Arboricultural Impact Assessment

Tan Y Bont
Main Road
Rhosrobin
Wrexham

Ref: P.1421.21

January 2021

Revision	Date	Reason
A	1st July 2021	Updated to proposed plan rev K
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E	11th January 2023	Updated to proposed plan rev T
F	14th November 2023	Updated tree survey
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P.1421.21

Arboricultural Impact Assessment

Tan Y Bont
Main Road
Rhosrobin
Wrexham

For

Castle Green Homes

29th January 2021
(Rev G – 30th July 2024)

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Appendix 1 **Tree Data Tables in accordance with Table 1 of BS5837: 2012**

Appendix 2 **Drawing P.1421.21.01 *Tree Survey and Tree Removal Plan***
Drawing P.1421.21.02 *Tree Protection Measures*

1.0 Introduction

1.1 Ascerta has been instructed to carry out a survey of the trees within and immediately adjacent Tan Y Bont, Main Road, Rhosrobin, Wrexham and to assess the potential impact of the development as proposed on trees within / adjacent the site in accordance with British Standard 5837: 2012 *Trees in relation to design, demolition and construction – Recommendations.*

1.2 The site was visited on 26th January 2021 by Robert Armitage, a competent and qualified arboriculturist with experience of the UK and European arboricultural and landscape industries within the context of the planning system. During the site visit, a survey was carried out of the trees growing both on and immediately adjacent the site to the standards contained within BS5837: 2012.

1.3 This report presents the results of the survey, provides an assessment of the impact of the development and includes recommendations for further actions, where applicable, to mitigate any potential impacts of the development on tree cover within the local landscape.

1.4 Our client's objective is to develop the site by the construction of 209 residential dwellings.

2.0 Planning Policy & Relevant Legislation

2.1 The site lies within the Wrexham County Borough Council administrative area and is subject to the policies contained within its Local Plan. These have been taken into account when writing this report.

2.2 Checks were made with the Local Planning Authority on 29th January 2021 to ascertain whether the site is located within a Conservation Area and/ or whether any of the trees surveyed were subject to any Tree Preservation Orders, but no response was given prior to submission of this report. In advance of the commencement of any works to trees within or adjacent the site, those instructing and proposing to carry out such works should satisfy themselves that all appropriate consents are in place to prevent potential breach of legislation.

2.3 British Standard 5837: 2012 *Trees in relation to design, demolition and construction – Recommendations* provides current recommendations and guidance on the relationship between trees and design, demolition and the construction processes. It sets out the principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees and structures.

2.4 Consideration should also be given to any impacts from the proposed development in respect of the Hedgerow Regulations 1997 and the Forestry Act 1967 (and specifically the potential need for a felling licence), as well as existing UK and European legislation relating to wildlife and nature conservation.

2.5 In accordance with the Hedgerow Regulations 1997, 'important' hedgerows (in the context of the Regulations) should not be removed without a Hedgerow Removal Notice issued by the relevant Local Authority, unless that removal is subject to an appropriate consent under the Town and Country Planning Act 1990. Appropriate checks should be made in advance of the commencement of works to hedgerows to establish the importance or otherwise of the hedgerow and whether there is a requirement for a Hedgerow Removal Notice distinct from any formal planning consent to be granted.

2.6 The revised National Planning Policy Framework, updated on 19th February 2019, sets out the government's planning policies for England and Wales and how these are expected to be applied and has been considered within this report. It provides a Framework within which locally prepared plans for housing and other development can be designed and produced.

3.0 Survey & Survey Methodology

3.1 We have been supplied with a digital copy of the topographical survey map for the site, which satisfies the relevant part of section 4.2 of BS5837: 2012. Features of arboricultural or landscape interest that have been excluded from the original plan (for example trees on or located off site but within a distance from the boundary of the site equal to or less than 12 times the stem diameter of that tree) have been added to the plan manually.

3.2 Thirty-one individual trees, sixteen groups of trees and six hedges were recorded during our survey, the details of which can be found within Appendix 1 to this report and cross referenced with drawing P.1421.21.01 *Tree Survey and Tree Removal Plan*.

3.3 Our survey of the trees within and adjacent the site was carried out by a qualified and competent arboriculturist in accordance with sections 4.4 and 4.5 of BS5837: 2012 on 27th January 2021 during mild and cloudy weather conditions. Those trees surveyed have been numbered sequentially and the details required by the Standard, including a categorisation in accordance with section 4.5 and Table 1 of the Standard, have been recorded within the Tree Data Tables at Appendix 1.

3.4 Where trees are surveyed that require immediate attention, for example to abate a nuisance, prevent a serious hazard to life or property, or are affected by a pathogen or pest that could cause widespread damage unless it is controlled, notification will be issued to the relevant person or organisation such that appropriate action can be taken.

