



THE TREE AND
WOODLAND COMPANY

Buckland Hall, Bwlch

House Refurbishment

Tree Constraints Summary

July 2020

TWC-1267-R-001

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1.0 Introduction

- 1.1 We are instructed to undertake an Arboricultural survey and assessment in accordance with BS5837:2012 'Trees in relation to design, demolition & construction - Recommendations'.
- 1.2 This report provides arboricultural detail to support preparation of design proposals and submission of planning application for proposed development works at Buckland Hall, Bwlch. The assessment has been produced to inform conceptual design and operational planning by highlighting the above and below ground constraints in the context of proposed development.
- 1.3 The survey area and tree locations were based on the extent of the proposed renovation and development works shown on the Topographical survey provided. Where trees were not shown their position was approximated using on-site observations and measurements.
- 1.4 The trees have been assessed using the current recommendations, as detailed in British Standard 5837:2012, in order to arrive at a Quality Category for each individual tree, group of trees or woodland. For full details of the assessment criteria see 'Table 1. Cascade chart for tree quality assessment' of BS5837:2012, shown in Appendix 2.
- 1.5 A Root Protection Area (RPA) has been assigned to each tree, calculated using the stem diameter at 1.5 metres above ground level. The RPA represents the minimum area around a tree that should be left undisturbed to ensure their survival and by default it will generally form a construction exclusion zone. Under certain circumstances it may be possible to build or operate within these areas providing that appropriate measures and specifications have been formally agreed between the Local Planning Authority, the consulting arboriculturalist and the client. The RPA of the trees have been plotted on the Tree Constraints Plan in addition to stem locations, canopy spreads and quality categories.
- 1.6 Brecon Beacons National Park Authority have confirmed that no trees surveyed are subject to Tree Preservation Order and the site is not situated within a designated Conservation Area. The site of the hall and gardens is however, a CADW Grade II registered landscape of special historic interest. The effect of a proposed development on a registered site or its setting will be a material consideration when determining the outcome of any planning application relating to the site.

2.0 Findings

- 3.1 A total of 31no. Trees, 8no Groups and 1no Woodlands have been recorded. Of these, 1No Woodland block was attributed Category A status, 9No trees and 1No groups were attributed Category B status, and 22No trees and 7No groups were attributed Category C status.
- 3.2 The majority of tree cover surveyed is situated on the earth bank, directly to the north-east of the main house. This comprises a mix of Category B and C individual trees and groups formed of semi and early mature cypress and cedar trees on the southern half of the bank (trees T8-T17 and G4-G7), and a mix of predominantly semi mature broadleaf trees and understorey groups (T1-T7 and G1-G3) to the north of the bank.
- 3.3 A retaining wall extends along the eastern edge of the earth bund on which T2-T17 and G1-G7 are situated and separates them from a recessed access road which leads down to the eastern side of the main house. To the east of the access road is another retaining wall which in turn connects with the raised level of the adjacent Category A woodland (W1). The boundary of W1 extended along the top of the retaining wall and comprised mixed broadleaf with scattered coniferous species, with a number of mature sweet chestnut and beech trees dotted throughout the woodland and along its western edge.
- 3.4 Finally, group G8 is situated adjacent to the south-east corner of the main house and extends along the eastern boundary of the site. the group comprises a single cherry laurel and a number of different species of rhododendron.

