TREE SOLUTIONS



Arboricultural Impact Assessment & Method Statement

Land at Former Coal Yard, Lloyd's Lane, Chirk

Prepared for:

ELATE CONSTRUCTION LTD

Our Ref: 24/AIA/WXM/323

July 2024

T 01244 389114 • E info@tree-solutions.co.uk

Tree Solutions Ltd • Registration in England & Wales • Company No. 04548951

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1.0 INSTRUCTION

1.1 We have been instructed by Elate Construction Ltd (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 housing development on land off Lloyds Lane, Chirk. 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 in June 2024 by Alistair Henderson, Principal 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 Twelve individual trees (T1–T12), five groups (G1-G5) and one hedgerow (H1) were surveyed and mapped on a Preliminary Tree Constraints & Impact Assessment Plan Ref: 24/AIA/WXM/323, Drawing Nos. 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 latest layout plan Ref: 22/208, Drawing No: EL/02 (Rev E) provided by BH Architects.

2.0 STATUTORY CONTROLS & PLANNING POLICY

2.1 We have been unable to ascertain if any trees are subject to a Tree Preservation Order. As such you are advised to seek confirmation on this prior to undertaking any works to trees.

2.2 Planning applications will be assessed against Planning Policy Wales Framework (PPW 2024), WCBC Planning Policy EC4 and PPG 17.

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 comprises of a former commercial coal yard approximately 0.26 hectares in size. There is a school beyond northern boundary, residential dwellings to the south and west and vehicular access off Lloyds Lane to the east. Outline planning consent was granted for 9 dwellings under Planning Code: P/2017/0455.

4.0 DEVELOPMENT PROPOSAL

4.1 9 No residential dwellings with associated vehicular access and parking.

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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 This is the area above ground occupied by the crown (branches) of the tree, along with allowances for working space (safe working area) and if appropriate, for future growth. The extent of CEZ 2 is determined by considering the existing and future crown spread of the tree(s), bearing in mind the possibility of this being modified by an acceptable quantum of pruning.

5.3.2 No access facilitation pruning is required as works are located clear of all canopy spreads.

5.4 CEZ 3: TREE DOMINANCE ZONE

5.4.1 Trees located along the southern boundary are small due to the inhospitable rooting area and have not grown any larger since our original survey for the outline planning application in 2017. We do not envisage them causing any significant issues with shading or over dominance. As they are a row of predominantly self-set Sycamore scrub, if future occupiers do have an issue, the canopies can be easily reduced back to alleviate this.

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P1 - T9-T12 & G4 photographed for outline application 2017



P2 - T9-T12 & G4 photographed June 2024

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.

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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. As the sites former usage was a commercial coal yard much of it contains bound surface with heavily compacted subgrade. We would therefore not anticipate significant root spread into the site from surrounding trees due to the inert soil conditions. The RPA of all trees have therefore been modified to reflect this.

7.2 Underground Services

7.2.1 Services trenches are proposed within and adjacent to the RPA of trees. As point 7.1.3 above, these areas contain heavily compacted subgrades from the sites former use as a commercial yard. Whilst it is unlikely that roots will be present in these areas due to the anaerobic soil conditions, it cannot be discounted until trial trenches are excavated. If roots are found to be present within the trial trench, then methods of excavation, such as thrust boring or hand digging, may need to be adopted to ensure that these impacts are acceptable.

7.2.2 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 for the outline planning application in 2017 and this was updated in June 2024 to provide the project architect with an updated 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 proposed layout is as per the outline consent with plots running centrally allowing for gardens to the south and vehicular access to the north all of which are within the former commercial yard areas that contains heavily compacted subsoils. As such the proposal is in accordance with Planning Policy Wales Framework (PPW 2024), WCBC Planning Policy EC4 and PPG 17 and recommendations contained with BS5837: 2012.

8.2 Whilst unnecessary to accommodate the works we have recommended the removal of group 1. These are small scrubby trees and a dead Ash located on the boundary. They will never become good specimens and removal allows for new better quality tree planting in this location.