4.0 Potential Arboricultural Impacts

4.1 Table 1 below shows the trees that will need to be removed to facilitate the development of the site.

Table 1: Trees to be Removed

T. No.	Species	HT (m)	Stem DBH (mm)	Cat / Grade	Reason
H1	Hawthorn, Holly, Elder and Blackthorn	2.5	#150	B2/C2	To accommodate the development proposal.
H5 (in part)	Hawthorn, Holly, Blackthorn, Hazel and Elder	1.5	#200	2.40	
T3	Oak	6	510	B2/C2	
T4	Oak	9	730	B2	
T5	Oak	8	700	B2	
T6	Oak	9	#800	B2	
G5 (in part)	Blackthorn, Hawthorn and Goat Willow	4	#200	C2	
G9 (in part)	Crack willow, Goat Willow and Birch	8	#200	C2	
G14	Sycamore, Alder, Hawthorn, Holly and Goat Willow	4-7	#150	C2	
T25	Oak	10.5	#560	C2	
T26	Oak	14	#950	A1/B1	
T27	Oak	14	1020	B1/C1	
T28	Sycamore	8.5	#480	C2	
T29	Oak	14	880	B1	
G16 (in part)	Hawthorn and Sycamore	4-9	#200	C2	

4.2 Table 2 below shows trees that are proposed for retention within the development that have the potential to be impacted by the development proposals.

Table 2: Summary of Potential Impacts to Retained Trees

T. No.	Species	HT (m)	Stem DBH (mm)	Cat Grade	Potential Impact
T1	Sycamore	12.5	#580+ 480	B1	The construction of the road along that boundary.
G4	Oak, Goat Willow and Wild Cherry	12-15	#350 ave	B2	Canopy pruning away from the proposed road.
T11	Oak	14	890	A1	The construction of new hoggin footpath
T24	Ash	11	#460 + 400 + 380	B2	The construction of new parking bays.
G6	Oak	16	590	A2/B2	The construction of new parking bays.
T30	Sycamore	16	#580+350+350+350	C2	Construction of proposed plots.
T31	Oak	12	#630	B1	The construction of a new footpath and canopy pruning.

5.0 Tree Protection Measures

5.1 Based on the proposed layout and those trees proposed for retention, Table 3 below provides suitable protection measures/ mitigation to minimise the potential impacts to retained trees as stated at **4.2.**

Table 3: Potential Impacts to Retained Trees & Proposed Protection Measure / Mitigation

	Potential Impact / Work Stage	**Affecting**	**Protection Measure / Mitigation**	**Description / Specification and Procedure**
	Construction Phase			
1	Proposed areas of hard standing	T1, T30 & T31	• Careful excavations	Machinery and plant to be located outside the root protection areas and excavations carried out slowly and progressively within and immediately adjacent root protection areas.
			• Root pruning	Exposed roots to be pruned cleanly back to the soil surface as promptly as possible using hand tools appropriate to the task (secateurs / pruning saw).
		T24, T11 & G6	• Specialised surface design/ geotextiles and plastic permeable paving grid	Surfaces to be constructed using a suitable plastic permeable paving grid where specified (Cellweb). There must be strictly no excavations beyond or deeper than the agreed / permitted extents in order to preserve as much root zone and live roots as possible.
2	Canopy pruning	G4, T30 & T31	• Pruning in accordance with British Standard	Works to be carried out by a suitably qualified, competent tree surgeon. No large diameter, main branches to be removed. Pruning works to be carried out in accordance with BS3998:2010 Tree Work: Recommendations.

5.2 On the basis of the above and the contents of this report, it is considered appropriate that an Arboricultural Method Statement be prepared to demonstrate how trees proposed for retention can be suitably safeguarded. The Arboricultural Method Statement can be secured by way of an appropriately worded planning condition attached to the consent for the development and should be adopted as a control document by site personnel.

5.3 In addition to the erection of protective fencing, the attached drawings show areas where it would be beneficial to agree an Arboricultural Method Statement between the project arboriculturist, design & construction teams and the local planning authority tree officer. The method statement will need to address and make allowance for the following:

- All forms of access required to the site;
- Site cabins and storage areas;
- Proposed parking for site personnel;
- Phasing of works;
- Space required for excavations (including foundation excavations);
- Any required special construction techniques (for example provision of porous surfaces);
- The location and construction methodology for installation of services in close proximity to retained trees & hedges;
- Any changes in ground levels and any resulting requirement for retaining structures;
- Proposed root zone enhancement measures;
- Working space for cranes, plant and scaffolding; and
- Management of waste products within the site.

5.4 Over and above the physical tree protection measures that should form the basis for the tree protection method statement, the following details should be provided within the Arboricultural Method Statement:

- Protection of the soil structure within the proposed planted areas (where applicable);
- Planting operations within the root protection areas of retained trees;
- Any required / additional precautions outside of construction exclusion zones in relation to the treatment & landscaping of garden or open space areas;
- System of arboricultural site monitoring / schedule of site visits and resulting actions.

6.0 Conclusions & Recommendations

6.1 The proposals to develop the site by the construction of 209 residential dwellings will directly require the removal of H1, H5 (in part), T3, T4, T5, T6, G5 (in part), G9 (in part), G14, T25, T26, T27, T28, T29 and G16 (in part).