3.0 Arboricultural Impacts and Recommendations

- 3.5 The main arboricultural constraint on site comprises Category A woodland W1. This feature are of significant landscape and historic value and any development works should be situated a sufficient distance away from it as to cause minimal or no impact to its stems, canopies or RPAs. It may, however, be appropriate to undertake some crown lifting of minor branches on the western edge of the woodland, overhanging the access track leading to the rear of the main house, in order to facilitate access for construction traffic.
- 3.6 Additional significant arboricultural constraints on site comprise Trees T1, T2, T7-T17 and tree groups G3-G7, situated on the bank directly to the north-east of the main house. There is limited scope for work in this area without causing loss/damage to trees and impact to overall landscape feature. Any requirement to encroach within this area will need specialist assessment, design and construction in order to minimise impacts.
- 3.7 It is understood that proposals will include the construction of new Energy Centre and General Store buildings to the north east of the main house, directly adjacent to the eastern access route to the rear of the building. The proposed new buildings will be situated within the perimeter of the retaining wall directly east of tree groups G6 and G7 as displayed in TWC1267-D-002 (appendix 4). Given the difference in levels of up to 2m between the top of the retaining wall on which the trees are situate and the proposed ground floors of the new buildings, it is considered unlikely that any significant tree roots will be located in this area. The eastern canopy extents of groups G6 and G7 and the southern canopy of T16 will likely require crown lifting to facilitate access for construction (see appendix 1 for details). However, given their location, these works are not considered to represent a significant impact to visual public amenity.
- 3.8 Retaining walls to the east and west of the proposed energy centre are between 2-4m in height. Given that access to the raised areas on which the trees are situated will not be required, and that the surrounding trees do not significantly overhang the proposed worksite, the erection of protective fencing around the RPAs and canopies of trees to be retained is not considered to be a necessity.

Appendices

- 1. Tree Survey Schedule TWC1267-S-001**
- 2. Survey Criteria and Categorisation**
- 3. Tree Constraints Plan (A3) TWC1267-D-001**
- 4. Energy Centre Overlay Tree Constraints Plan (A3)
TWC1267-D-001**

