



Alloy Industrial Estate Car Park

BS5837:2012 Tree Survey 22nd October 2021

Membership No: TE03654



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Site Location: Site adjacent to Quad Bikes Wales, Alloy Industrial Estate, Pontardawe	Report Reference: 10/21/ACP/V3
Client: David John	Date of Report: 22 nd October 2021 Date of Site Visit(s): 20 th September 2021
Report Prepared By: Liz Phillips	Survey Carried Out By: Liz Phillips

RTAC, 6 COURTYARD FLATS, STABLE YARD, STACKPOLE, PEMBROKESHIRE, SA71 5DE

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1. Introduction

1.1 Site Location

1.1.1 Site Address: Land to southwest of Quad Bikes Wales, Alloy Industrial Estate, Pontardawe, SA8 4EZ.

1.1.2 Ordnance Survey grid reference: SN725042.

1.2 Instructions

1.2.1 RTAC has been instructed to produce a tree survey in compliance with BS5837:2012 'Trees in Relation to Design, Demolition and Construction' to inform a planning application for a new carparking area at this site. The instruction was given by Mark Shreves, SGW Planning.

1.3 Documents Provided

1.3.1

Document Description	Reference Number	Produced By	Date
General Site Layout 1:500@A2	21/848/12	SGW Planning	Aug 2021

1.3.2 No independent verification or assessment of this document has been made by RTAC. The General Site Layout has been used to form the basis of the plans in this report.

1.4 Scope of Report

1.4.1 The purpose of this report is to survey the trees within the gated area to the southwest of Quad Bikes Wales to a distance of approximately 40 metres west of the gate and from the top of the bank to the north of the site to the fence separating the site from the Royal Mail building to the south.

1.4.2 This report is concerned with the arboricultural features of the site only and including any physical features which directly affect or are affected by the trees.

1.4.3 This survey is a record of the condition of the trees at the time of the survey being carried out, notwithstanding this, the purpose of this survey is to assess the trees in accordance with BS5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations and with respect to the proposed development and the survey is not intended to be a full tree condition or hazard survey.

1.5 Survey Methodology and Limitations

1.5.1 The survey was carried out on Monday 20th September 2021, the weather was dry and overcast, and visibility was good.

1.5.2 No discussion took place between the surveyor and any other party.

1.5.3 The heights and crown spreads of all trees recorded were measured with an SNDWAY SW-1000A Laser Distance Meter Telescope; stem diameters of all trees recorded were measured at 1.5 metres above ground level with a diameter tape.

1.5.4 Tree locations were plotted using a 50-metre measuring tape.

1.5.5 No vegetation has been removed to inspect trees and where trees are not visible or accessible because of vegetation, fences, ditches or other obstructions a limited assessment has been carried out.

1.5.6 Observations were made using Visual Tree Assessment (VTA) methodology (Mattheck 1994). The data was recorded using Pear Technology Pocket GIS on a Panasonic Toughpad FZ-G1.

1.5.7 The trees recorded were tagged with two-inch diameter aluminium tree tags numbered from 0501 to 0516 inclusive. For clarity, only trees with a stem diameter above approximately 200mm at 1.5 metres above ground level were plotted on the Tree Constraints Plans (Appendix I).

1.5.8 This survey was undertaken in accordance with BS5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations.

1.5.9 The trees have been categorised in accordance with the British Standard 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations as listed below:

Category A – trees of high quality with an estimated remaining life expectancy of at least 40 years.

Category B – trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

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 150mm.

These categories are subdivided into 1. Arboricultural qualities, 2. Landscape qualities and 3. Cultural values, including conservation.

Trees not suitable for retention have been categorised as U.

See Appendix I for table of categories.

1.5.10 All observations were made from the ground. No climbing surveys were carried out.

1.5.11 No soil samples were taken.

1.5.12 No invasive decay detection techniques have been used.

1.5.13 This report is valid for one year from the date of inspection. Trees are living organisms and no responsibility can be accepted by the surveyor for the failure of a tree or part of a tree due to adverse weather conditions, *force majeure* or other unpredictable occurrences. It is the responsibility of the tree owner to inspect and maintain his or her trees on a regular basis.