6.2 In the absence of suitable controls, the development also has the potential to have an indirect impact on T1, G4, T11, G6 T24, T30 and T31 that are proposed for retention as part of the development of the site. However, suitable protection measures as listed in Table 3 and summarised below will ensure trees are sufficiently protected throughout the entire course of the development.

6.3 Protection of retained trees from the impacts of the development proposals can be provided by:

- The erection of protective fencing in advance of the commencement of the development in the locations shown;
- The agreement, in advance of the commencement of the development, together with the implementation during the construction phase, of an Arboricultural Method Statement;
- The use of suitable geotextiles and plastic permeable paving grids for new hard surfaces within root protection area of T24; and
- Root pruning procedures where excavations are located within and immediately adjacent root protection areas of retained trees.

6.4 Compensation for the impact of the development, together with landscape and biodiversity enhancements can be achieved by way of the following:

- The planting of trees, shrubs and where applicable hedges as part of a comprehensive landscape scheme to replace any vegetation lost and to integrate the development into the wider landscape; and
- The use of a mixture of native and ornamental species within planting schemes, where those species are suited to the site and local landscape.

7.0 References

Department for Communities and Local Government (February 2019) *National Planning Policy Framework*;

British Standard 5837: 2012 *Trees in relation to design, demolition and construction – Recommendations*;

National Joint Utilities Group publication *Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees – Volume 4*.

Appendix 1

Site:	**Tan Y Bont, Main Road, Rhosrobin, Wrexham**	Surveyor:	**Robert Armitage**
Client:	**Castle Green Homes**	Survey Date:	**27th January 2021 & 14th November 2023**
Brief:	**Tree Survey to BS5837:2012**	Survey Conditions:	**Mild and cloudy**

T. No	Species	Ht (m)	Stem DBH (mm)	RPA Radius (m)	Branch Spread N	S	E	W	Ht Crown Clearance (m)	Age Class	P Condition	Structural Condition & General Comments	Preliminary Recommendations (not to be actioned without a valid planning consent)	Est. (yrs)	Cat Grade
G1	Sycamore and Field Maple	10	#300	3.60	4	4	4	4	1	Y/EM	F	Self-seeded Sycamore. Relatively dense group. Stems located outside the assumed site boundary fence. Plenty of scope to prune branches, as necessary.	No works required at this stage.	30+	**B2/C2**
T1	Sycamore	14	#580+ 480	9.03	5	5	5	5	2	M	F	Well balanced canopy in good vigour. Located immediately adjacent the assumed site boundary fence.	No works required at this stage.	30+	**B1**
T2	Oak	15	#560	6.72	5	5	5	5	0	EM/M	F	Well balanced canopy. Located approximately 4m from the boundary fence. Some landscape retention value.	No works required at this stage.	40	**B1**
H1	Hawthorn, Holly, Elder and Blackthorn	2.5	#150	1.80	1	1	1	1	0	EM	F	Previously maintained left to grow. Predominantly Hawthorn. Becomes unmaintained towards northern end.	Remove to accommodate development proposals. Plant replacement hedging elsewhere on site at the landscaping stage of the project.	30	**B2/C2**
G2	Lime, Oak and Sycamore	11	#500+ 500	8.48	5	5	5	5	0	EM	F/G	Predominantly Oak trees along boundary. Stems are generally around 4m from assumed site boundary fence. Provide valuable screening of adjacent road.	Prune branch tips back towards boundary if necessary.	40+	**A2/B2**
G3	Oak, Hawthorn and Elder	4-8	#150-280	1.80-3.36	4	4	2	4	1	Y/EM	F	Predominantly Hawthorn scrub along boundary fence. Stems located off site. Occasional taller Oak tree.	Prune branch tips back towards boundary if necessary.	30	**C2**

NOTE: The Category Grade applied to trees surveyed is consistent with the recommendations within Table 1 of BS5837: 2012, however this does not necessarily correlate with the visual importance of a tree within the wider landscape, nor does it dictate which trees should be retained at the cost of quality development. Where trees are to be lost to accommodate a development, recommendations will be made such as to provide suitable mitigation and compensation, and to integrate the development into the wider landscape.

Key to Abbreviations & Headings

T. No.: Tree number (T = Tree, G – Group, W = Woodland, H = Hedge, Cpt. = Compartment)
Stem DBH (Diameter at Breast Height): Measured at 1.5m above ground level*
Ht Crown Clearance: Canopy ground clearance
Structural Condition: Description of any observed defects
Cat. Grade: Tree quality assessment in accordance with BS5837: 2012

Species: Common name used
Root Protection Area Radius: Root Protection Area as per BS5837: 2012
Age Class: Y = Young, EM =Early Mature, M = Mature, OM = Over mature, D = Dead
Preliminary Recommendations: Made in respect of known / intended use of the site
* For groups of trees, the stem diameter of the largest tree in the group is generally used
# Denotes estimated DBH where access was not possible

Ht: Approximate height of tree from ground level in metres
Branch Spread: Extent of canopy spread in metres to each of the four cardinal points
P (Physiological) Condition: G = Good, F = Fair, P = Poor, D = Dead
Est. (yrs): Estimated remaining contribution in years

