



#### **ArbTS - Arboricultural Technician Services Ltd**

(Tree Consultancy Services)

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## **Arboricultural Report**

Including:

Tree Survey Data &

Tree Constraints Plan,

Arboricultural Impact Assessment,

Tree Protection Plan and Arboricultural Method Statement

To the British Standard 5837:2012 (Trees in relation to design, demolition and construction. Recommendations)

Date - 17<sup>th</sup> June 2025

Site – Park House Court, Narberth Road, Tenby, SA70 8TJ

Project Reference – ArbTS\_1824.4\_Park House Court

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#### 1.0 Introduction

- 1.1 The purpose of this report is to assess the quality of the trees at Park House Court, Narberth Road, Tenby, SA70 8TJ, assess the arboricultural impact of the proposed development design and provide details regarding the protection of retained trees during construction work.
- 1.2 This report identifies the quality of the trees on this site as categorised by the *British Standard 5837:2012, Trees in relation to design, demolition and construction Recommendations*. The survey and findings, as reported here, represent an unbiased third-party opinion offering professional advice on the value of the trees on or adjacent to this site. To illustrate the constraints identified trees pose to the design of future development, a Tree Constraints Plan (TCP) has been drawn, as found in Appendix 2.
- 1.3 Arboricultural constraints within the surveyed site relate primarily to the preservation of trees recommended for retention. Identified trees must be protected during the construction phase by employing a combination of tree protection methods as illustrated in Appendix 4, Tree Protection Plan and detailed within Section 6 Arboricultural Method Statement.
- 1.4 The trees' root system and the associated soil structure is often overlooked during the construction process and can be damaged or altered by compaction, causing significant damage to the health of the tree. Generally, the tree's entire root system is within the top 600mm of soil, where it can be easily damaged. A calculated ground area around the tree should be protected during the onsite construction phase. In this report, it is referred to as the Root Protection Area (RPA).

## 2.0 The Tree Survey

- 2.1 The tree survey was conducted by *Stephen Lucocq BSc (Hons), Tech Cert (ArborA), M.Arbor.A* on 22<sup>nd</sup> Janaury 2024.
- Trees over 75mm were tagged where appropriate with numbered metal identification tags at around 2.0 metres above ground level.
- 2.3 All observations were made from the ground with an acoustic-sounding hammer. No invasive decay detective instruments were used.
- 2.4 The survey was carried out per *British Standard 5837:2012, Trees in relation to design, demolition and construction Recommendations.* This standard gives a systematic, consistent, transparent evaluation method for tree surveying.
- 2.5 The tree survey was conducted with the aid of a topographical survey.
- 2.6 **Preliminary management recommendations:** The survey has identified preliminary management recommendations for the trees on or adjacent to this site. Details regarding these specified operations are given in this report (See Appendix 1 Tree Survey Data). Where work priority is stated to be H High due to safety reasons, these operations should be carried out as soon as possible. Where work priority is

- said to be M/H medium/high or higher, these operations should be undertaken before the commencement of any works on site.
- 2.7 Limitations of the tree survey: Whilst every effort is made to ensure an accurate assessment of the tree's condition during the survey, no responsibility can be taken for resultant damage or injury that occurred by a failing tree. The survey only gives a snapshot of what is visible and is not obscured on the day of the survey. The survey identifies trees of varying quality and their above-ground/below-ground constraints. This survey does not constitute a full tree condition survey/tree risk assessment of the site, and this report is only valid for 24 months from the date of the tree survey.