1.5.14 The tree survey was carried out by Liz Phillips TechArborA of RTAC. Liz has worked in the arboricultural industry for 14 years as a tree surgeon, surveyor, local authority tree officer and consultant.

1.6 Planning Policy

1.6.1 Planning Policy Wales Edition 10 December 2018 Chapter 6: Distinctive and Natural Places contains the following policies:

6.4.25 Planning authorities should protect trees, hedgerows, groups of trees and areas of woodland where they have ecological value, contribute to the character or

amenity of a particular locality, or perform a beneficial and identified green infrastructure function. Planning authorities should consider the importance of native woodland and valued trees, and should have regard, where appropriate, to local authority tree strategies or SPG. Permanent removal of woodland should only be permitted where it would achieve significant and clearly defined public benefits. Where woodland or trees are removed as part of a proposed scheme, developers will be expected to provide compensatory planting.

1.6.2 Neath Port Talbot County Borough Council's Local Development Plan (2011-2016) adopted January 2016 contains the following policy:

Policy EN 7 Important Natural Features

Development proposals that would adversely affect ecologically or visually important natural features such as trees, woodlands, hedgerows / field boundaries, watercourses or ponds will only be permitted where:

- 1. Full account has been taken of the relevant features in the design of the development, with measures put in place to ensure that they are retained and protected wherever possible; or*
- 2. The biodiversity value and role of the relevant feature has been taken into account and where removal is unavoidable, mitigation measures are agreed.*

1.7 Statutory Designations

1.7.1 Amanda Holmes, Senior Land Charges Officer, Neath Port Talbot County Borough Council has confirmed that there are no Tree Preservation Orders affecting this site.

1.8 Protected Wildlife

1.8.1 Before any treeworks are carried out, the trees should be inspected for any evidence of bats or nesting birds.

1.8.2 It is an offence under the Wildlife and Countryside Act 1981 to intentionally:

- kill, injure or take any wild bird;
- take, damage or destroy the nest of a wild bird included in Schedule ZA1;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built; or
- take or destroy an egg of any wild bird,

1.8.3 It is also an offence to:

- deliberately capture, injure or kill a bat;
- damage or destroy any structure or place which any bat uses for shelter or protection;
- disturb any bat while it is occupying a structure or place which it uses for shelter or protection; or
- obstruct access to any structure or place which any bat uses for shelter or protection.

2. Site Analysis

2.1 Site Description

2.1.1 The site proposed for the new car park measures approximately 350m² and is situated between Alloy Industrial Estate to the south and east and a steep bank leading up to the old Neath canal to the north. The site currently houses an above ground sewage pipe and a small stream runs from the bank to the north and then turns east across the site.

2.1.2 The site has previously been cleared by Dŵr Cymru Welsh Water to install the sewage pipe and the trees in the area proposed for development are predominantly self-set goat willow (*Salix caprea*).

2.2 Proposed Works

2.2.1 Overflow carparking for Quad Bikes Wales comprising thirteen additional parking spaces will be constructed on the flat ground at the base of the slope and immediately to the north of the boundary fence with the existing Royal Mail building.

3. The Trees

3.1 Sixteen trees with stems above 200mm in diameter were recorded, the tables of species, age class and retention category are below:

3.2 Tree Species

Common Name	Botanical Name	Number of Trees
Goat willow	<i>Salix caprea</i>	10
Sycamore	<i>Acer pseudoplatanus</i>	5
Common oak	<i>Quercus robur</i>	1

3.3 Age Classes

Age Class	Number of Trees
Young	1
Semi-mature	8
Mature	7
Over Mature	0

3.4 Retention Category

Retention Category	Number of Trees
A	0
B	3
C	9
U	4

4 Treeworks Recommendations

4.1

Tree Number	Species	Work Required	Retention Category
T501	Goat willow	Fell	U
T502	Goat willow	Fell to facilitate development	C
T503	Goat willow	Fell to facilitate development	C
T504	Goat willow	Fell to facilitate development	C
T505	Goat willow	Fell	U
T506	Goat willow	Fell to facilitate development	C
T507	Goat willow	Fell to facilitate development	C
T511	Sycamore	Fell	U
T515	Sycamore	Fell	U

4.2 All treeworks must be carried out in accordance with BS3998:2010 Recommendations for Treeworks.

5 Arboricultural Impact Assessment

5.1 Tree Constraints Plan

5.1.1 All site plans are in Appendix II.

5.1.2 Above Ground Constraints - current crown spread is marked on the Tree Constraints Plan (TCP). This does not indicate the ultimate crown spread of the individual trees.

