

Arboricultural Method Statement

Land at Marford Gate, Gresford

Prepared for:

AMG DEVELOPMENTS (MARFORD) LTD

Our Ref: 23/AIA/WXM/313

Planning Ref: P/2020/0724 - Conditions: 6, 7, 8

September 2023

Tree Solutions Ltd

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SEQUENCE OF OPERATIONS

From commencement of the 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 tree protective fencing
4. Main construction phase
5. Realign tree protective fencing for installation of ‘No Dig’ driveway section
6. Installation of ‘No-Dig’ driveway section
7. Removal of temporary fencing
8. Landscaping within RPA of trees
9. 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 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

1. ACoW to undertake a ‘toolbox talk’ outlining working methods in relation to trees prior to any construction activity on site. Those to be present are:
 - Arboricultural Clerk of Works – (ACoW)
 - Client
 - Main Contractor

3. Erect Temporary Tree Protective Fencing

1. Prior to commencement of any construction, ground 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.
2. Photographic evidence of tree protective fencing will be issued to Wrexham Council Tree Officer for approval upon completion. Any damage occurring to protective fencing during the development phase shall be made good by the main contractor.

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
4. Any damage to trees because of construction/engineering work will be logged and reported to the project ACoW

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 coming into contact with retained trees. Such contact can result in serious injury resulting in safe retention impossible

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.

On Site Storage of Spoil and Building Materials

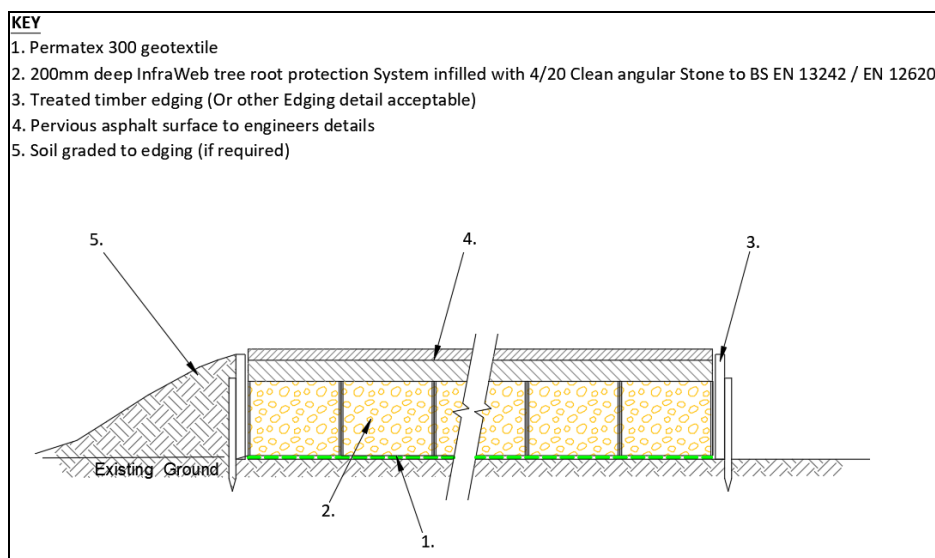
- Prior to and during all site construction works no spoil will be stored within the Root Protection Area of any tree on or adjacent to the site even if proposed site work is to be within the crown spread. Any encroachment within this protected area will only be by the prior agreement of the LPA Arboricultural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

5. Realign Tree Protective Fencing for Installation of No Dig Driveway Sections

- Upon completion of all construction work and removal of all plant and material from site, the tree protective fencing shall be realigned to the secondary location shown on Tree Protection in yellow
- The fencing shall remain in this location until the completion of the installation of the no-dig driveway, removal of existing bound surface and pond dredging