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8.3 The access road encroaches very marginally (≤800mm) within the RPA of trees numbers 1-6 located outside the site boundary. Whilst the RPA has been plotted extending into the site, we are confident that no significant roots will be in this area due to the wall, buildings and storage yard that formally ran along the boundary. The ground conditions appear heavily compacted and inhospitable to root growth, we can however not substantiate this unless a trial trench is excavated. Nonetheless we are satisfied that the road foundation and edge restraints can be installed with no significant adverse impact to the health and vitality of these trees if any roots found to be present are carefully pruned back by the Arboricultural Clerk of Works (ACoW) back to the next available inner node.

8.4 The hard standing areas on site have now all been removed during recent demolition works and the garden areas to plots 1-5 have been cleared and are only require minor works to spread good quality topsoil prior to seeding or turfing to create ethe lawns. Tree protective fencing can stay at the full extent of the RPA/crown spread until all construction work is completed and plant and machinery moved off site. The landscape contractors will install the topsoil by wheelbarrow as there will be no access for any mini-excavator.



P3 – Site prior to recent ground clearing works looking west showing hard standing and storage areas up to the boundaries



P4 – Site looking east with wall and hard standing along northern boundary adjacent to T1-T7

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P5 – Former storage areas/buildings and boundary wall that abuts tree numbers 1-7



P6 – Site, June 2024 post removal of hard standing areas. G1 in foreground to be removed



P7 – Location of previous boundary wall and hardstanding adjacent to northern boundary

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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
- Former site usage as a commercial yard likely to have prevented root established into the site from adjacent trees due to lack of available gaseous exchange
- No trees of any value being removed
- 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*.

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Appendix One

Tree Survey Schedule

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TREE SURVEY SCHEDULE (BS5837: 2012)

TREE SOLUTIONS

SITE:	LAND AT THE FORMER COALYARD, LLOYDS LANE, CHIRK
CLIENT:	ELATE CONSTRUCTION LIMITED
BRIEF:	ARBORICULTURAL IMPACT ASSESSMENT

SURVEYOR:	A. HENDERSON
ASSESSMENT DATE:	11 JUNE 2024
VIEWING CONDITIONS:	GOOD
JOB REFERENCE:	24/AIA/WXM/323

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) N	S	E	W	STEM/ MULTI-STEM* DIA. (mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB-CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m^2)
T1	Beech	EM	14 1E	2	2	3.5	2.5	350	G	• Ivy clad stem impeding inspection • Located beyond boundary within school grounds • Tip dieback evident in top • E.R.C. 20	• 3rd party tree - N/A	B2	4.2 55m²
T2	Willow (Weeping)	M	15 1.5E	7	2	4.5	4.5	420	G	• Leans north due to suppression by T1 • Outside boundary with no access to survey • E.R.C. 20	• As T1	B2	5 80m²
T3	Yew	EM	7 0	4	4	2	3	250	G	• Outside boundary with no access to survey • Appears in good vigour • E.R.C. 20	• As T1	B2	3 28m²
T4	Birch	M	16 2.5N	4	1.5	4	2	350	G	• Abuts footings to removed boundary wall & leans north • No access to accurately survey • E.R.C. 20	• As T1	B2	4.2 55m²
T5	Birch	M	16 2N	4	2	4	4	400	G	• As T4	• As T1	B2	4.8 72m²

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 5837CATEGORY & 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 M^2) NOTE – ALL CALCULATIONS ROUNDED TO NEAREST DECIMAL

TREE SURVEY SCHEDULE (BS5837: 2012)

TREE SOLUTIONS

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JOB REFERENCE:	24/AIA/WXM/323