5.1.3 Below Ground Constraints – the root protection area (RPA) is a circle of radius 12 x the diameter of the stem of the tree measured at 1.5 metres above ground level. For a multi-stemmed tree, the RPA is calculated using the following formula:

$$\sqrt{(\text{mean stem diameter})^2 \times \text{number of stems}}$$

5.1.4 The RPA is usually depicted as a complete circle; however, this area can be altered in shape to reflect compromised growing conditions such as the presence of buildings, watercourses, etc. In this case, the RPAs of T501; T502; T503; T504; T509; T510 and T516 have been redrawn to reflect the proximity of the adjacent car park; roads and canal.

5.2 Arboricultural Impact Assessment

5.2.1 The sparsely set trees on the flat ground between the base of the site and the fence forming the south boundary are predominantly self-set goat willow (*Salix caprea*) in various condition and all classified as C and U category. Five C category and two U category goat willows will be removed to construct the parking area. The more dense tree cover on the bank to the north will not be affected by the proposed development.

5.3 Tree Protection Plan & Method Statement

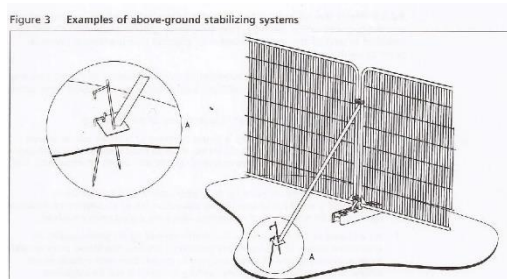
5.3.1 All treeworks must be carried out prior to the commencement of construction works.

5.3.2 Heras fencing as shown below will be erected as marked on the Tree Protection Plan in Appendix II. Signage as shown below must be attached to the tree protection fencing.

5.3.3 The fenced off area will be designated as the construction exclusion zone (CEZ). All fencing must be in place before construction works begin and must not be moved or removed until all construction works have finished.

5.3.4 Works within the CEZ are restricted as follows:

- No excavations to be carried out unless agreed as part of the planning permission.
- No vehicle access.
- No fires to be lit within the CEZ or within 10 metres of the crown of a tree to be retained.
- No storage of construction materials or spoil within the CEZ.
- No mixing of cement or discharge of contaminants such as fuel within the CEZ.
- Soil levels within the CEZ must not be altered unless agreed as part of the planning permission.
- No signs or lighting to be attached to trees to be retained.





20th October 2021

Alloy Industrial Estate car park

APPENDIX

I. Survey Data

Terms used in data tables

BS5837 Survey

Tag No – corresponds to numbered metal tag attached to tree.

Species – common and Latin names are given.

Height - measured with a Suunto PM5/360 clinometer to the nearest metre unless otherwise stated.

Stem diameter - measured at 1.5 metres above ground level with a dbh (diameter at breast height) tape.

Crown spread - measured at the cardinal points to 0.5 metres.

Clear - the lowest height of the crown above ground measured in metres.

Age - NP – newly planted; Y – young, a tree in the first third of life expectancy; SM – semi-mature, a tree in the second half of life expectancy; M – mature, tree in final third of life expectancy; OM – over-mature, tree in decline; V – veteran, tree with major physiological decline, surviving beyond the typical age range for the species.

RP – root protection area; radius and area of circle.

Phys. Condition - physiological condition; poor, fair, good, dead or dangerous.

Structural condition - crown, stem and basal area.

Preliminary recommendations - recommendations for remedial works.

Cat - retention category as defined in BS5837:2012 A, B, C and U.

