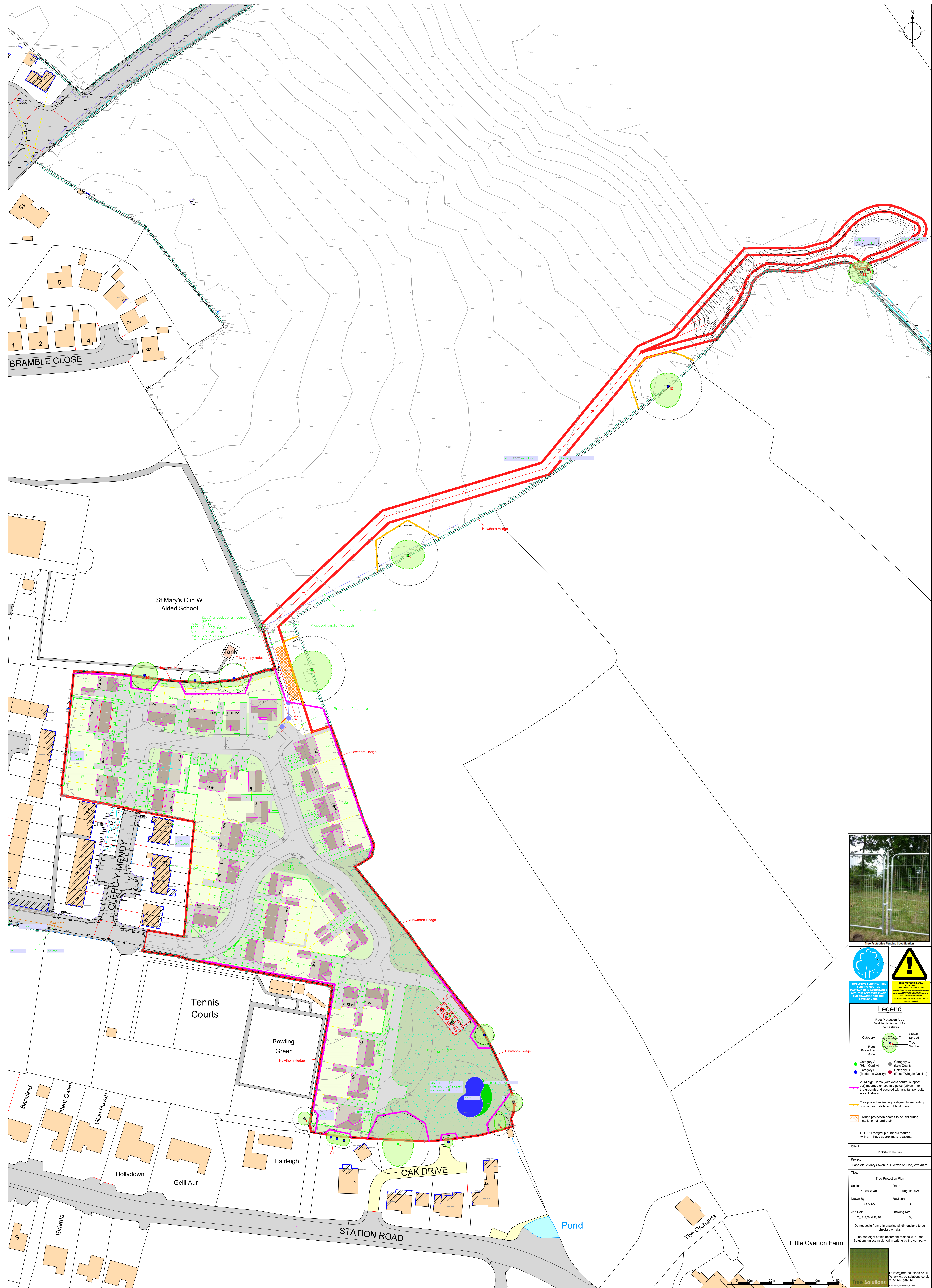
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Appendix Four

Tree Protection Plan



Root Protection Area

- NOTE: Tree/group numbers marked

	Pickstock Homes
Project:	

Tree Protection Plan	
Scale:	Date:

Job Ref:	Drawing No:
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11/11/2019

Appendix Five

Tree Protective Measures/Method Statement

SEQUENCE OF OPERATIONS

From commencement of the above development, the following methodology shall be implemented in the manner and sequence described:

1. Tree surgery works
2. Pre-contract site meeting – Toolbox Talk
3. Erect temporary protective fencing
4. Main construction phase
5. Realign tree protective fencing for trenching within RPA of T8
6. Install ground protection boards within RPA of T8
7. Excavation of land drain trench within RPA of T8
8. Removal of temporary fencing
9. Landscaping within RPA
10. Arboricultural site supervision (ACoW)

1. Tree Surgery Works

1. Before the erection of the temporary protective fencing, all tree removal shall be implemented in accordance with the Tree Survey Schedule at **Appendix 1**
2. All possible efforts must be made to prevent damage to retained trees including potential root incursion or compaction caused by vehicle access.
3. All arboricultural works shall conform to the recommendations of BS 3998 (2010) 'Recommendations for Tree Work'
4. All operatives shall be equipped with and use personal protective equipment (PPE) in accordance with current Health & Safety Executive current directives and industry codes of practice.
5. Performance of all arboricultural operations and use of equipment shall be in accordance with current Health & Safety Executive current directives and industry codes of practice
6. Any additional access facilitation pruning required shall be undertaken by qualified tree contractors and conform to the recommendations of BS 3998 (2010) 'Recommendations for Tree Work'

2. Pre-Contract Site Meeting – 'Toolbox Talk'

To outline working methods in relation to trees prior to any construction activity on site, a site meeting of the following shall take place:

1. Client
2. Main Contractor
3. Arboricultural Clerk of Works (ACoW)
4. Site Agent

3. Erect Temporary Tree Protective Fencing

1. Prior to commencement of any construction, preparation, excavation, or material deliveries the main contractor shall erect the temporary protective fencing as detailed in the 'Tree Protection Specification' and in the location indicated on the Tree Protection Plan.

4. Main Construction Phase

1. There shall be no storage of construction material, site parking, site accommodation or equipment in any area designated as the Root Protection Area (RPA) and Construction Exclusion Zone (CEZ) and enclosed by Temporary Protective Fencing
2. No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 10 metres of the trunk of a tree that is to be retained. No fires will be lit
3. The site agent shall supervise deliveries by self-loading crane, with vehicles positioned in such a manner that retained trees are not at risk of damage

Cement Mixing

- The cement mixer will be laid on top of plywood boards in a position outside the RPA of any trees. The mixer will be kept in this position throughout all development work.

Avoiding Damage to Stems and Branches

- Care shall be taken when planning site operations in proximity to trees to ensure that wide or tall loads or plant with booms, jibs and counterweights can operate without encountering retained trees. Such contact can result in serious injury resulting in safe retention impossible

On Site Storage of Spoil and Building Materials

- Prior to and during all site construction works no spoil will be stored and no cement mixing will take place within the Root Protection Area of any tree on or adjacent to the site even if proposed site work is to be within the crown spread. Any encroachment within this protected area will only be with the prior agreement of WCBC Arboricultural Officer

5. Realign Tree Protection Fence for Trenching RPA of T8

- Tree protective fence to be realigned to secondary location shown in yellow prior to commencing trenching works for surface water drain
- Fencing to be inspected and retain in place until all works are completed and plant removed from site

6. Install Ground Protection Boards within RPA of T8

- Prior to commencement of any trenching works ground protection must be installed where indicated with an orange hatch on the Tree Protection Plan at **Appendix 4**
- The ground protection measures must be capable of supporting the expected plant loads and evenly distribute the carried weight over the track width to avoiding rutting, compaction, and damage to the soil.
- Temporary ground protection materials shall be delivered and moved by low impact tracked machinery and installed by hand
- The ground protection will involve the use of a bog mats or ground guards to be agreed with the LPA
- The ground beneath the mats will be left undisturbed and will be protected with a porous geotextile fabric and side butting scaffold boards on a 100mm compressible layer such of sharp sand or wood chip



P4 – Example of ground guards used for plant access within RPA of trees

7. Excavation of Land Drain Trench within RPA of T8

- Excavation work within the RPA of tree number 8 is to be undertaken under the direct supervision of the Arboricultural Clerk of Works (ACoW)
- Any roots encountered during excavation are to be cleanly pruned back to the next available inner node by the ACoW using hand saw or secateurs
- No roots are to be left exposed at any time

8. Remove all Temporary Tree Protective Fencing

1. Tree Protective fencing will only be removed upon completion of all construction work and once all machinery associated with the works has left site.