TREE NO. T - Tree G - Group H- Hedge W - Wood	SPECIES (COMMON NAME)	AGE	HEIGHT (m) + CROWN CLEARANCE/ DIRECTION OF GROWTH (N.S.E.W)	RADIAL CROWN SPREAD (m) N	S	E	W	STEM/ MULTI-STEM* DIA. (mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB-CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m^2)
T6	Spruce	M	16 4S	2	2	2	2	350	G	• Ivy clad stem impeding inspection • Ground heavily compacted within site - roots likely to extend north • Off-site with no access to survey • E.R.C. 20	• As T1	B2	4.2 55m²
T7	Hawthorn	M	5 2S	1	1	2	2	150	G	• As T6 • E.R.C. 20	• As T1	B2	1.8 10m²
T8	Grey Willow	EM	10	3	2	3	2.5	260	G	• Small insignificant tree • Roots severed to east during site works • E.R.C. 0	• Recommend removing	C1	3 31m²
T9	Oak	EM	12	1.5	4	4	5	350 300 (461)	M	• Dieback & dead wood in crown, appears stressed due to roots damage during construction of adjacent turning head to south • Past coppiced during boundary hedge management • All crown bias south • E.R.C. 20	• No works	B2	5.5 96m²
T10	Sycamore	EM	13 1S	3	2	2	2	220x2 (311)	G	• Twin stem from past coppice • Allowed to grow back due to lack of site management • E.R.C. 10	• No works	C1	3.7 44m²
T11	Sycamore	M	14 2N	4.5	4.5	4	4	400 300 220 (546)	G	• Ivy clad tree of no significant value • E.R.C. 10	• No works	B2	6.5 135m²
T12	Cypress	M	5	2	2	2	2	250	G	• Small insignificant tree of no value • E.R.C. 0	• No works	C1	3 28m²

TREE SURVEY SCHEDULE (BS5837: 2012)

TREE SOLUTIONS

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TREE NO. T - Tree G - Group H- Hedge W - Wood	SPECIES (COMMON NAME)	AGE	HEIGHT (m) + CROWN CLEARANCE/ DIRECTION OF GROWTH (N.S.E.W)	RADIAL CROWN SPREAD (m) N	S	E	W	STEM/ MULTI-STEM* DIA. (mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB-CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m^2)
G1	Sycamore Ash Hawthorn	SM	≤9	1.5	1.5	1.5	1.5	≤150	G	• Self-set small diameter trees within confined rooting area • Ash with Chalara Ash Dieback (20%) • E.R.C. 0	• Remove & replace with better quality trees	C1	1.8 10m²
G2	Ash	Y						≤100	P/D	• Small Ash poles all with Chalara Ash Dieback (20%) • E.R.C. 0	• Within school grounds but do require removal	U	N/A
G3	Hazel Hawthorn	EM	5	1.5	1.5	1.5	1.5	≤150	G	• Located off-site in school grounds • Provides good natural screen • E.R.C. 20	• No works	B2	1.8 10m²
G4	Ash x1 Elm x 1 Elder	SM	≤10	1.5	1.5	1.5	1.5	≤150	M	• Ash in decline due to Chalara Ash Dieback • Low quality tree of no value • E.R.C. 0	• Remove Sash if within site ownership	C2	1.8 10m²
G5	Ash Goat Willow x 1	Y	5	2.5	2.5	2.5	2.5	≤100	G	• Located off-site • Ash in decline • Willow appears in good health and vitality • E.R.C. 0	• 3rd party trees - no works	C1 & U	1.2 5m²
H1	Hawthorn Blackthorn	SM	2					≤20	G	• Unmanaged hedge within confined rooting environment • E.R.C. 0	• No works	N/A	N/A