6. Installation of 'No-Dig' Driveway Section

- The no-dig driveway section as indicated in blue on the Tree Protection Plan shall be constructed using a three-dimensional cellular confinement system in accordance with the submitted and approved structural engineers plans and specification
- Construction shall ideally be undertaken in dry weather when ground is driest and least prone to compaction
- Ground vegetation should be killed using a translocated herbicide such as glyphosate. To prevent severe oxygen depletion in the soil during the process of decomposition, all dead organic material shall be removed
- All major protrusions such as rocks and demolition material shall be removed minimizing ground disturbance. All hollows will be filled with sharp sand
- Permeable matting will then be laid, and the cellular confinement system laid on top and pegged in place.
- The cellular confinement system will then be installed in accordance with the manufacturer's guidelines using **no-fines** aggregate. Fill the cells working from the area furthest from the tree first. Further filling should be carried out using the filled Cellweb as a platform
- Edging will be constructed with tandalised boards attached to pegs driven into the ground. Pegs should be long enough to give adequate support during construction
- Install a permeable wearing course, e.g., porous tarmac or block paving or porous tarmac placed on the aggregate. Paving slabs or brick paving should be dry bedded on the sub-base and joints left unsealed
- Under no circumstances is limestone aggregate to be used**



P2 – Example cross section of no-dig section

7. Remove all Temporary Tree Protective Fencing

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

8. Landscaping within RPA of Trees

1. There shall be **no rotoventing** of ground within any area designated as a Root Protection Area (RPA) and Construction Exclusion Zone (CEZ) and enclosed by Temporary Protective Fencing.
2. Other than the approved works, there should be no additional 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.

9. Arboricultural Site Supervision

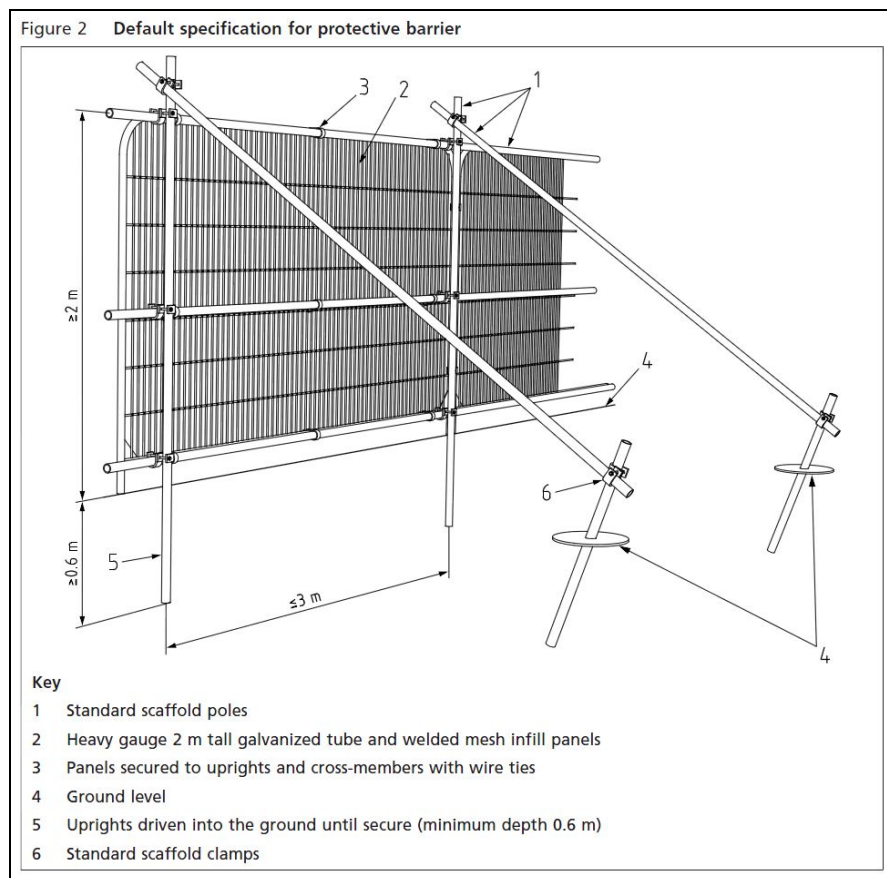
1. The erection of all tree protection measures outlined in this AMS and as indicated on the Tree Protection Plan will be inspected by the contract ACoW immediately after erection. Photographic evidence of the location and specification of all protective fencing will be forwarded to Wrexham Council Tree Officer upon completion.
2. All proposed work within any designated RPA will be overseen by the ACoW with photographic records taken and signed inspection report emailed direct to Wrexham Council Tree Officer for approval