#### 3.0 The Trees

- 3.1 The complete tree survey data can be found in Appendix 1A Tree Survey Data
- 3.2 Tree Survey Summary Table (See Appendix 3 for BS5837 category definitions). (A more detailed Tree Survey Data Summary can be found in Appendix 1B)

BS5837:2012 Quality Category	Total Number of Individual Trees Surveyed	Total Number of Tree Groups Surveyed	Total Number of Tree Areas Surveyed	Total Number of Woodland Areas Surveyed	Total Number of Hedgerows Surveyed	Total
A (High - Most desirable for retention)	0	0	0	0	0	0
B (Moderate - Desirable for retention)	0	0	0	0	0	0
C (Low - Optional for retention)	1	5	0	0	0	6
U (Poor - Unsuitable for retention)	1	0	0	0	0	1
Total A,B,C,U	2	5	0	0	0	7

### 4.0 Tree Constraints Plan (TCP) Information

4.1 A Tree Constraints Plan (TCP) can be found in Appendix 2 of this report. An introduction to TCP can also be found at the start of this Appendix Section. For further information and details regarding TCP, please see the *British Standard 5837:2012*, Trees in relation to design, demolition and construction – Recommendations.

### 5.0 Arboricultural Impact Assessment (AIA)

- 5.1 The following Arboricultural Impact Assessment has been made for the proposed development design.
- 5.2.1 <u>Tree Loss AIA LOW / MODERATE -</u> The following trees are required to be removed to facilitate the construction of the proposed development design.
- 5.2.2 Individual Tree Loss -
  - Tree T1 Ash Poor quality (U category)
- 5.2.3 Grouped Tree Loss -
  - Tree Group G1 Maple, Lime 51 m2 Low quality (C category)
  - Tree Group G2 Maple, Spruce 75 m2 Low quality (C category)
  - Tree Group G3 Maple, Cherry 63 m2 Low quality (C category)
  - Tree Group G4 Leyland Cypress 12 m long Low quality (C category)
  - Tree Group G5 2 sycamore of Low quality (C category)

#### 5.2.4 Overall Tree Loss -

Several trees have been identified as being removed to facilitate the construction of the proposed development design. All these trees identified for removal are low or poor quality (C / U Category). These trees should not present a constraint on developing the site.

- 5.3.1 <u>AIA Conclusion (including landscape mitigation) LOW Several trees have been</u> identified as being removed to facilitate the construction of the proposed development design. All these trees identified for removal are low or poor quality (C / U Category). These trees should not present a constraint on developing the site.
- 5.3.2 The construction of the proposed development, whilst complying with the tree protection scheme as detailed in section 6, will ensure that no significant long-term adverse Arboricultural impact occurs on the health of any retained trees adjacent to this site.

#### 6.0 Arboricultural Method Statement

- 6.1 The Tree Protection Plan to facilitate the construction of the development design can be found in Appendix 4 of this report. The Tree Protection Plan must comply with all of the following:
  - Be regarded as sacrosanct and follow the sequence of events as detailed in the table below
  - Be installed before commencement of any demolishing or construction works on site
  - Must not be removed or altered without prior approval of the local planning authority

6.2 The following table below provides a detailed sequence of events that must occur to protect the retained trees during all stages of the construction process. These methods must be communicated to the entire construction team before any work on site.