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

BS5837:2012 Tree Survey

RTAC

Client: sgw planning
 Project: Alloy Ind Est car park
 Survey Date: 24/09/2021
 Surveyor: Liz Phillips

6 Courtyard Flats
 Stable Yard
 Stackpole
 Pembroke
 SA71 5DE
 Mobile: 07823332279

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m ²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment		Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)							
T501 501												
Goat Willow <i>Salix caprea</i>	9	1	610	N E S W	3 4 6 1	6 7 3 7	M A: 168.4 R: 7.32	Good	C: Good S: Fair B: Poor	Fell :: Fell to ground level Tree appears to have rootplate lifted on north side; weak fork at stem break.		U
T502 502												
Goat Willow <i>Salix caprea</i>	9	1	490	N E S W	7 3 9 5	5 7 2 6	M A: 108.6 R: 5.87	Good	C: Good S: Good B: Good	Fell :: Fell to facilitate development		C.2 >40 yrs
T503 503												
Goat Willow <i>Salix caprea</i>	8	8	509 (Eq)	N E S W	8 6 8 7	1.5 2 6 4	M A: 117.3 R: 6.11	Fair	C: Good S: Fair B: Good	Fell :: Fell to facilitate development Deadwood and damaged stems.		C.2 >40 yrs
T504 504												
Goat Willow <i>Salix caprea</i>	8	8	566 (Eq)	N E S W	6 5 8 7	6 6 2 3	M A: 144.8 R: 6.78	Good	C: Good S: Good B: Good	Fell :: Fell to facilitate development		C.2 >40 yrs
Age Classifications: N Newly planted EM Early Mature Y Young M Mature SM Semi-mature OM Over Mature												
Condition: C Crown S Stem B Basal area												
Stems: Ø Diameter (Eq) Equivalent stem diameter using BS5837:2012 definition												

Tree and Tag No Species		Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations			Cat ERC
			No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment			
T505 505														
Goat Willow <i>Salix caprea</i>		8	1	230	N E S W	3 4 8 3	SM	A: 23.9 R: 2.75	Good	C: Good S: Poor B: Poor	Fell :: Fell to ground level Collapsed tree.			U
T506 506														
Goat Willow <i>Salix caprea</i>		8	1	540	N E S W	7 4 3 6	5 M	A: 131.9 R: 6.47	Fair	C: Fair S: Ivy B: Good	Fell :: Fell to facilitate development Tree covered in ivy.			C.2 20 to 40 yrs
T507 507														
Goat Willow <i>Salix caprea</i>		8	6	441 (Eq)	N E S W	5 7 6 4	3 M	A: 88 R: 5.29	Good	C: Good S: Good B: Good	Fell :: Fell to facilitate development			C.2 >40 yrs
T508 508														
Goat Willow <i>Salix caprea</i>		14	1	330	N E S W	3 6 9 4	4 SM	A: 49.3 R: 3.96	Good	C: Good S: Good B: Good	No action :: Unspecified			C.2 >40 yrs
T509 509														
Sycamore <i>Acer pseudoplatanus</i>		12	1	500	N E S W	6 6 7 7	8 SM	A: 113.1 R: 6	Fair	C: Fair S: Ivy B: Good	No action :: Unspecified			B.2 >40 yrs
T510 510														
Sycamore <i>Acer pseudoplatanus</i>		12	1	800	N E S W	7 1 7 8	2 SM	A: 289.6 R: 9.6	Fair	C: Fair S: Ivy B: Good	No action :: Unspecified Asymmetrical crown weighted towards west.			B.2 >40 yrs
Age Classifications:		N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature	Condition:		C S B	Crown Stem Basal area	Stems:	Ø (Eq)	Diameter Equivalent stem diameter using BS5837:2012 definition		