9. Landscaping within RPA of Trees

1. There shall be **no rotovating** of ground within any area designated as a Root Protection Area (RPA) and Construction Exclusion Zone (CEZ) and enclosed by Temporary Protective Fencing.
2. No hard-landscaping works or excavation for cables or any other service should be installed within the Root Protection Area (RPA) and Construction Exclusion Zone (CEZ) without the written consent of the LPA

10. Arboricultural Site Supervision – (ACoW)

- 1 The ACoW shall give toolbox talk training with the main contractor/sub-contractor on all tree protective measures and working practice within designated RPA's
- 2 The ACoW shall make visits to site to inspect all tree protection measures during all key development work within proximity to retained trees and when requested by the contractor.

Arboricultural Clerk of Works (ACoW)

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TREE PROTECTIVE FENCING

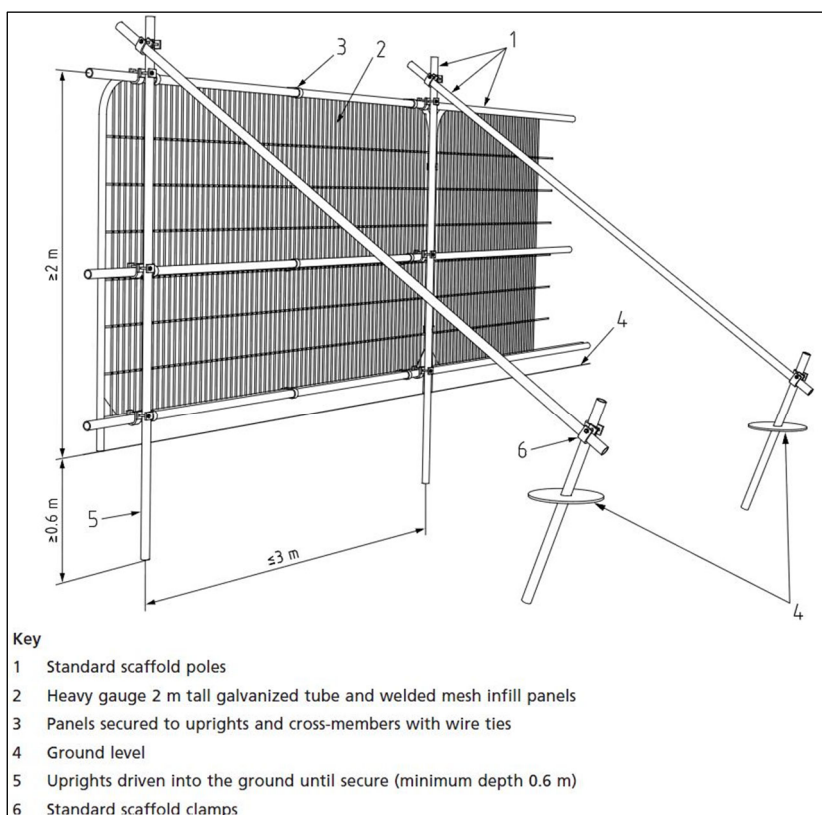
- 1 Before the commencement of any demolition and subsequent construction works on site (other than those set out in the schedule of tree works contained in this document), protective fencing will be erected as detailed on the Tree Protection Plan and as specified below.
- 2 The fencing will consist of a scaffold framework in accordance with Figure 2 of BS 5837 – 2012 (illustration below) comprising a metal framework, both vertical and horizontal, well braced to resist impacts. Vertical tubes will be spaced at a maximum interval of 3m. Onto this, weldmesh panels shall be securely fixed with wire or scaffold clamps. Weldmesh panels on rubber or concrete feet are not considered resistant to impact and for this reason will not be used. The site manager or other suitably qualified appointed person will be responsible for inspecting the protective fencing daily; any damage to the fencing or breaches of the fenced area will be rectified immediately.
- 3 Clearly legible weatherproof signage, stating “Protected Trees – Exclusion Zone” shall be attached to the fencing 1.5m from the ground, facing out of the Tree Protection Zone located at regular intervals along the fence line
- 4 The fencing will remain in place until completion of all site works and then only removed when all site traffic is removed from site
- 5 Other than works detailed within this method statement or approved in writing by the Local Planning Authority (LPA), no works including storage or dumping of materials shall take place within the exclusion zones defined by the protective fencing.

Protective Fencing Detail

The fence types are shown on the Tree Protection Plan with the following colour key: -

1. **Magenta**

2.0M high heavy-duty Heras panels (with extra central support bar) mounted on scaffold poles (driven into the ground) and secured with anti-tamper bolts – as illustrated below.



Tree Protective Fencing Specification



**PROTECTIVE FENCING. THIS
FENCING MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.**



**TREE PROTECTION AREA
KEEP OUT !**

**(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A
TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY
LEAD TO CRIMINAL PROSECUTION**

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