



Quad Bikes Wales Alloy Industrial Estate

BS5837:2012 Tree Survey 11th August 2021

Membership No: TE03654



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Site Location: Quad Bikes Wales, Alloy Industrial Estate	Report Reference: 08/21/QBW/V4
Client: SGW Planning	Date of Report: 11 th August 2021 Date of Site Visits: 8 th July 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: Quad Bikes Wales, Alloy Industrial Estate, Gilbertson Court, Pontardawe, Swansea, SA8 4EZ.

1.1.2 Ordnance Survey grid reference: SN726042.

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 proposed development at Quad Bikes Wales. The instruction was given by Mark Shreves, SGW Planning.

1.3 Documents Provided

1.3.1

Document Description	Reference Number	Produced By	Date
Proposed Site Layout 1:250@A2	21/848/03	SGW Planning	Apr. 2021
Proposed Site Layout 1:250@A2	21/848/11	SGW Planning	Apr. 2021
Location Plan 1:1250	21/848/01	SGW Planning	May 2021

1.3.2 No independent verification or assessment of these documents has been made by RTAC. Diagram 21/848/11 has been used to form the basis of the Proposed Site Layout plans in this report.

1.4 Scope of Report

1.4.1 The purpose of this report is to survey the trees within the Quad Bikes Wales site and immediately outside the northeast corner of the site adjacent to the proposed new building.

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 Thursday 8th July 2021, the weather was dry and sunny, and visibility was good.

1.5.2 The trees recorded were tagged with two-inch diameter aluminium tree tags numbered from 0331 to 0337 inclusive.

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

1.5.8 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.

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

1.5.10 No soil samples were taken.

1.5.11 No invasive decay detection techniques have been used.

1.5.12 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.

1.5.13 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.

1.7.2 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 Gavin Sterio, Geographic Information Systems Supervisor for 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 is an industrial unit on the Alloy Industrial Estate. The site currently contains a large commercial building against the southeast boundary and the remainder of the site has been concreted over except for a small grass verge adjacent to the only entrance in the southwest corner.

2.2 Proposed Works

2.2.1 A new building will be constructed in the northeast corner of the site and the existing building will be extended to the southwest. The verge at the entrance will be redesigned to allow for delivery lorries to access the site safely.

3. The Trees

3.1 The seven trees within the site have been recorded, the tables of species, age class and retention category are below:

3.2 Tree Species

Common Name	Botanical Name	Number of Trees
Norway maple	<i>Acer platanoides</i>	3
Common hornbeam	<i>Carpinus betulus</i>	1
Common oak	<i>Quercus robur</i>	1
Silver birch	<i>Betula pendula</i>	1
Sweet chestnut	<i>Castanea sativa</i>	1

3.3 Age Classes

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

3.4 Retention Category

Retention Category	Number of Trees
A	0
B	2
C	5
U	0

3.5 The site is surrounded by mixed broadleaf woodland to the east and west outside the perimeter fence.

4 Arboricultural Impact Assessment

4.1 Tree Constraints Plan

4.1.1 All site plans are in Appendix II.

4.1.2 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.

4.1.3 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:

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

4.1.4 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 all trees except for T331 have been redrawn to reflect the current site layout.

4.2 Arboricultural Impact Assessment

4.2.1 T331, T332, T335 and T336 will be removed to facilitate the new car park and access. T331 is a hornbeam with extensive squirrel damage and T336 conflicts with the new vehicle access – these two trees have been categorised as C. Two small B category trees T332 and T335 will be removed to facilitate the new car parking spaces; T332 is a sweet chestnut, and the restricted rooting area of the verge will not allow this tree to grow to its full potential. T337 is a small C category oak with a very restricted rooting area; an asymmetrical crown which will conflict with the new build; and bark damage, and this tree will be removed.

4.2.2 Three heavy standard (12-14cm stem girth at 1m above ground level) silver birch trees (*Betula pendula*), will be planted at the western end of the retained verge to replace the trees removed.