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G4	Oak, Goat Willow and Wild Cherry	12-15	#350 ave	4.20	4.5	4.5	4.5	4.5	2	Y/EM	F	Predominantly self-seeded Oaks with occasional taller emerging Wild Cherries. Canopies generally overhang site boundary by 4m but plenty of scope to prune back with minor impacts to trees. Valuable screening group.	Canopies to be pruned in accordance with BS3998:2010 Tree Work: Recommendations. No large diameter branches to be removed to achieve a suitable clearance from the proposed new road.	40+	**B2**
T3	Oak	6	510	6.12	2	6	5	3	1.5	EM	F	Canopy bias away from adjacent larger tree. Together with T4, forms one overall canopy. Not a particularly good example of species.	Remove to accommodate development proposals. Plant replacement tree elsewhere on site at the landscaping stage of the project.	30+	**B2/C2**
T4	Oak	9	730	8.76	7	2	5.5	6	2	M	F	Canopy bias away from tree to south. Significant Ivy colonisation.	Remove to accommodate development proposals. Plant replacement tree elsewhere on site at the landscaping stage of the project.	30+	**B2**
T5	Oak	8	700	8.40	5	6	4	8	2	EM/M	F	Squatly formed Oak. Waterlogged ground around base. Regular small diameter dead wood.	Remove to accommodate development proposals. Plant replacement tree elsewhere on site at the landscaping stage of the project.	30+	**B2**
T6	Oak	9	#800	9.60	6	7	6	5	2	M	F	Canopy appears in good vigour. Ivy beginning to colonise main stem and scaffold branches.	Remove to accommodate development proposals. Plant replacement tree elsewhere on site at the landscaping stage of the project.	30+	**B2**
G5	Blackthorn, Hawthorn and Goat Willow	4	#200	2.40	2	2	2	2	0	Y/EM	F/P	Continuation of H1 but become expansive and unmaintained. Occasional Goat Willow scrub.	Remove to accommodate development proposals. Plant replacement tree elsewhere on site at the landscaping stage of the project.	30+	**C2**

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Preliminary Recommendations: Made in respect of known / intended use of the site
* For groups of trees, the stem diameter of the largest tree in the group is generally used
# Denotes estimated DBH where access was not possible

Ht: Approximate height of tree from ground level in metres
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G6	Oak	16	730	8.76	6	6	6	6	1.5	M	P/F/G	Mature Oaks around existing pond. Most in relatively good condition and form prominent landscape feature. Some with failed limbs and decay.	No works required at this stage.	40+	**A2/B2**
G7	Wild Cherry, Hawthorn and Elder	9	#300 ave	3.60	4	4	4	4	1	Y/EM	P	Small section of poor condition Cherry trees. Multiple cankers on all stems and reduced vigour / dieback.	No works required at this stage.	10	**C1**
T7	Oak	16.5	940	11.28	9	9	9	9	3S	M	F/G	Canopy appears full and in good vigour. No evident significant structural defects or signs of ill-health. One horizontally orientated branch at 2m. Good example of species.	No works required at this stage.	40+	**A1**
G8	Hawthorn	4.5	#260 ave	3.12	2	2	2	2	0	EM	F/P	Unmaintained, scrappy Hawthorn amongst larger trees.	No works required at this stage.	20+	**C2**
T8	Oak	6	#400	4.80	3.5	3.5	3.5	3.5	2	EM	F/P	Squatly formed Oak. Previous main branch removed with decay.	No works required at this stage.	20	**C2**
H2	Hawthorn and Holly	2-4	#100	1.20	1	1	1	1	0	Y/EM	F/P	Discontinuous Holly hedging. Poor condition.	No works required at this stage.	10+	**C2**
T9	Oak	14	840	10.08	8	8	8	8	2	M	F/G	Canopy appears in relatively good vigour. Some large diameter dead wood. No evident significant structural defects or signs of ill-health. Relatively good example of species.	No works required at this stage.	40+	**A1**

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T10	Oak	13	#580+ 680	10.72	8	6	4	9	2	M	F/P	Large area of missing bark with localised decay on lower stem. Some small diameter dead wood. Canopy appears in normal vigour.	No works required at this stage.	20+	**B2/C2**
T11	Oak	14	890	10.68	8.5	13	9	10	3	M	F/G	Relatively good example of species. Small area of missing bark on lower stem but no active decay. Waterlogged ground around base of stem.	No works required at this stage.	40+	**A1**
G9	Crack Willow, Goat Willow and Birch	8	#200	2.40	4	4	4	4	0	Y/EM	F	Dense group of multi-stemmed Willows around waterlogged ground. Low arboricultural importance.	Remove specified section to accommodate development proposals. Plant replacement tree elsewhere on site at the landscaping stage of the project.	30	**C2**
T12	Oak	18	#680	8.16	8	8	8	8	2	EM/M	F/G	Well balanced canopy. Unable to inspect thoroughly for dense vegetation. Canopy appears in good vigour.	No works required at this stage.	30+	**B1**
T13	Oak	13	890	10.68	6	6	6	6	3	M	F	Basal cavity that extends up main stem. Not considered a significant defect. Canopy appears full and in good vigour.	No works required at this stage.	30	**A1/B1**
T14	Oak	14	#640	7.68	6	6	6	8	3	M	F	Relatively good example of species. Some small diameter dead wood. Bifurcates at 2m.	No works required at this stage.	40	**B1**
T15	Oak	11	1100	13.20	6.5	6.5	6.5	6.5	2E	M	F	Large main leader previously removed with decay into main stem. Large cavity on main leader that extends over half the diameter.	No works required at this stage.	40	**B1**
T16	Oak	16	580	6.96	6.5	6.5	5	6.5	5	M	F/G	Slight canopy bias away from adjacent Oak. Some small diameter dead wood.	No works required at this stage.	40	**B1**