Table 1 **Cascade chart for tree quality assessment**

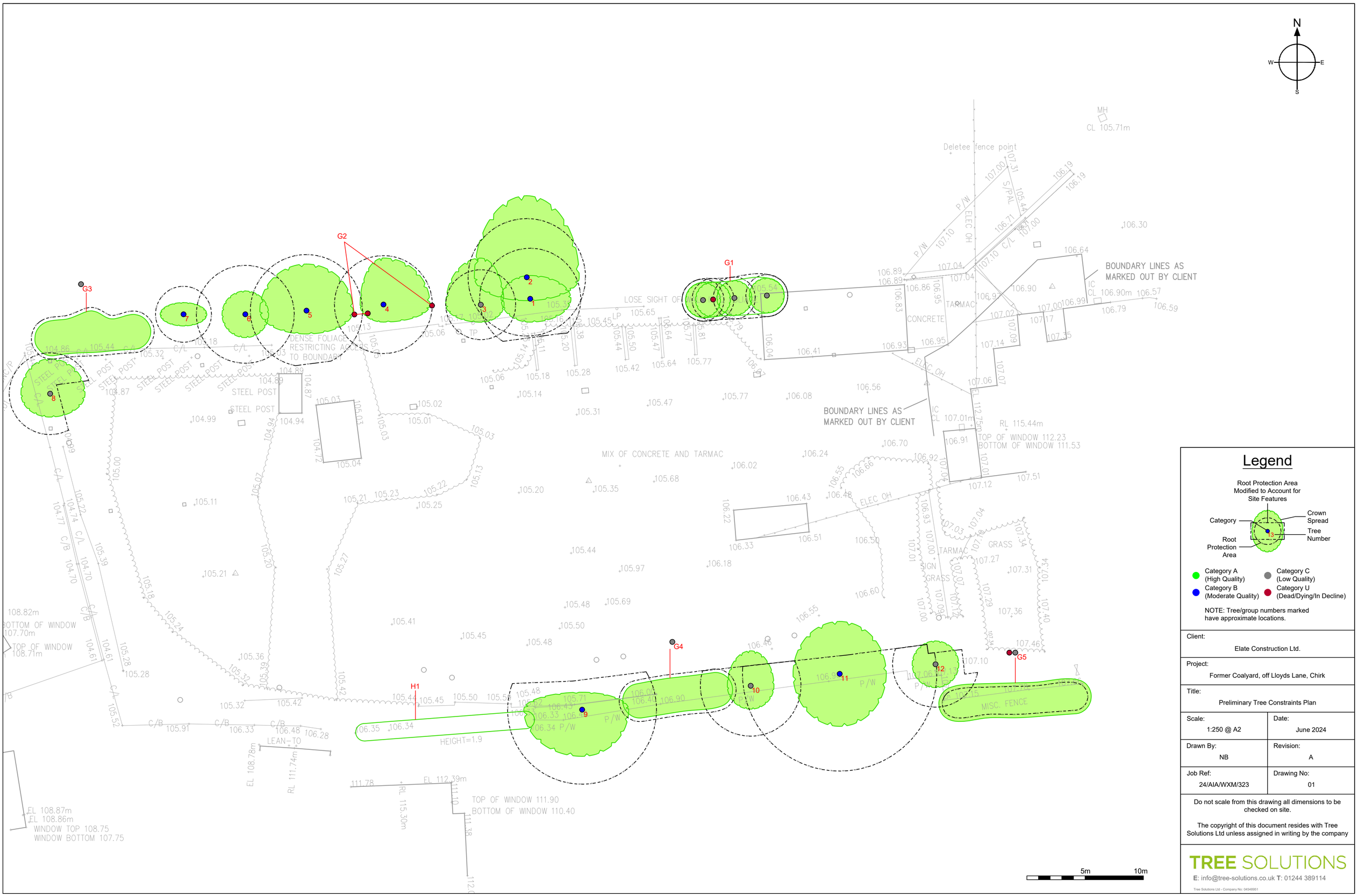
Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 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 *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7**.*			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

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Appendix Two

Preliminary Tree Constraints Plan

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Legend

Root Protection Area Modified to Account for Site Features

Category
Crown Spread
Tree Number
Root Protection Area

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

NOTE: Tree/group numbers marked have approximate locations.