Tree and Tag No Species		Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations			Cat ERC
			No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment			
T511 no tag														
Sycamore <i>Acer pseudoplatanus</i>		12	1	800	N E S W	7 8 6 8	6 4 8 8	SM A: 289.6 R: 9.6	Poor	C: Poor S: Ivy B: Good	Fell :: Fell to ground level Sparse crown; large amounts of deadwood.			U
T512 no tag														
Goat Willow <i>Salix caprea</i>		14	2	461 (Eq)	N E S W	7 6 5 6	4 3 5 6	SM A: 96.3 R: 5.53	Good	C: Good S: Good B: Good	No action :: Unspecified			C.2 >40 yrs
T513 513														
Sycamore <i>Acer pseudoplatanus</i>		10	1	440	N E S W	3 3 5 3	5 4 4 4	SM A: 87.6 R: 5.28	Fair	C: Fair S: Ivy B: Good	No action :: Unspecified Deadwood and ivy in crown.			C.2 20 to 40 yrs
T514 514														
Goat Willow <i>Salix caprea</i>		7	1	180	N E S W	4 2 4 4	2 3 2 3	Y A: 14.7 R: 2.16	Good	C: Good S: Good B: Good	No action :: Unspecified			C.2 >40 yrs
T515 515														
Sycamore <i>Acer pseudoplatanus</i>		12	1	440	N E S W	6 4 5 4	4 4 6 7	SM A: 87.6 R: 5.28	Poor	C: Poor S: Ivy B: Good	Fell :: Fell to ground level Sparse crown and deadwood.			U
T516 516														
Common Oak <i>Quercus robur</i>		12	1	700	N E S W	2 6 9 8	7 8 5 5	M A: 221.7 R: 8.4	Good	C: Good S: Ivy B: Good	No action :: Unspecified			B.2 >40 yrs
Age Classifications:		N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature	Condition:		C S B	Crown Stem Basal area	Stems:	Ø (Eq)	Diameter Equivalent stem diameter using BS5837:2012 definition		

Report selection criteria.

Projects.

Alloy Ind Est car park

Date Range.

Any Date

Work types.

----> Fell :: Fell to facilitate development
 ----> Fell :: Fell to ground level
 ----> No action :: Unspecified

Latest Survey.

All surveys for the selected trees.
 ---> Last survey for each selected tree.

Work Completed.

---> Work Completed
 ---> Work Not Completed

Number of trees in selected Project(s) 16

Number of trees in Report selection 16

Age Classifications:

N	Newly planted	EM	Early Mature
Y	Young	M	Mature
SM	Semi-mature	OM	Over Mature

Condition:

C	Crown
S	Stem
B	Basal area

Stems:

Ø	Diameter
(Eq)	Equivalent stem diameter using BS5837:2012 definition



20th October 2021

Alloy Industrial Estate car park

II. Site Plans

RTAC

6 Courtyard Flats, Stable Yard, Stackpole, SA71 5DE
07823332279 info@rtactrees.co.uk

Alloy Industrial Estate New Car Park Tree Constraints Plan

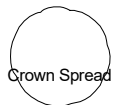
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DATE :
20/10/2021



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Crown Spread



Root Protection Area



Category 'A'



Category 'B'