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Brief:	**Tree Survey to BS5837:2012**	Survey Conditions:	**Mild and cloudy**

T. No	Species	Ht (m)	Stem DBH (mm)	RPA Radius (m)	Branch Spread N	S	E	W	Ht Crown Clearance (m)	Age Class	P Condition	Structural Condition & General Comments	Preliminary Recommendations (not to be actioned without a valid planning consent)	Est. (yrs)	Cat Grade
T17	Oak	15	#900	10.80	7	7	7	7	3	M	F	Unable to inspect stem base for dense Holly at base. Some large diameter dead wood. Prominent landscape feature.	No works required at this stage.	40+	**A1/B1**
T18	Sycamore	11	#800	9.69	6	6	6	8	2	M	F/P	Canopy appears in slightly reduced vigour. Small section of *Kretzschmaria duesta* at base. Dense epicormic.	No works required at this stage.	10+	**C1**
G10	Oak, Goat Willow, Ash, Sycamore, Hawthorn and Elder	5-13	#350 ave	4.20	4	4	4	4	2	Y/EM	F	Predominantly self-seeded Oak along existing boundary embankment. Provide good screening in areas. Canopies overhang boundary fence in a limited number of areas. Some Goat Willows will require harsh pruning. All trees relatively similar aged. Becomes denser towards northern end. Most trees set back from boundary fence by 2-3m.	No works required at this stage.	30+	**B2**
G11	Norway Maple, Field Maple, Sycamore and Beech	14	#350 ave	4.20	4	4	4	4	2.5	Y/EM	F	Elongated Sycamore and Norway Maple. Becomes dense. Only small diameter branch tips overhang site boundary. Provides valuable screening.	No works required at this stage.	40+	**B2/C2**
T19	Oak	11.5	520	6.24	4	7	6.5	6.5	3S	EM/M	F	Well balanced canopy. Emerging from maintained hedge.	No works required at this stage.	40+	**B1**
H3	Hawthorn, Sycamore and Hazel	3.5	#200	2.40	1	1	1	1	0	Y/EM	F	Previously maintained at 1.5m now left to grow. Predominantly Hawthorn and Hazel. Provides valuable screening.	No works required at this stage.	30	**B2**
H4	Hawthorn and Holly	4.5	#200	2.40	1.5	1.5	1.5	1.5	0	Y/EM	F	Discontinuous hedge. Low value.	No works required at this stage.	20	**C2**

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Key to Abbreviations & Headings

T. No.: Tree number (T = Tree, G – Group, W = Woodland, H = Hedge, Cpt. = Compartment)
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Cat. Grade: Tree quality assessment in accordance with BS5837: 2012

Species: Common name used
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Age Class: Y = Young, EM =Early Mature, M = Mature, OM = Over mature, D = Dead
Preliminary Recommendations: Made in respect of known / intended use of the site
* For groups of trees, the stem diameter of the largest tree in the group is generally used
# Denotes estimated DBH where access was not possible

Ht: Approximate height of tree from ground level in metres
Branch Spread: Extent of canopy spread in metres to each of the four cardinal points
P (Physiological) Condition: G = Good, F = Fair, P = Poor, D = Dead
Est. (yrs): Estimated remaining contribution in years

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Site:	**Tan Y Bont, Main Road, Rhosrobin, Wrexham**	Surveyor:	**Robert Armitage**
Client:	**Castle Green Homes**	Survey Date:	**27th January 2021 & 14th November 2023**
Brief:	**Tree Survey to BS5837:2012**	Survey Conditions:	**Mild and cloudy**