Appendix 1 Tree Survey Schedule: TWC1267-S-001

Tree No	Species	Age Class	Height	Crown Spread				CrownClr	Stem diam	Physiological Condition	Structural Condition	ERC	Comments	Recommendations	Quality Category	RPA Radius
				North	East	South	West									
T1	Common yew	SM	8	4	2	3	4	3	430	Fair	Fair	40+	Heavily ivy clad, asymmetric crown suppressed by neighbouring tree, minor lean to north.	Sever ivy	C1	5.2
T2	Douglas Fir	SM	14	5	5	4	5	6.5	600	Fair	Fair	40+	High canopy previously crown lifted, stem heavily ivy clad, lower northern laterals interfering with telephone wire, slightly sparse upper crown.	Sever ivy	B1,2	7.2
T3	Goat willow	M	13	6	4.5	4	5.5	7.5	640	Fair	Fair	20-40	Moderate lean to north, upper stem and lower crown ivy clad, minor deadwood and snapped hanging limbs in upper crown.	Sever ivy	C1,2	7.7
T4	Common ash	EM	13	5	4	4	4.5	8	435	Fair	Fair	20-40	Moderate lean to north. Minor deadwood in canopy, high drawn crown resulting from dense yew understory, clad in dead ivy.	No works required	C1	5.2
T5	Common yew	SM	8	4	4	3	5	2	510	Fair	Fair	40+	Slightly ivy clad and suppressed by adjacent ash, minor retained deadwood in lower crown. Located adjacent to wood chip access path.	No works required	C1	6.1
T6	Common yew	SM	11	5	4	3	4	2	550	Fair	Fair	40+	Upper canopy ivy clad to north, minor branch tears and deadwood throughout crown, moderate epicormic growth on lower laterals.	No works required	C1	6.6
T7	Japanese red cedar	EM	16.5	4	4.5	3	3	8	610	Fair	Fair	20-40	High crown with slender stem, multiple snapped out branches around base, minor branch stubs in canopy, minor ivy cladding upper crown.	No works required	B2	7.3
T8	Common ash	EM	15	5	5	6.5	5	8	610	Fair	Fair	20-40	High canopy above understory layer, Minor ivy cladding upper crown, minor deadwood, slightly asymmetric to south.	No works required	B1,2	7.3
T9	Japanese red cedar	SM	12	2.5	2.5	2.5	2.5	7	390	Fair	Fair	40+	Minor lean-to south with asymmetric crown, minor deadwood, stunted form suppressed by adjacent trees.	No works required	C1	4.7
T10	Western red cedar	EM	17	4	4	4	4	3	780	Fair	Fair	40+	Slightly sparse upper crown, minor lean-to north-east, twin stem with tight fork in crown.	No works required	B1	9.4
T11	Japanese red cedar	EM	15	5	4	4	5	1	640	Fair	Fair	40+	Forming combined codominant canopy with adjacent cedar, ivy clad.	Sever ivy	B2	7.7
T12	Western red cedar	M	15	4	5	5	5	0.5	560	Fair	Fair	20-40	Multi stem from 1m bole, large lateral extending south-west from south stem, forming low canopy to south-west. Minor dead uprights, minor ivy cladding and shade wood.	No works required	B2	6.7
T13	Magnolia sp	Y	6	2.5	2.5	2.5	2.5	0.5	75	Fair	Fair	40+	Twin stem from base, low spreading crown, shaded by adjacent cedars.	No works required	C1	0.9
T14	Western red cedar	EM	14	3	3	3	3	0.5	350; 350; 200	Good	Fair	40+	Trifurcate from 1m with tight fork, good vitality.	No works required	B2	6.4
T15	Western red cedar	M	18	4.5	2.5	4.5	5.5	2	1260	Fair	Fair	40+	Large lower western laterals forming south-west section of canopy structure, multi stem from 1.5 m with tight forks. Asymetric crown to south-west.	No works required	B2	15.0
T16	Common yew	Y	6	2	3	3	2	0.5	250	Good	Good	40+	Western canopy overhanging adjacent access road.	No works required	C1	3.0
T17	Western red cedar	EM	16	3	3	3	3	2	700	Good	Good	20-40	Tall drawn form, small western lateral on lower stem forming codominant canopy structure with adjacent group.	No works required	B2	8.4
T18	Common yew	EM	1.5	1.5	1.5	1.5	1.5	0	50	Good	Fair	40+	Topiary a hedge shaped into a box	No works required	C1	1.9
T19	Common yew	EM	1.5	1.5	1.5	1.5	1.5	0	50	Good	Fair	40+	Topiary a hedge shaped into a box	No works required	C1	1.9
T20	Common yew	EM	1.5	1.5	1.5	1.5	1.5	0	50	Good	Fair	40+	Topiary a hedge shaped into a box	No works required	C1	1.9
T21	Common yew	EM	1.5	1.5	1.5	1.5	1.5	0	50	Good	Fair	40+	Topiary a hedge shaped into a box	No works required	C1	1.9
T22	Common yew	EM	1.5	1.5	1.5	1.5	1.5	0	50	Good	Fair	40+	Topiary a hedge shaped into a box	No works required	C1	1.9
T23	Common yew	EM	1.5	1.5	1.5	1.5	1.5	0	50	Good	Fair	40+	Topiary a hedge shaped into a box	No works required	C1	1.9
T24	Common yew	EM	2	2	2	2	2	0	50	Good	Good	40+	Topiary hedge shaped into a dome.	No works required	C1	1.9
T25	Common yew	EM	2.5	2	2	2	2	0	50	Good	Good	40+	Topiary hedge shaped into a dome.	No works required	C1	1.9
T26	Golden yew	EM	2.5	2	2	2	2	1	310	Good	Good	40+	Standard tree formed into a topiary dome.	No works required	C1	3.7
T27	Common yew	SM	2.5	1	1	1	1	1.5	195	Good	Fair	40+	Topiary dome, stem and basal epicormics.	No works required	C1	2.3
T28	Common yew	SM	2.5	1	1	1	1	1.5	220	Good	Fair	40+	Topiary dome, stem and basal epicormics.	No works required	C1	2.6
T29	Common yew	SM	3	1.5	1.5	1.5	1.5	1.5	200	Good	Fair	40+	Topiary dome, stem and basal epicormics.	No works required	C1	2.4
T30	Common yew	SM	3	1.5	1.5	1.5	1.5	1.5	200	Good	Fair	40+	Topiary dome, stem and basal epicormics.	No works required	C1	2.4
T31	Golden holly	EM	5	1.5	1.5	1.5	1.5	1.5	200	Good	Good	20-40	Slightly unbalanced and unshapely crown, good vitality.	No works required	C1	2.4