Client: Elate Construction Ltd.	
Project: Former Coalyard, off Lloyds Lane, Chirk	
Title: Preliminary Tree Constraints Plan	
Scale: 1:250 @ A2	Date: June 2024
Drawn By: NB	Revision: A
Job Ref: 24/AIA/WXM/323	Drawing No: 01

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

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E: info@tree-solutions.co.uk T: 01244 389114
Tree Solutions Ltd - Company No: 04548961

Appendix Three

Impact Assessment Plan

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N

W E S

New foul underground drainage shown in red dash/dot line and connected to main sewer within the Highway

Install drop kerbs to all properties

G2

Footpath width

Road width

G1

G3

New foul drainage connected to main sewer in the highway

planted margin between road and boundary

road

New boundary fences to existing properties

footpath

Critical setting out dimension - mid point between Units 1 and 2 to rear of footpath

2 number 4.8m x 2.4m car parking spaces per property

Unit 9

Unit 8

Unit 7

Unit 6

Unit 5

Unit 4

Unit 3

Unit 2

Unit 1

Rear garden 88m²

Rear garden 62m²

Rear garden 69m²

Rear garden 64m²

Rear garden 68m²

Rear garden 66m²

Rear garden 65m²

Rear garden 65m²

Rear garden 75m²

Rear gardens to be lawned using either seed or turf

WCBC Planning Guidance required distance between dwellings

New surface water underground drainage shown in blue dash line and connected into individual soakaways

5m 10m

Legend

Root Protection Area Modified to Account for Site Features

Category

Crown Spread

Tree Number

Root Protection Area

Category A (High Quality)

Category B (Moderate Quality)

Category C (Low Quality)

Category U (Dead/Dying/In Decline)

Tree Proposed for Removal

NOTE: All tree have approximate locations

Client: Elate Construction Ltd.	
Project: Former Coalyard, off Lloyds Lane, Chirk	
Title: Arboricultural Impact Assessment	
Scale: 1:250 @ A2	Date: June 2024
Drawn By: NB	Revision: -
Job Ref: 24/AIA/WXM/323	Drawing No: 02

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Appendix Four

Tree Protection Plan

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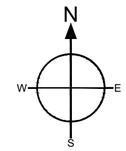
Tree Protective Fencing Specification



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



New foul underground drainage shown in red dash/dot line and connected to main sewer within the Highway

Install drop kerbs to all properties

Footpath width

Road width

New foul drainage connected to main sewer in the highway

planted marsh between road and boundary

road

footpath

New boundary fences to existing properties

Critical setting out dimension - mid point between Units 1 and 2 to rear of footpath

2 number 4.8m x 2.4m car parking spaces per property

Unit 1
Unit 2
Unit 3
Unit 4
Unit 5
Unit 6
Unit 7
Unit 8
Unit 9

Rear garden 75m²
Rear garden 65m²
Rear garden 66m²
Rear garden 68m²
Rear garden 64m²
Rear garden 69m²
Rear garden 62m²
Rear garden 88m²

Rear gardens to be lawned using either seed or turf

WCBC Planning Guidance required distance between dwellings

New surface water underground drainage shown in blue dash line and connected into individual soakaways

G1 G2 G3 G4 G5 H1 1 2 3 4 5 6 7 9 10 11 12

105.30 106.64 107.31 107.36 107.10 105.28 105.41 105.45 105.48 105.50

5m 10m

Legend

Root Protection Area Modified to Account for Site Features

Category
Crown Spread
Tree Number
Root Protection Area

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

2.0M high Heras (with extra central support bar) mounted on scaffold poles (driven in to the ground) and secured with anti tamper bolts – as illustrated.

NOTE: All trees have approximate locations.