4.2.3 The trees in the woodland area outside the perimeter fence are approximately five metres away from the fence and will not be affected by the proposed development. The ground inside the site has been concreted over and this will have prevented any root encroachment into the site by trees growing outside the site. A small amount of overhang to the south of T337 will need to be cut back to the fence line but this will not have a detrimental effect on the trees.

4.3 Tree Protection Plan & Method Statement

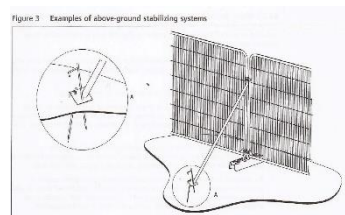
4.3.1 All treeworks must be carried out prior to the commencement of construction works.

4.3.2 Heras fencing as shown below will be erected as marked on the Tree Protection Plan in Appendix II to protect the retained trees and the verge area reserved for replacement tree planting. Signage as shown must be attached to the tree protection fencing.

4.3.3 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.

4.3.4 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.





11th August 2021

Alloy Industrial Estate

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 Industrial Estate
 Survey Date: 08/07/2021
 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 (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
			No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
T331	331	8	1	350	N	6	1.5	SM	A: 55.4 R: 4.19	Fair	C: Poor S: Good B: Good	Fell :: To facilitate development	C.2 10 to 20 yrs
Common Hornbeam	E				6	1.5	Extensive squirrel damage.						
<i>Carpinus betulus</i>	S				6	1							
	W				6	1							
T332	332	10	1	360	N	3.5	5	SM	A: 58.6 R: 4.31	Good	C: Fair S: Good B: Good	Fell :: To facilitate development	B.2 >40 yrs
Sweet Chestnut	E				5	4	Minor deadwood; exposed roots.						
<i>Castanea sativa</i>	S				5	3							
	W				4	5							
T333	333	11	1	240	N	5	4	SM	A: 26.1 R: 2.88	Good	C: Good S: Good B: Good	No action :: Unspecified	C.2 >40 yrs
Norway Maple	E				5	3							
<i>Acer platanoides</i>	S				5	4							
	W				4	3							
T334	234	13	1	250	N	3	6	SM	A: 28.3 R: 3	Good	C: Fair S: Good B: Good	No action :: Unspecified	C.2 >40 yrs
Silver Birch	E				4	6	Minor dieback.						
<i>Betula pendula</i>	S				5	5							
	W				4	6							
Age Classifications:		N	Newly planted	EM	Early Mature		Condition:		C	Crown	Stems:	Ø	Diameter
		Y	Young	M	Mature				S	Stem		(Eq)	Equivalent stem diameter using BS5837:2012 definition
		SM	Semi-mature	OM	Over Mature				B	Basal area			

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			
T335 335														
Norway Maple	11	1	300	N	5	3	SM	A: 40.7	Good	C: Good	Fell :: To facilitate development			B.2 >40 yrs
Acer platanoides				E	4	3		R: 3.59		S: Good				
				S	3	3				B: Good				
				W	4	3								
T336 336														
Norway Maple	11	1	300	N	5	3	SM	A: 40.7	Good	C: Good	Fell :: To facilitate development			C.2 20 to 40 yrs
Acer platanoides				E	5	3		R: 3.59		S: Fair				
				S	4	4				B: Good	Weak fork at stem break.			
				W	4	3								
T337 337														
Common Oak	10	1	280	N	1	5	SM	A: 35.5	Fair	C: Poor	Fell :: To facilitate development			C.2 10 to 20 yrs
Quercus robur				E	1	6		R: 3.36		S: Fair				
				S	5	5				B: Good	Asymmetrical crown weighted over new build; slight lean to west; bark wounds.			
				W	5	2								

Report selection criteria.

Projects.

Alloy Industrial Estate

Date Range.

Any Date

Work types.

----> Fell :: To facilitate development
----> No action :: Unspecified

Latest Survey.