Tree No	Species	Age Class	Height	Crown Spread				Crown Clr	Stem diam	Physiological Condition	Structural Condition	ERC	Comments	Recommendations	Quality Category	RPA Radius
				North	East	South	West									
G1	Mixed species	SM	8	-	-	-	-	1	150	Fair	Fair	40+	Group of mixed willow and silver birch with a laurel understorey, extending along top of retaining wall, multiple stems ivy clad with an ivy ground layer.	No works required	C2	0.5m beyond canopy line, follows line of retaining wall on eastern edge
G2	Mixed species	EM	10	-	-	-	-	3	600	Fair	Fair	20-40	Group comprising mainly semi-mature yew and scattered western red cedar, with a cherry and a Holly understorey. Ground heavily ivy clad with large nearly dead fir on southern end of group. Composition transitions into ash, dead elm and willow with laurel understorey towards northern end.	No works required	C2	2m beyond canopy line
G3	Mixed species	SM	8	-	-	-	-	0.5	440	Fair	Fair	20-40	Understorey group comprising yew, box and rhododendron with scattered scattered self set ash, extending along western side of woodchip access path, moderate ivy cladding throughout.	No works required	C1,2	1m beyond canopy line
G4	Mixed species	SM	5-14	-	-	-	-	0.5	400	Fair	Fair	40+	Group of four semi-mature yew forming understorey to adjacent larger trees.	No works required	C2	1m beyond canopy line
G5	Mixed species	Y	8	-	-	-	-	0.5	250	Fair	Fair	20-40	Group of young cherry laurel and ash extending along edge of access road on bank.	No works required	C1	0.5m beyond canopy line
G6	Mixed species	EM	14	-	-	-	-	1.5	400	Fair	Fair	20-40	Group of semi mature western red cedar and Ash extending along top of retaining wall bund. single holly stem also present. Trees appear to be in fair to good condition with several twin stems and tight forks among the cedars.	Crown lift eastern canopy extents to achieve clearance of 2m above the level of the retaining wall	C2	2m beyond canopy line, follows line of retaining wall on eastern edge
G7	Mixed species	SM	6	-	-	-	-	0	200	Good	Good	40+	Group comprising yew, variegated yew, rhododendron and wild privet, forming single codominant canopy, low spreading crowns.	No works required	C2	0.5m beyond canopy line
G8	Mixed species	M	6-10	-	-	-	-	0	350	Good	Good	40+	Dense canopy extending along bank, comprising one cherry laurel at northern end adjacent to house and mixed rhododendron species for remainder of group.	No works required	B2	1m beyond canopy line
W1	Mixed species	SM-M	10-20	-	-	-	-	4	1250	Fair	Fair	40+	Woodland boundary extending along top of retaining wall, comprising mixed broadleaf with scattered coniferous species. Several mature sweet chestnut and beech dotted along woodlands edge, scattered lower lateral and sub lateral branches extending over access road, becoming scrubby at southern end extending around rear of house.	Selective crown lifting of canopies overhanging access road to achieve a minimum clearance of 5m.	A2	10m (follows line of retaining wall on western side)