T. No	Species	Ht (m)	Stem DBH (mm)	RPA Radius (m)	Branch Spread N	S	E	W	Ht Crown Clearance (m)	Age Class	P Condition	Structural Condition & General Comments	Preliminary Recommendations (not to be actioned without a valid planning consent)	Est. (yrs)	Cat Grade
T20	Turkey Oak	8.5	390	4.68	4.5	4.5	4.5	4.5	3	EM	F	Developing well.	No works required at this stage.	40+	**B2**
T21	Turkey Oak	8.5	#350	4.20	3	5	3	3	3	Y/EM	F	Not a particularly good example of species. Hawthorn at base. Developing a canopy bias	No works required at this stage.	30	**C2**
H5	Hawthorn, Holly, Blackthorn, Hazel and Elder	1.5	#200	2.40	1	1	1	1	0	EM	F/G	Well maintained, dense established hedge along boundary.	Remove specified section to accommodate development proposals. Plant replacement tree elsewhere on site at the landscaping stage of the project.	40	**A2/B2**
H6	Blackthorn and Hawthorn	1	#100	1.20	0.5	0.5	0.5	0.5	0	EM	F	Discontinuous sections of hedging. Low value.	No works required at this stage.	20	**C2**
T22	Turkey Oak	14	#650+ 500	9.84	6.5	6.5	6.5	6.5	3E	M	F	Twin stem from base. Wide, expansive canopy. Relatively good example of species.	No works required at this stage.	40	**B1**
G12	Goat Willow and English Oak	9	#350+ 350+ 300	6.94	6	6	6	6	1	EM	P	Low value Goat Willow scrub in poor condition. Canopy overhangs boundary quite significantly. One canopy bias 9m Oak.	No works required at this stage.	30	**C2**
T23	Goat Willow	9	#450+ 450+ 450+ 450	10.80	7	7	7	7	3.5E	EM	F	Not a particularly arboriculturally important tree. Some saprophytic fungal growth on dead limbs. Canopy appears in normal vigour.	No works required at this stage.	20+	**C2**
G13	Sycamore, Oak, Goat Willow and Hawthorn	11	#300	3.60	3	3	3	3	1	Y/EM	F	Occasional self-seeded trees along railway boundary. All relatively low value trees. Half of canopy failed on one goat willow.	Prune branch tips back towards boundary as necessary.	30+	**C2**

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T. No	Species	Ht (m)	Stem DBH (mm)	RPA Radius (m)	Branch Spread N	S	E	W	Ht Crown Clearance (m)	Age Class	P Condition	Structural Condition & General Comments	Preliminary Recommendations (not to be actioned without a valid planning consent)	Est. (yrs)	Cat Grade
T24	Ash	18	#460+ 400+ 380	8.61	4.5	4.5	4.5	4.5	3E	EM	F	Three stems from base. Canopy appears in good vigour. Well balanced canopy. Relatively good example of species.	No works required at this stage.	20+	**B2**
G14	Sycamore, Alder, Hawthorn, Holly and Goat Willow	4-7	#150	1.80	2	2	2	2	0	Y/EM	F	Remnant hedge left unmaintained. Gaps in areas. Occasional taller emerging Sycamore. Small section of young Alders. Low arboricultural importance.	Remove to accommodate development proposals. Plant replacement tree elsewhere on site at the landscaping stage of the project.	30	**C2**
T25	Oak	10.5	#560	6.72	4.5	1	6	5	3	M	F/P	Canopy bias to north. Dense Ivy. Slightly supressed by adjacent larger Oak.	Remove to accommodate development proposals. Plant replacement tree elsewhere on site at the landscaping stage of the project.	20+	**C2**
T26	Oak	14	#950	11.40	7.5	7.5	7.5	7.5	3W	M	F	Canopy full and in good vigour. Some cavities from previously failed branches. Prominent landscape feature. Located at the base of a small stream.	Remove to accommodate development proposals. Plant replacement tree elsewhere on site at the landscaping stage of the project.	40	**A1/B1**
T27	Oak	14	1020	12.24	7	7	7	7	3	M	F/P	Canopy appears in slightly reduced vigour. Lesions on lower stem, possibly Phytophthora.	Remove to accommodate development proposals. Plant replacement tree elsewhere on site at the landscaping stage of the project.	30	**B1/C1**
T28	Sycamore	8.5	#480	5.76	4	4	4	8	3	EM/M	F/P	Reduced vigour. Low prominence within the landscape. Poor example of species.	Remove to accommodate development proposals. Plant replacement tree elsewhere on site at the landscaping stage of the project.	20	**C2**

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T. No	Species	Ht (m)	Stem DBH (mm)	RPA Radius (m)	Branch Spread N	S	E	W	Ht Crown Clearance (m)	Age Class	P Condition	Structural Condition & General Comments	Preliminary Recommendations (not to be actioned without a valid planning consent)	Est. (yrs)	Cat Grade
T29	Oak	14	880	10.56	7.5	7.5	7.5	7.5	2	M	F	Canopy appears full and in good vigour. Prominent landscape feature. Ivy beginning to colonise main stem. Some loose dead wood.	Remove to accommodate development proposals. Plant replacement tree elsewhere on site at the landscaping stage of the project.	40	**A1/B1**
G15	Sycamore and Ash	16	#400 ave	4.80	4	4	4	4	2	EM	F	Multi-stemmed, etiolated Sycamore. Non are particularly good examples of species but together form quite a prominent group.	Prune retained tree canopies back towards boundary as necessary.	30	**B1/C1**
T30	Sycamore	16	#580+ 350+ 350+ 350	10.06	6	6	6	6	2	M	F	Multi-stemmed mature Sycamore. Not a particularly good example of species but probably the most mature tree of the surrounding group.	Canopy to be pruned in accordance with BS3998:2010 Tree Work: Recommendations. No large diameter branches to be removed to achieve a suitable clearance from the proposed gardens.	20	**C2**
T31	Oak	16	#630	7.56	6	5	5	6	2.5	M	F/G	Squatly formed, well balanced canopy. Good retention value.	Canopy to be pruned in accordance with BS3998:2010 Tree Work: Recommendations. No large diameter branches to be removed to achieve a suitable clearance from the proposed new road.	40	**B1**
G16	Hawthorn and Sycamore	4-9	#200	2.40	3	3	3	3	0	Y/EM	F	Unmaintained Hawthorn hedge to 4m. Occasional self-seeded Sycamore. Low value.	Prune branch tips and understorey hedge as necessary to allow erection of plot scaffolding and suitable working areas.	30	**C2**