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

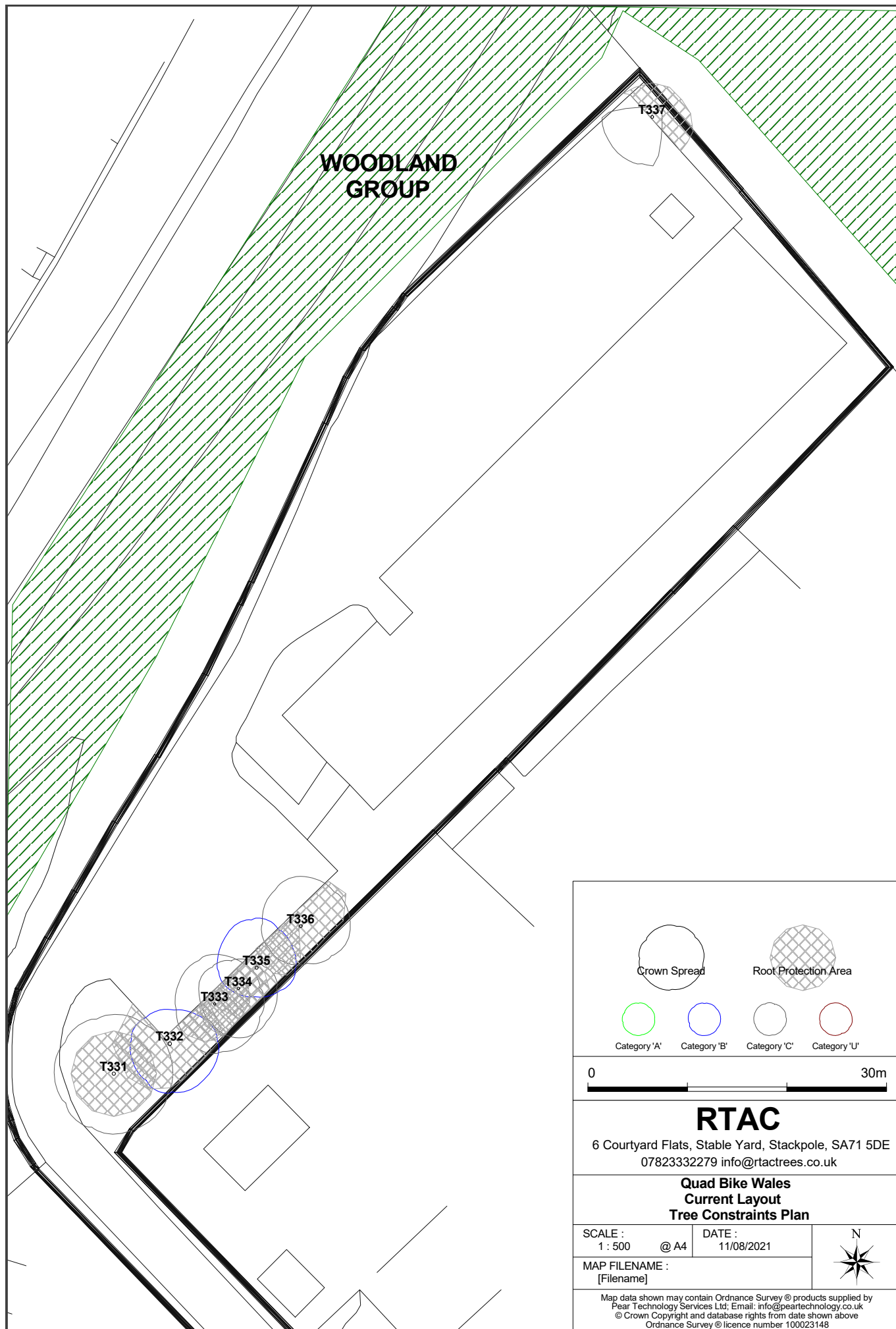
Work Completed.