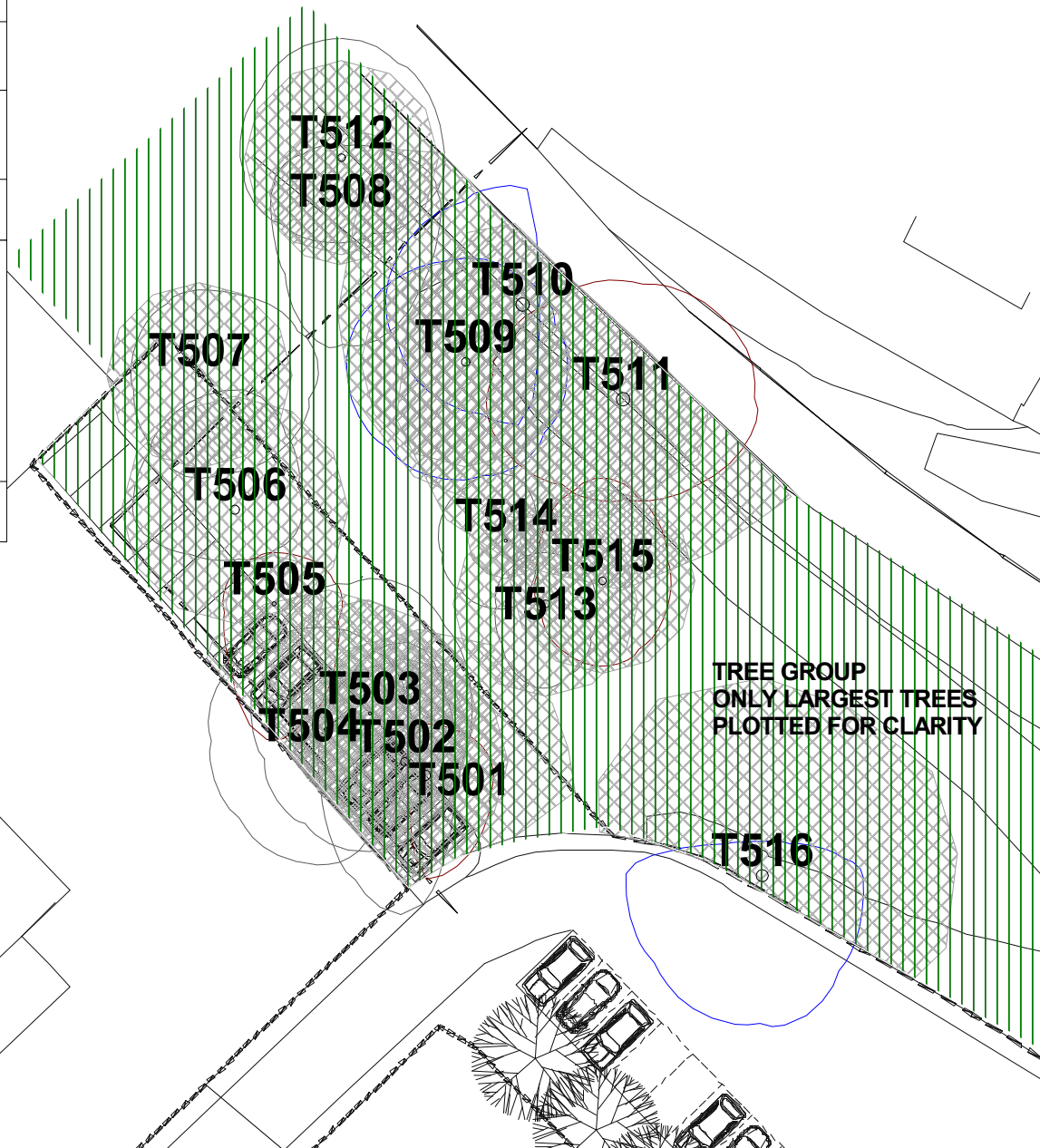


Category 'C'



Category 'U'

0 25m



RTAC

6 Courtyard Flats, Stable Yard, Stackpole, SA71 5DE
07823332279 info@rtactrees.co.uk

Alloy Industrial Estate New Car Park Retained Trees Plan

SCALE :
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20/10/2021



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Crown Spread



Root Protection Area



Category 'A'



Category 'B'