Stage	Arboricultural Method Statement (In the sequence of events)
1.) Preconstruction (Prior to any on-site construction work,	1.1 – Design areas for construction site storage by the site supervisor and the appointed Arboriculturist.
including demolition work, site material storage etc.)	1.2 – Design position, form and construction methods of all utility services with Arboricultural consideration. All underground service designs MUST conform to the NJUG Volume 4 Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees. The full document is available at <a href="http://www.njug.org.uk/">http://www.njug.org.uk/</a> and BS5837:2012. Local Planning Authority to be consulted on utility service design details and, if satisfied, to be approved in writing before installation during the construction phase.
	<b>1.3 – Site storage area containers</b> installed as designed and supervised by the site supervisor and the appointed Arboriculturist.
	<b>1.4 – Appointed Arboriculturist to document</b> all tree protection methods in situ and photographs taken for reference purposes. Copy of document report sent to all parties.
2.) Construction	2.1 – The site supervisor is to be briefed by the appointed Arboriculturist regarding the Tree Protection Plan/Methods, and a laminated copy of the plan/methods is to be secured onto the wall in the site supervisor's office. Contact details of the appointed Arboriculturist, Council's Tree Officer, to be included. Emphasis is to be made to the site supervisor on the importance of the Tree Protection Plan/Methods and possible planning enforcement action (Stop Notice), problems with discharging tree protection conditions and/or legal action for noncompliance with these tree protection methods.
	2.2 – All contractors are to be briefed by the site supervisor and/or the appointed Arboriculturist regarding the tree protection plan and methods before starting work on site. Emphasis made to contractors on the importance of the Tree Protection Plan/Methods and possible planning enforcement action (Stop Notice), problems with discharging tree protection conditions and/or legal action for noncompliance with these tree protection methods.
	2.3 – The construction phase begins
	<ul> <li>2.4 - Tree Safe Construction (Throughout site) – areas outside of the construction exclusion zones, as shown on the tree protection plan, must adhere to the following:</li> <li>Building materials and fuels such as oil, bitumen or cement should not be stacked or discharged within 20 metres of the tree's stem.</li> <li>Fires will not be lit beneath any tree or in a place where flames could extend to within 10 metres of the tree.</li> <li>Trees to be retained and protected should not be used as anchorage for services or equipment.</li> <li>The use of cranes and large machinery on site should be planned and care taken not to damage the trees during the process.</li> <li>2.5 – Unforeseen issues which require the alteration of the Tree Protection</li> </ul>
	Plan/Methods, required tree surgery work or immediate remedial work will be submitted to the Local Planning Authority for approval in writing.

3.) Post	<b>3.1</b> – <b>Hard and soft landscaping commence</b> - All landscape team members are to be
Construction (Once	briefed regarding tree protections by an Arboriculturist.
all construction	
work has been	<b>3.2</b> – <b>Any required remedial tree action is taken,</b> such as Leaf Mulch Application, soil
completed, this	de-compaction methods, contamination clean up etc., to be carried out.
includes all utility	
services)	

## 7.0 Conclusion

7.1 Adhering to the tree protection details in this report, the proposed development can be constructed without any significant long-term adverse impact on the offsite retained trees.

### 8.0 Further Information & Qualifications

Stephen Lucocq has been involved in Arboriculture within South Wales for over twenty years. He has worked as an Arborist for many of these years and has an excellent working knowledge of the practical side of the profession. He has always taken an active interest in all areas of Arboriculture and kept up to date with current research and developments.

#### Qualifications

- First Class BSc (Hons) Degree Combined Studies Biology and IT
- Arboricultural Association Technicians Certificate Level 4 (Merit)
- PTI Professional Tree Inspection (Lantra Awards)
- 2D Computer-Aided Design (City and Guilds Level 3)
- Quantified Tree Risk Assessment (QTRA) Mike Ellison
- Visual Tree Assessment (VTA) Mike Ellison
- Arboriculture and Bats (Lantra)
- Industrial Rope Access Trade Association (IRATA)
- Practical Arboriculture Qualifications (NPTC)

#### Membership

Arboricultural Association Professional Member (M.Arbor.A)

## 9.0 Web Information & Bibliography

#### Web Information

Arboricultural Association

http://www.trees.org.uk/

Cellular Confinement System

GeoWeb - GreenFix

CellWeb - Geosynthetics Cellweb

Underground Utilises Installation

http://www.njug.org.uk/

#### **Bibliography**

- British Standards 3998 (2010) Recommendations for Tree Work UK; British Standards Intuition
- British Standard 5837:2012, Trees in relation to design, demolition and construction - Recommendations UK; British Standards Intuition
- Coombes, A.J (1992) Trees London; Dorling Kindersley
- Lonsdale, D (1999) Principle of Tree Hazard Assessment and Management Edinburgh; Forestry Commission
- Mattheck, C (2007) Field Guide for Visual Tree Assessment Germany;
   Karlsruhe Research Centre
- Shigo, A.L (1991) Modern Arboriculture USA; Shigo and Trees, Association
- Sterry, P (2007) Collins Complete British Trees London; Collins
- Strouts, R.G (2000) Diagnosis of ill-health in trees Edinburgh; Forestry Commission
- Weber, K & Mattheck, C (2003) Manual of wood decay UK; Arboricultural Association