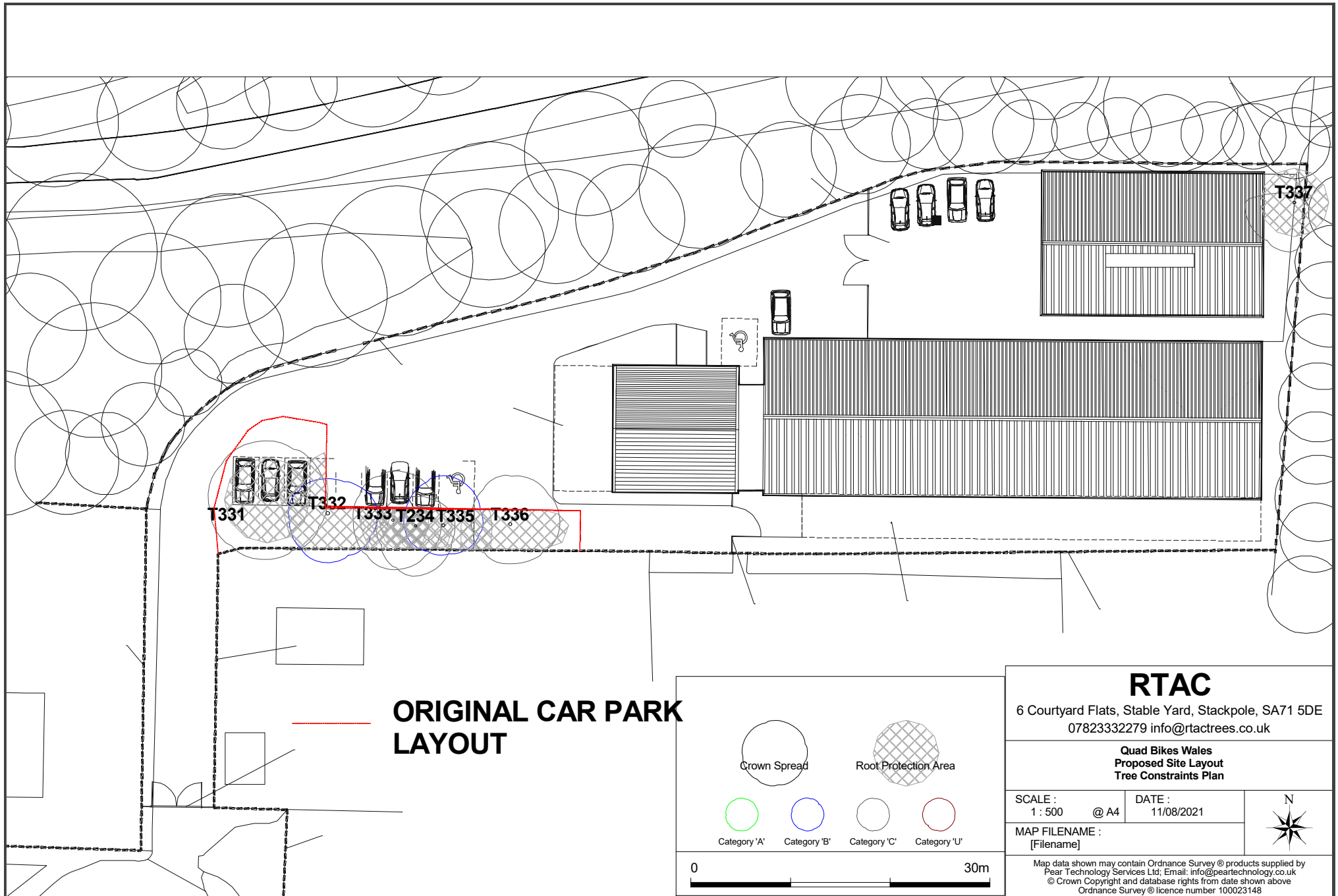
---> Work Completed
---> Work Not Completed

Number of trees in selected Project(s) 7
Number of trees in Report selection 7

Age Classifications:	N	Newly planted	EM	Early Mature	Condition:	C	Crown	Stems:	Ø	Diameter
	Y	Young	M	Mature		S	Stem		(Eq)	Equivalent stem diameter using BS5837:2012 definition
	SM	Semi-mature	OM	Over Mature		B	Basal area			

II. Site Plans





III. Photographs



T331 and T332



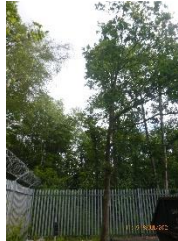
Squirrel damage T331



T333 to T336



Site of new building



T337



Overhang to be cut back

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

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