Client: Elate Construction Ltd.	
Project: Former Coalyard, off Lloyds Lane, Chirk	
Title: Tree Protection Plan	
Scale: 1:250 @ A2	Date: June 2024
Drawn By: NB	Revision: -
Job Ref: 24/AIA/WXM/323	Drawing No: 03

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

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TREE SOLUTIONS
E: info@tree-solutions.co.uk T: 01244 389114
Tree Solutions Ltd - Company No: 04548951

Appendix Five

Tree Protective Measures/Method Statement

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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. Erect temporary protective fencing
3. Excavation of road section within RPA of trees
4. Installation of services within RPA of trees
5. Main construction phase
6. Removal of temporary fencing
7. Landscaping within RPA
8. Arboricultural site supervision

1. Tree Surgery Works

1. Before the erection of the temporary protective fencing, all tree removal shall be implemented in accordance with the approved 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. 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.

3. Excavation of Road Section within RPA of Trees

1. Excavation of the road and associated concrete edge restraints is to be undertaken under the supervision of the contract Arboricultural Clerk of Works (ACoW)
2. Any tree roots found to be present are to be carefully pruned back using secateurs or sharp saw to the next available inner node and then immediately backfilled with surround soil to prevent desiccation

4. Installation of Services within RPA of Trees

1. Service trench along the northern boundary adjacent to tree numbers 1-7 is to be hand excavated avoiding damage to the protective bark covering larger roots if found to be present within the trench. Excavation will be carried out under the supervision of the contract Arboricultural Clerk of Works (ACoW)
2. Roots, whist exposed, shall be wrapped in dry, clean Hessian sacking to prevent desiccation and to protect from rapid temperature changes.
3. No machinery shall pass over the surface once broken-out. Arisings shall be picked and removed by manual means.
4. Services shall pass beneath exposed roots prior to backfilling
5. Prior to backfilling any Hessian wrapping shall be removed and retained roots shall be surrounded in at least 35mm of sharp sand or other loose granular fill before any other material is replaced.

5. 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

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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 Wrexham Council Arboricultural Officer

6. Remove all Temporary Tree Protective Fencing

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

7. 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

8. 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.

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TREE PROTECTIVE FENCING

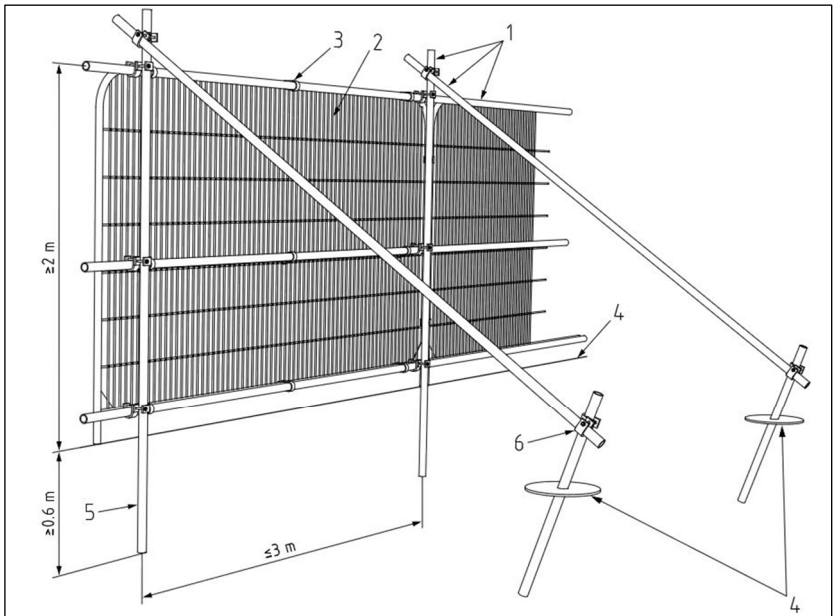
1. Before the commencement of any construction works on site (other than those set out in the schedule of tree works contained in this document), protective fencing will be erected as detailed on the Tree Protection Plan and as specified below.
2 The fencing will consist of a scaffold framework in accordance 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.



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

Tree Protective Fencing Specification

Arboricultural Clerk of Works (ACoW)

Name: Alistair Henderson
Tel: 01244 389114
Mobile: 07766 77450
Email: alistair@tree-solutions.co.uk

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