## 10.0 Appendix 1A -Tree Survey Data

Tree ID	Tree Species	Age	Stems	Stem Diam (mm)	Cat	Height + (Lower Branch Height)	Nrth	Est	Sth	Wst	Phys Cond	Struc Cond	Est. Remain Contrib	Comments	Preliminary Management Recommendations	Work Priority	RPR (m)	RPA (m2)
G1	Acer platanoides (Norway Maple), Tilia X europaea (Common Lime)	М	1	380	C2	8(2)	4	4	4	4	G/F	F	10+	high C category.  small group of 11 trees, some defects (compressed stem unions and slender and unright in form) noted in tree group, as a whole of moderate landscape value, group o trees of fairly young age			4.56	65.33
	Acer platanoides (Norway Maple),Picea abies (Norway Spruce)	М	1	400	C2	12(2)	5	5	5	5	G/F	F		Surrounding vegetation prevented close inspection of the tree therefore all observations and measurements are estimated.			4.8	72.39
G3	Prunus avium (Wild Cherry),Acer platanoides (Norway Maple)	М	1	350	C2	8(2)	5	5	5	5	G/F	F	10+	high C category.  small group of mainly cherry trees, some cherry trees showing decline, as a group provide some moderate landscape value to the area, species prone to pest and diseases			4.2	55.42
G4	X Cupressocyparis leylandii (Leyland Cyp)	М	1	500	C2	11(2)	6	6	6	6	G/F	F	10+	group of unmanaged conifers			6	113.1
G5	Acer pseudoplatanus (Sycamore)	М	1	400	C2	12(3)	5	5	5	5	G/F	N/A	20+	Surrounding vegetation prevented close inspection of the tree therefore all observations and measurements are estimated.  group of 2 sycamore of fair form, eastern tree suppressed in crown form from large adjacent declining ash tree			4.8	72.39
T1	Fraxinus excelsior (Ash)	М	1	650	U	12(3)	7	7	7	7	P	N/A	<10	Surrounding vegetation prevented close inspection of the tree therefore all observations and measurements are estimated. Located on private land preventing a close inspection of the tree therefore all observations and measurements are estimated.	e		7.8	191.2
T2	Acer pseudoplatanus (Sycamore)	EM	1	350	C2	11(3)	4	4	4	4	G/F	N/A	10+	Surrounding vegetation prevented close inspection of the tree therefore all observations and measurements are estimated.			4.2	55.42

## 10.0 Appendix 1B – Detailed Tree Survey Data Summary

(Please see Appendix 3 - Tree Survey Key)

Field Usage Results.		
Total Records: 7		
		% of
Туре	Count	Total
Т	2	28.6
G	5	71.4
Tues Cuesias	Count	% of
Tree Species	Count	Total
X Cupressocyparis leylandii (Leyland Cyp)	1	14.3
Fraxinus excelsior (Ash)	1	14.3
Acer pseudoplatanus (Sycamore)	2	28.6
		% of
Average Stem Diameter	Count	Total
<500	5	71.4
<750	2	28.6
	_	
		% of
Cat	Count	Total
C2	6	85.7
U	1	14.3
		% of
Age	Count	Total
EM	1	14.3
M	6	85.7
		0/ -£
Height	Count	% of Total
<10	2	28.6
<15	5	71.4
13	<u> </u>	71.4
		% of
Phy Cond	Count	Total
G/F	6	85.7
P	1	14.3
		% of
Stuc Cond	Count	Total
F	4	57.1
N/A	3	42.9

		% of
Est. Remain Contrib	Count	Total
<10	1	14.3
10+	5	71.4
20+	1	14.3
		% of
RPR	Count	Total
<5	5	71.4
<10	2	28.6
		% of
RPA	Count	Total
RPA other	Count 7	Total 100

## 10.0 Appendix 2 - Tree Constraints Plan

### An introduction to the Tree Constraints Plan (TCP)

Trees identified to be retained should be treated as constraints to the design of future development. A Tree Constraints Plan has been drawn and can be found over leaf.