Appendix 2: Survey Criteria and Categorisation

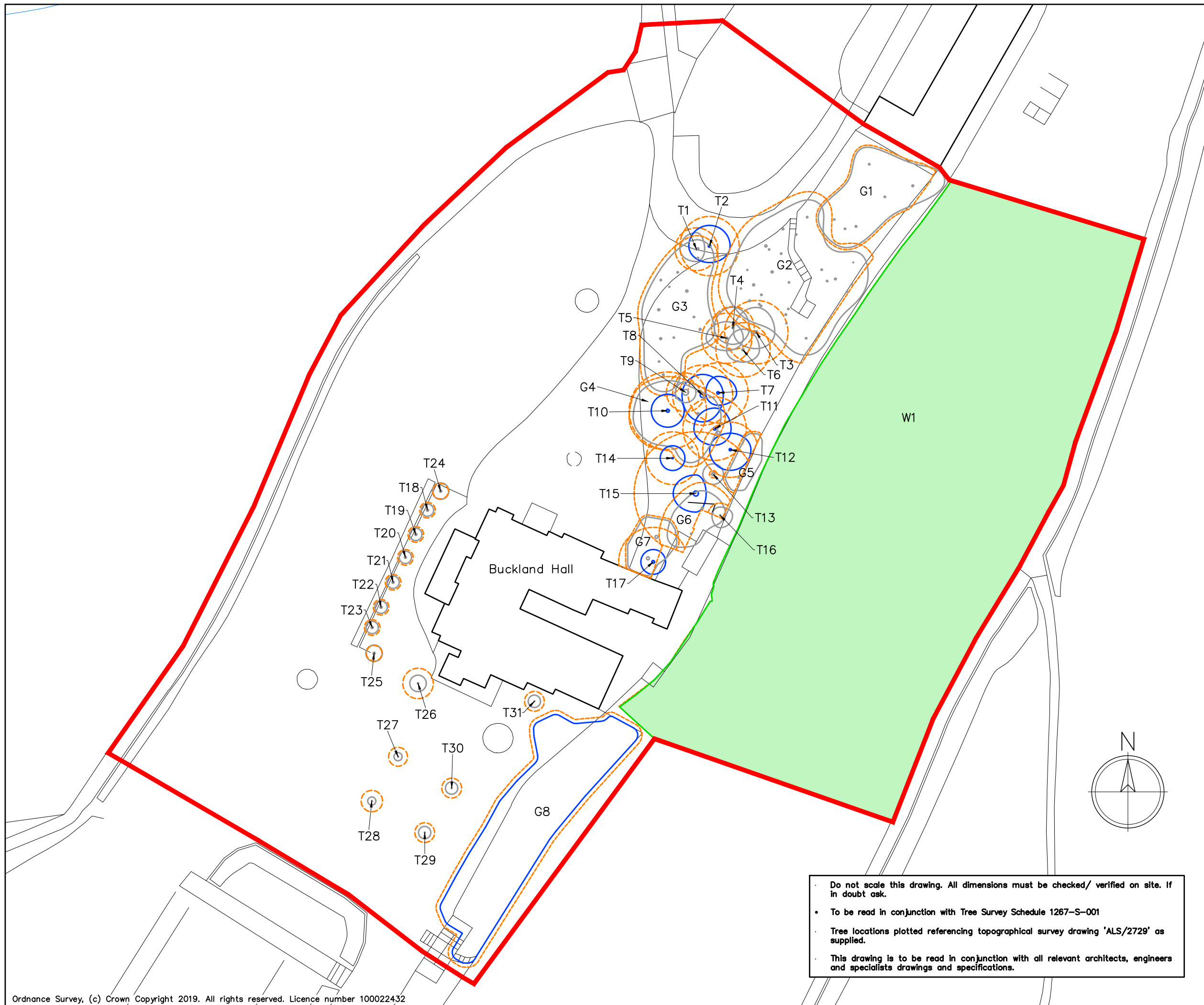
Table 1: Quality Categorisations

Quality Category	Trees
Tree No.	Reference ID given to each tree or group of trees (unless tagged).
Species	Common name. Botanical name may be given if clarification is required.
Age Class	Young, semi mature, early mature, mature or over-mature.
Height	Estimated in metres.
Crown Spread	Crown spread (North / East / South / West) measured from centre of trunk, in metres.
Crown Clearance	Approximate height between lowest part of canopy and ground level (metres).
Stem dia	Trunk diameter/s (mm) measured at 1.5m above ground level, or other height as specified.
Structural/Physiological Condition	Good, Fair, Poor or Dead based on the general physiological health and structural condition of the tree.
Estimated Remaining Contribution	An estimation of the life expectancy in years, if the natural cycle of the tree is allowed to run its full course. (<10, 10-20, 20-40, 40+ years).
Comments	A brief description of the tree or group relating to its form, vitality and presence of any significant defects.
Recommendations	All tree work is based on current tree condition and the existing land use and will include work such as hazard abatement, encroachment pruning, thinning of groups/woods and good arboricultural practice.
Quality Category	<p>Categorisation grading in accordance with BS 5837 2012.</p> <p>Trees suitable for retention: - Category A trees of high quality and amenity value. Category B trees of moderate quality and amenity value. Category C trees of low quality or amenity value.</p> <p>Trees unsuitable for retention: - Category U trees.</p> <p>British Standards BS 5837:2012 recommends that these categories may be further broken down into sub-categories A1 A2 A3 pertaining to Arboricultural, Landscape or Cultural values respectively.</p>
RPA	Root Protection Area is based on stem diameter (mm) and is provided as the radius of circle measured in metres from centre of tree, or may be expressed as an area (m ²)

Table 2: Quality Categorisations

Trees unsuitable for retention				
Category and Definition	Criteria (including subcategories where appropriate)			Identification on Plan