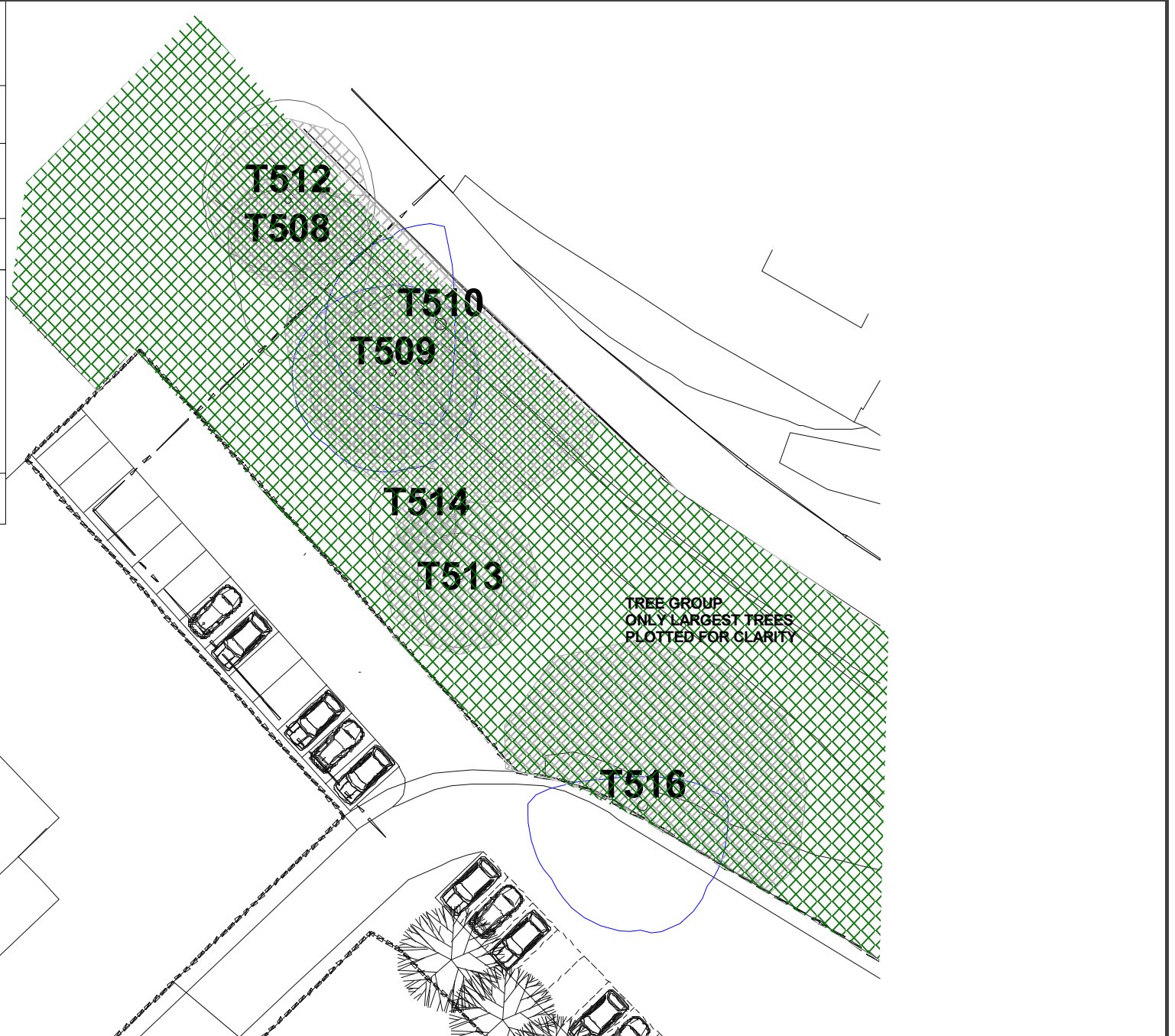


Category 'C'



Category 'U'

0 25m



RTAC

6 Courtyard Flats, Stable Yard, Stackpole, SA71 5DE
07823332279 info@rtactrees.co.uk

Alloy Industrial Estate New Car Park Tree Protection Plan

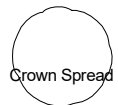
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Crown Spread



Root Protection Area



Category 'A'



Category 'B'



Category 'C'