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Appendix 2

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ALL COORDINATES RELATED TO LOCAL GRID
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KEY

Existing tree to be retained

Existing tree to be removed

REV	DESCRIPTION	DATE
G	updated to proposed plan "...rev X"	30/07/24
F	updated tree survey	14/11/23
E	updated to proposed plan "...rev T"	11/01/23
D	updated to proposed plan "...rev Q"	01/07/22
C	updated to proposed plan "...rev O"	04/04/22
B	updated to proposed plan "...rev M"	08/11/21
A	updated to proposed plan "...rev K"	01/07/21

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CLIENT:
Castle Green Homes

PROJECT:
Tan Y Bont, Main Road, Rhosrobin, Wrexham

DRAWING TITLE:
Tree Survey and Tree Removal Plan
Sheet 1 of 2

SCALE:		DRAWING No:	REV:
1:500 @ A0			
DRAWN BY:	CHKD BY:	DATE:	
CP	RA	27/01/2021	P.1421.21.01 G

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ALL COORDINATES RELATED TO LOCAL GRID LOCATED TO OS NG BY BEST FIT TO DETAIL, EXTRACTED FROM OS DIGITAL DATA

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Existing tree to be retained

Existing tree to be removed

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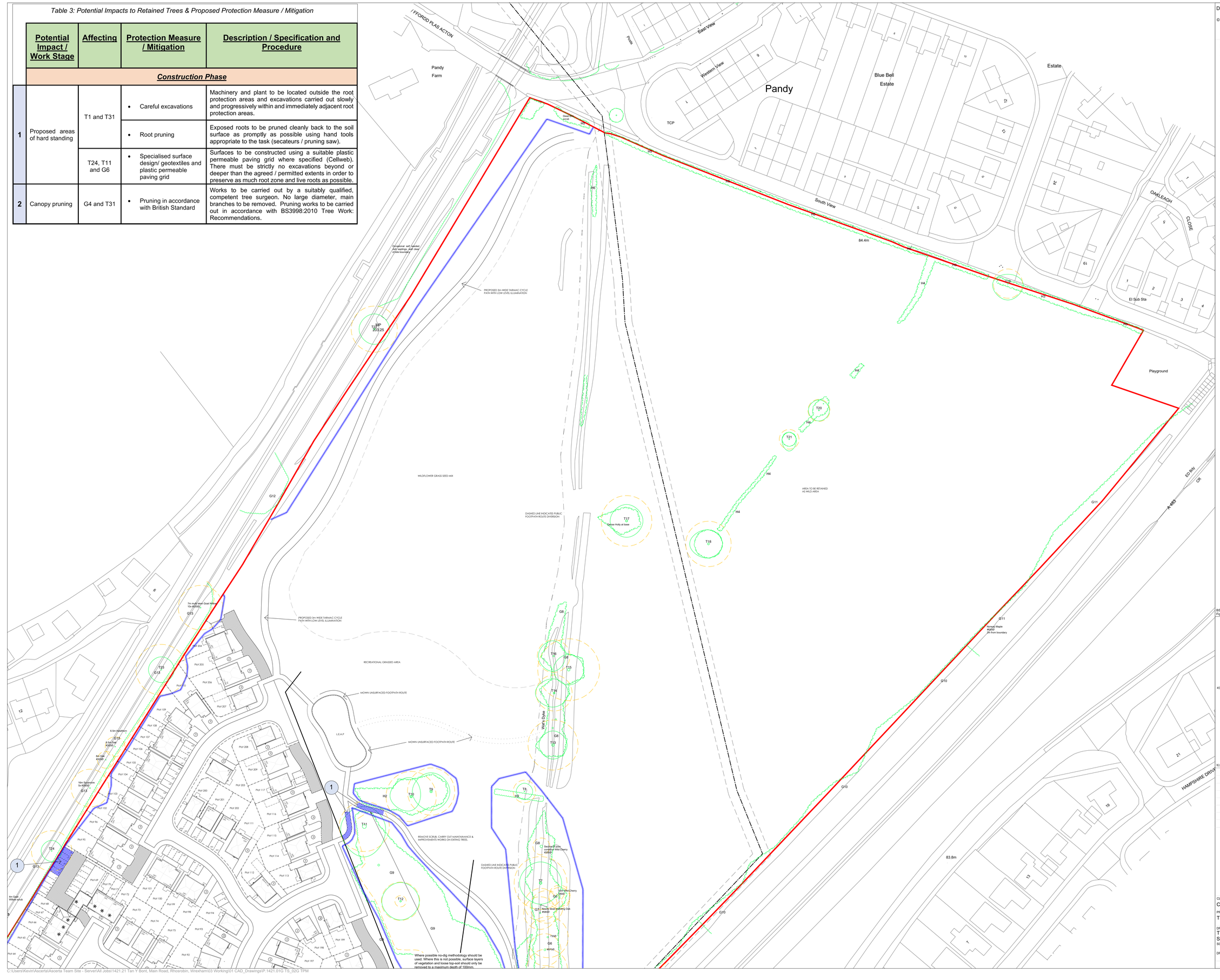
DRAWING TITLE:
Tree Survey and Tree Removal Plan
Sheet 2 of 2