Category U Those in such a condition that they cannot realistically be retained as a living tree in the context of the current land use for longer than 10 years.	<ul style="list-style-type: none">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 U category trees (i.e. 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 or irreversible overall decline.Trees infected with pathogens of significance to the health and or safety of other trees nearby by or very low-quality trees suppressing adjacent trees of better quality.			Red
Trees to be considered for retention				
Category and Definition	1. Mainly arboricultural values	2. Mainly landscape values	3. Mainly cultural values	Identification on Plan
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are a particularly good example of their species, especially if rare or unusual, or essential components of groups or of formal or semi-formal arboricultural features.	Tree groups or woodlands of particular visual importance as arboricultural and/or landscape features.	Tree groups or woodlands of significant conservation historical, commemorative or other value	Green
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.	Trees that might be included in the high category but are downgraded because of impaired condition.	Trees present in numbers, usually 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 benefits.	Blue
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.	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 landscape value and/or trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural benefits.	Grey

Appendix 3: Tree Constraints Plan (A3) TWC1267-D-001



KEY

Tree Categorisation:
(Tree quality assessment based on BS 5837:2012 Trees in relation to design, demolition and Construction – Recommendations)

- Crown spread of category A
Trees/groups/woodlands of high quality and value
- Crown spread of category B
Trees/groups of moderate quality and value
- Crown spread of category C
Tree/groups of low quality and value
- Crown spread of category U
Trees/groups unsuitable for retention
- Root Protection Area (RPA)
To be used to inform design proposals and assess potential tree impacts.
It represents the minimum area around each tree that should be left undisturbed to ensure their survival.
- Survey boundary

Woodland

PROJECT INFO

Project: Buckland Hall
Title: Tree Constraints Plan
Client: The Landscape Agency
Project No: 1267
Drawing No: 1267-D-001
Rev:
Scale: Not to scale
Date: 17.07.20
Drawn: CA
Checked: JP
Figure No:

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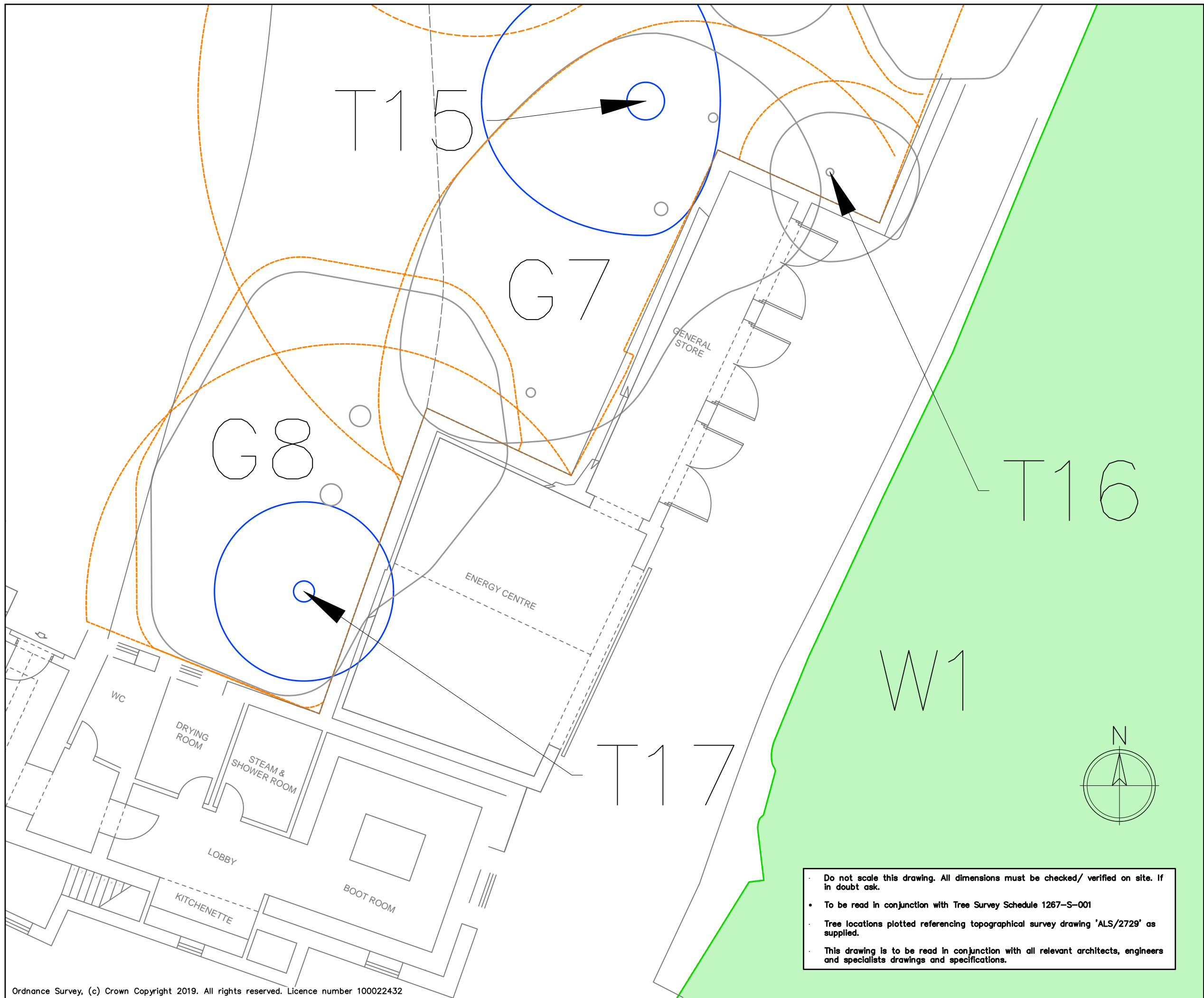
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To be read in conjunction with Tree Survey Schedule 1267-S-001

Tree locations plotted referencing topographical survey drawing 'ALS/2729' as supplied.

This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.





Appendix 4: Energy Centre Overlay Tree Constraints Plan (A3) TWC1267-D-002




KEY

Tree Categorisation:

(Tree quality assessment based on BS 5837:2012 Trees in relation to design, demolition and Construction – Recommendations)

-  Crown spread of category A
Trees/groups/woodlands of high quality and value
-  Crown spread of category B
Trees/groups of moderate quality and value
-  Crown spread of category C
Tree/groups of low quality and value
-  Crown spread of category U
Trees/groups unsuitable for retention

 Root Protection Area (RPA)
To be used to inform design proposals and assess potential tree impacts.
It represents the minimum area around each tree that should be left undisturbed to ensure their survival.

 Survey boundary

 Woodland

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Project: Buckland Hall
Title: Energy Centre Overlay Tree Constraints Plan
Client: The Landscape Agency
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To be read in conjunction with Tree Survey Schedule 1267-S-001
Tree locations plotted referencing topographical survey drawing 'ALS/2729' as supplied.
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