TREE PROTECTIVE FENCING

- 1 Before the commencement of any site excavations and subsequent construction works (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 (as Appendix 3).
- 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

1. **Magenta** - Trees



Arboricultural Clerk of Works (ACoW)

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 Mobile: 07766 774508
 Email: alistair@tree-solutions.co.uk

Appendix One
Tree Survey Schedule

TREE SURVEY SCHEDULE (BS5837: 2012)

SITE:	LAND AT MARFORD GATE, GRESFORD
CLIENT:	AMG DEVELOPMENTS (MARFORD) LTD
BRIEF:	ARBORICULTURAL IMPACT ASSESSMENT & METHOD STATEMENT

SURVEYOR:	A. HENDERSON
ASSESSMENT DATE:	30/008/2023
VIEWING CONDITIONS:	CLEAR
JOB REFERENCE:	23/AIA/WXM/313

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	Pine	M	14 3.5W	5.5	4.5	5	5	720	G	• Located off-site • No visual defects • E.R.C.20+	• No works	B2	8.6 235m²
T2	Pine	M	12 4.5W	5	5	5	2.5	420	G	• Minor dead wood in crown • Asymmetric form • E.R.C.20	• No works	B2	5 80m²
T3	Malus	M	4	3	2	2	3	200	M	• Small insignificant tree • E.R.C.10	• Remove	C3	2.4 18m²

HEADINGS & ABBREVIATIONS

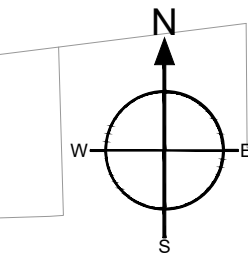
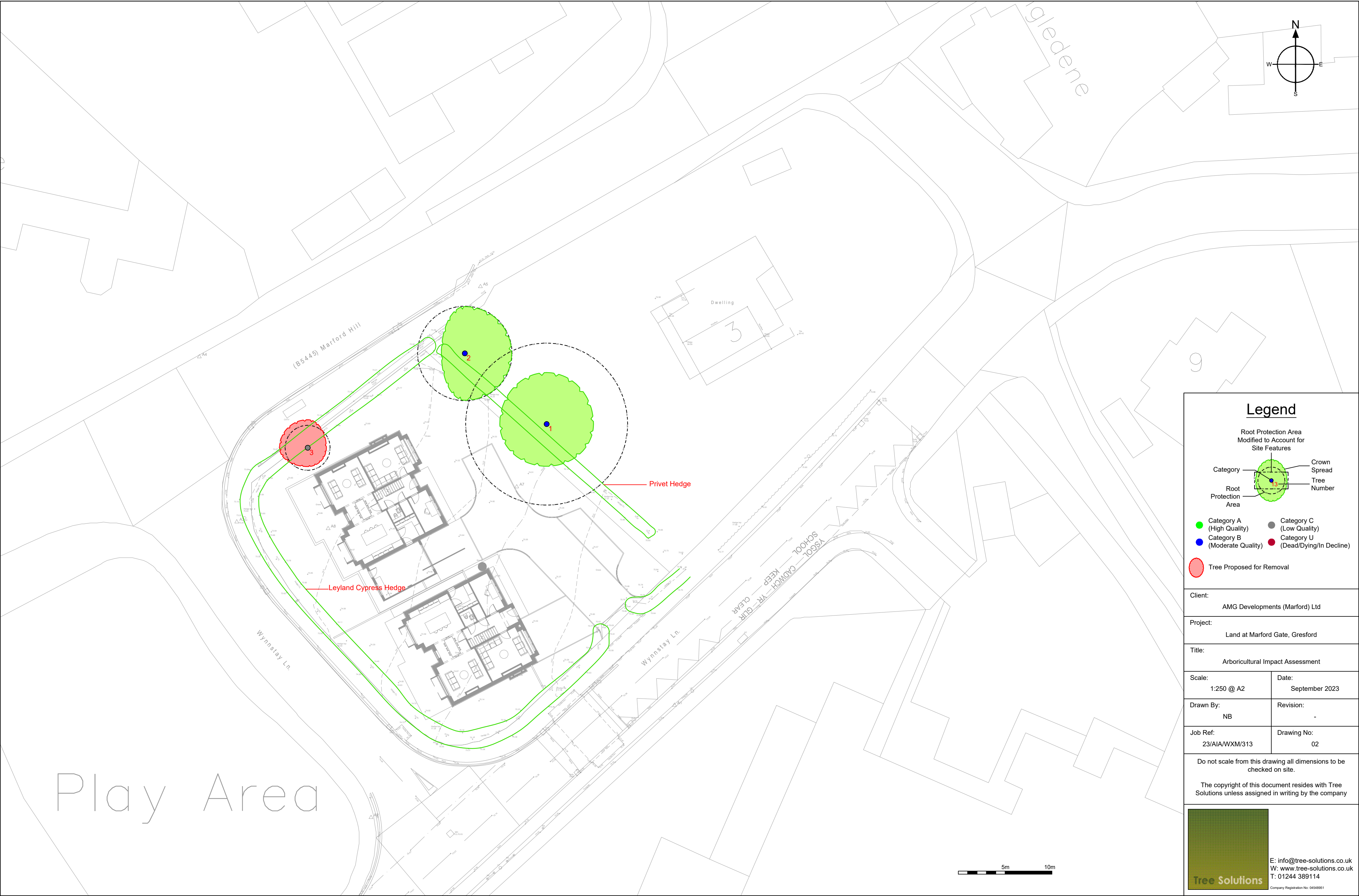
TREE NO.	REFERENCE NUMBER. REFER TO PLAN OR NUMBERED TAGS WHERE APPLICABLE (T = TREE, G = GROUP, H = HEDGE)
SPECIES:	COMMON NAME (LATIN NAMES AVAILABLE ON REQUEST)
AGE RANGE/LIFE STAGE:	Y = YOUNG, SM = SEMI MATURE, EM = EARLY MATURE, M = MATURE, PM = POST MATURE
HEIGHT:	ESTIMATED AND RECORDED IN METRES. 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 M²) NOTE – ALL CALCULATIONS ROUNDED TO NEAREST DECIMAL