SCALE:			DRAWING No:	REV:
1:500 @ A0				
DRAWN BY:	CHKD BY:	DATE:		
CP	RA	27/01/2021	P.1421.21.01	G

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Table 3: Potential Impacts to Retained Trees & Proposed Protection Measure / Mitigation

	Potential Impact / Work Stage	Affecting	Protection Measure / Mitigation	Description / Specification and Procedure
	Construction Phase			
1	Proposed areas of hard standing	T1 and T31	• Careful excavations	Machinery and plant to be located outside the root protection areas and excavations carried out slowly and progressively within and immediately adjacent root protection areas.
			• Root pruning	Exposed roots to be pruned cleanly back to the soil surface as promptly as possible using hand tools appropriate to the task (secateurs / pruning saw).
		T24, T11 and G6	• Specialised surface design/ geotextiles and plastic permeable paving grid	Surfaces to be constructed using a suitable plastic permeable paving grid where specified (Cellweb). There must be strictly no excavations beyond or deeper than the agreed / permitted extents in order to preserve as much root zone and live roots as possible.
2	Canopy pruning	G4 and T31	• Pruning in accordance with British Standard	Works to be carried out by a suitably qualified, competent tree surgeon. No large diameter, main branches to be removed. Pruning works to be carried out in accordance with BS3998:2010 Tree Work: Recommendations.



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KEY

Existing tree to be retained

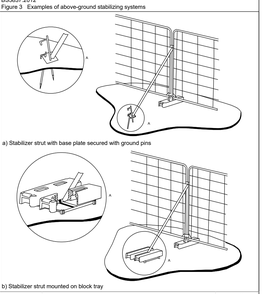
Extent of Root Protection Area for retained trees in accordance with BS5837: 2012 *Trees in relation to design, demolition and construction - Recommendations*

Proposed location of protective fencing - see inset for type / construction detail

Target note - numbers relate to the attached Table 3 which provides protection details for retained trees.

Specialised surface design / geotextiles and plastic permeable paving grid

BS5837:2012
Figure 3 Examples of above-ground stabilizing systems



a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray

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CLIENT: Castle Green Homes

PROJECT: Tan Y Bont, Main Road, Rhosrobin, Wrexham

DRAWING TITLE: Tree Protection Measures
Sheet 1 of 2

SCALE: 1:500 @ A0 | DRAWING No: | REV: G

DRAWN BY: CP | CHKD BY: RA | DATE: 27/01/2021 | P.1421.21.02

Table 3: Potential Impacts to Retained Trees & Proposed Protection Measure / Mitigation

	Potential Impact / Work Stage	Affecting	Protection Measure / Mitigation	Description / Specification and Procedure
	Construction Phase			
1	Proposed areas of hard standing	T1 and T31	• Careful excavations	Machinery and plant to be located outside the root protection areas and excavations carried out slowly and progressively within and immediately adjacent root protection areas.
			• Root pruning	Exposed roots to be pruned cleanly back to the soil surface as promptly as possible using hand tools appropriate to the task (secateurs / pruning saw).
		T24, T11 and G6	• Specialised surface design/ geotextiles and plastic permeable paving grid	Surfaces to be constructed using a suitable plastic permeable paving grid where specified (Cellweb). There must be strictly no excavations beyond or deeper than the agreed / permitted extents in order to preserve as much root zone and live roots as possible.
2	Canopy pruning	G4 and T31	• Pruning in accordance with British Standard	Works to be carried out by a suitably qualified, competent tree surgeon. No large diameter, main branches to be removed. Pruning works to be carried out in accordance with BS3998:2010 Tree Work: Recommendations.

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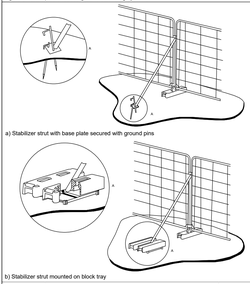
Extent of Root Protection Area for retained trees in accordance with BS5837: 2012 *Trees in relation to design, demolition and construction - Recommendations*

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BS5837:2012
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DRAWING TITLE: Tree Protection Measures
Sheet 1 of 2

SCALE:	DRAWING No:	REV:
1:500 @ A0	P.1421.21.02	G

DRAWN BY:	CHKD BY:	DATE:
CP	RA	27/01/2021

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