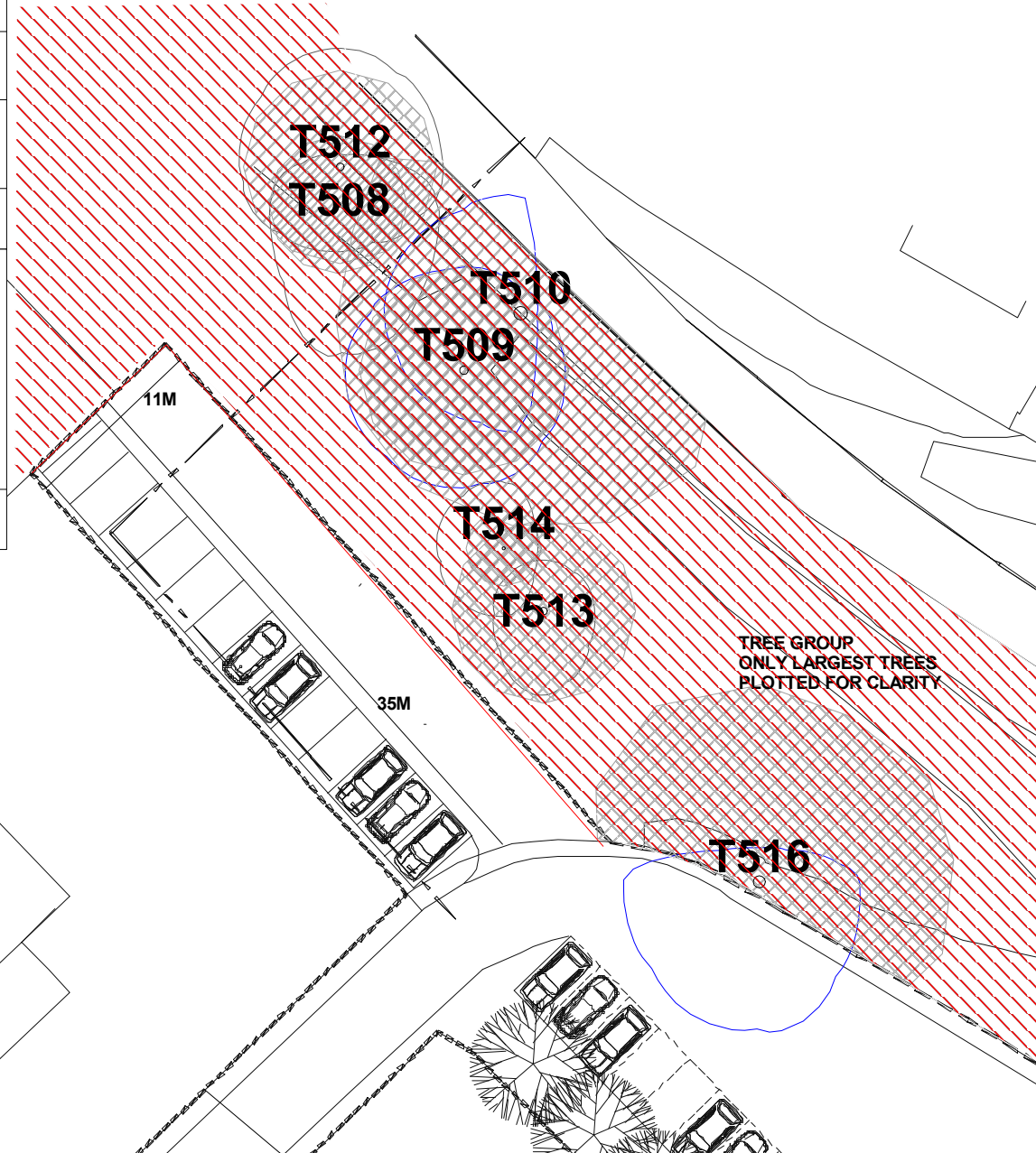
Category 'U'



 TREE PROTECTION FENCE

 CONSTRUCTION EXCLUSION ZONE

 MEASUREMENTS TAKEN
FROM EXISTING BOUNDARIES



III. Photographs



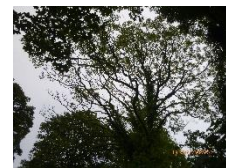
Site from entrance



Site looking south



West boundary of site



T511

IV. Qualifications

Qualifications:

AA Technicians Certificate 2009
BSc. Heritage Conservation 2ii
Electrical Arboriculture Units 1 and 2a
NVQ Level 2 Environmental Conservation
NPTC CS 30, 31, 39, climb trees and perform aerial rescue

CPD:

Bats and Arboriculture: a Practitioner's guide
BS 5837:2012. Tree Surveying and Categorisation
Subsidence 1 day workshop
Assessment of Tree Forks: Assessment of Junctions for Risk Management
The Hollow Tree – Arboriculture
Introduction to Soils

V. **Bibliography**

British Standard 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations; British Standards Institution.

Manual of Wood Decays in Trees (2003) Weber & Mattheck; The Arboricultural Association.

Diagnosis of Ill-health in Trees (1994) Strouts and Winter; TSO.

British Standard 3998:2010 Recommendations for Tree Work UK; British Standards Institution.

The body language of trees (1994) Mattheck & Breloer; TSO.

Principles of tree hazard assessment and management (1999) Lonsdale; Forestry Commission.

Complete field guide to the Trees of Britain & Europe (2004) Johnson & More; Collins.

Assessment of Tree Forks: Assessment of Junctions for Risk Management (2016) Slater in association with Myerscough College; The Arboricultural Association.

Arboricultural Practice Note 12: Through the Trees to Development (2007) Patch and Holding; Arboricultural Advisory and Information Service.

Guide to producing a Tree Protection Fencing Plan for straightforward Householder Applications SPG; City and County of Swansea Council.

Planning Policy Wales Technical Advice Note 5: Nature Conservation and Planning (September 2009) Welsh Government.