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

Arboricultural Impact Assessment Plan



Legend

Root Protection Area
Modified to Account for
Site Features

Category

Root Protection Area

Crown Spread

Tree Number

Category A (High Quality)

Category B (Moderate Quality)

Category C (Low Quality)

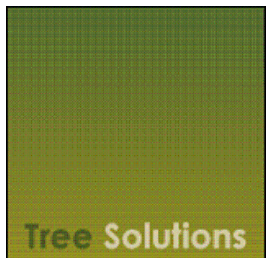
Category U (Dead/Dying/In Decline)

Tree Proposed for Removal

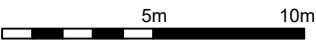
Client: AMG Developments (Marford) Ltd	
Project: Land at Marford Gate, Gresford	
Title: Arboricultural Impact Assessment	
Scale: 1:250 @ A2	Date: September 2023
Drawn By: NB	Revision: -
Job Ref: 23/AIA/WXM/313	Drawing No: 02

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

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Appendix Three
Tree Protection Plan



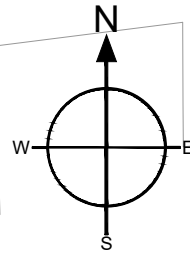
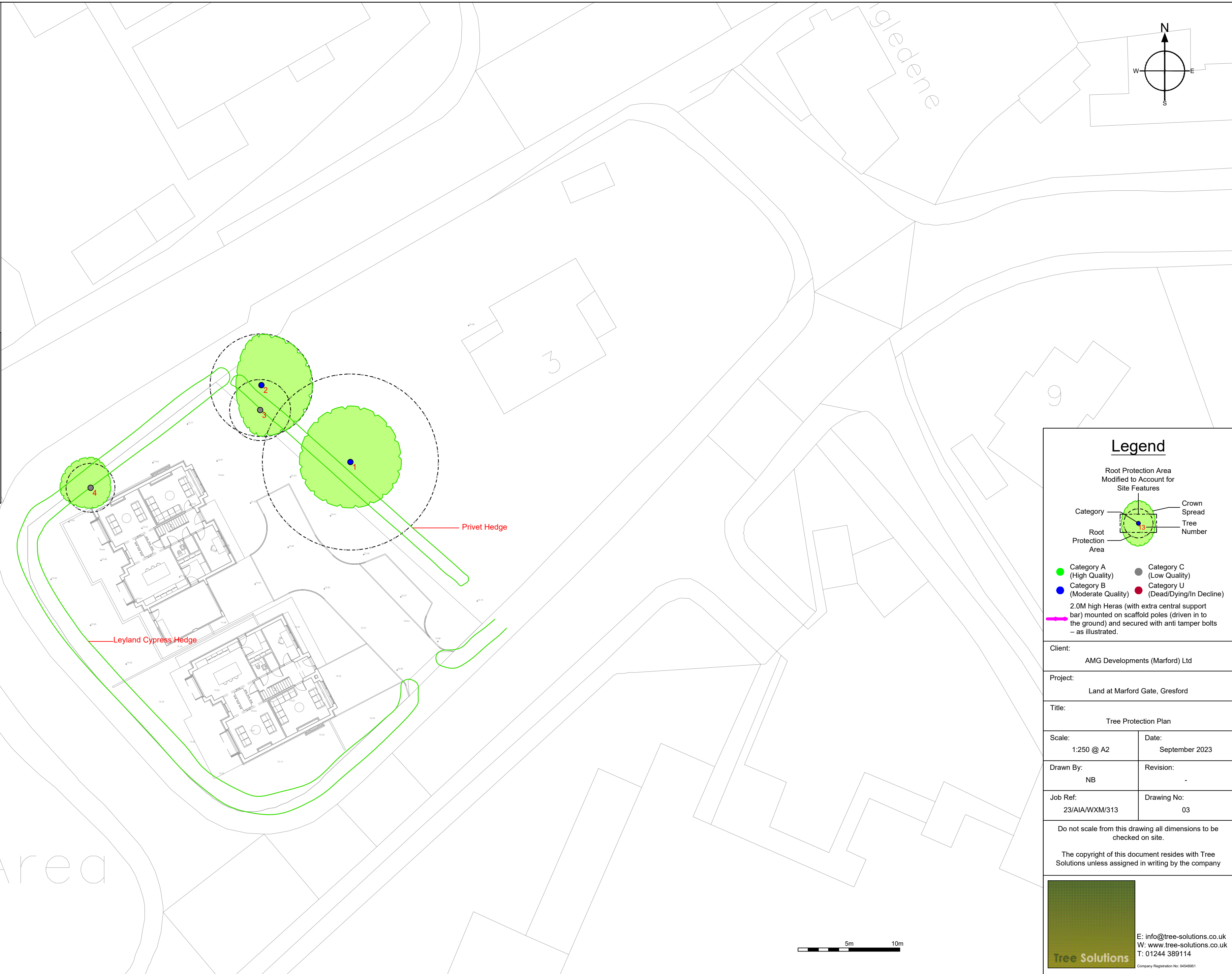
Tree Protective Fencing Specification



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



Legend

Root Protection Area
Modified to Account for
Site Features

Category

Root Protection Area

Crown Spread

Tree Number

Category A (High Quality)

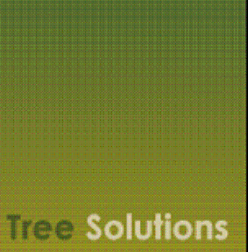
Category B (Moderate Quality)

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.

Client:		AMG Developments (Marford) Ltd	
Project:		Land at Marford Gate, Gresford	
Title:		Tree Protection Plan	
Scale:	1:250 @ A2	Date:	September 2023
Drawn By:	NB	Revision:	-
Job Ref:	23/AIA/WXM/313	Drawing No:	03
Do not scale from this drawing all dimensions to be checked on site.			
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Appendix Four
Tree Protection Sign



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



**TREE PROTECTION AREA
KEEP OUT !**

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