- Tree Quality The TCP highlights the above and below-ground constraints each tree poses to design future development schemes. Further, the BS5837 tree quality category (A High, B Moderate, C Low and U- Unsuitable for retention) are coloured coded as solid circles at the centre of the tree's position.
- Root Protection Area The magenta circle on the TCP sets out the root protection area (RPA). No construction work in this area, ground-level alteration or site traffic (machinery or persons) should occur. This prevents damage to tree roots and soil compaction. (Where possible, an Arboriculturist can design suitable tree protection methods to facilitate construction work/site traffic within these areas).
- Tree Canopy The green circle/oval on the TCP sets out the above-ground
  constraints of tree canopy spread. Within this area, no construction work or site
  traffic (machinery or persons) should occur if the tree is to be retained. This prevents
  damage to the tree branches and trunk. (Where possible, an Arboriculturist can
  design suitable tree protection methods to facilitate construction work/site traffic
  within these areas).
- Tree Shading Shade from the retained trees should be considered in the development design. Depending on the tree's height and width, the shade cast will be from a North West to East pattern through the central part of the day.
- Tree Future growth Within future development design, consideration should also be given to the ultimate height and extent of the canopy spread of all trees within site identified to be retained.





## 10.0 Appendix 3 - Tree Survey Data Key

- Tree ID # Identifies the location of individual trees (T-ID Number), Groups of trees (G-ID Number), Area of trees (A-ID Number), Hedgerow (H-ID Number), Woodland (W-ID Number), Row of trees (R-ID Number) and tree Stumps (S-ID Number) on the accompanying plan. (Please note: A group of trees here refers to two or more standing trees that form a visual whole, whereas an area of trees refers to dispersed individual trees standing within the site)
- **Tree Species** Scientific names and common tree name in brackets are generally shown.
- Age
  - o (Y) Young Less than 1/3 of life completed
  - o (SM) Middle Aged 1/3 2/3 of life completed
  - o (EM) Early Mature Just entering Maturity
  - o (M) Mature more than 2/3 of life completed
  - o (OM) Over Mature more than 3/3 of life completed and declining
  - (V) Veteran (v) Veteran Veteran trees have no precise definition but are trees considered to be of biological aesthetic or ecological value because of their age
- Stems Number of tree stems used to calculate the RPR/RPA
- Stem Diam (mm) Diameter of tree stem measured in millimetres for single stem trees or average stem diameter calculated for multi-stemmed trees as detailed in section 4.6 & Annex C of the British Standard 5837:2012, Trees in relation to design, demolition and construction Recommendations. The height above ground level where the stem measurement was taken will be shown if not measured at 1.5 metres above ground level. (Please note: that the stem diameter of certain trees will have to be estimated due to difficulties in taking measurements or for trees with a large number of stems)
- Cat Tree Quality Category British Standard 5837:2012 A, B, C, U + 1, 2, 3

Based on BS5837:2012, categories A, B, C, and U provide the basis for prioritising trees for retention:

- o A Those of high quality with an estimated remaining life expectancy of at least 40 years. (\*Most desirable for retention\*)
- o B Those of moderate quality with an estimated remaining life expectancy of at least 20 years. (\*Desirable for retention\*)
- o C Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. (\*Optional for retention\*)
- o 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. (\*Unsuitable for retention unless provides high conservation value\*)

Retention Criteria Subcategories: Used for identifying subcategories

E.g. A2 = A high-quality tree with high landscape qualities (further details can be found in British Standard 5837:2012, Trees in relation to design, demolition and construction - Recommendations UK; British Standards Intuition)

- o 1 Mainly Arboricultural qualities
- o 2 Mainly landscape qualities
- o 3 Mainly cultural values, including conservation
- Height + (Lower Branch Height) Tree height in metres and in brackets height in metres of the crown (tree branches) clearance at its lowest point above adjacent ground levels.
- Nrth, Est, Sth, Wst Crown Spread (Metres) -Tree branch spread in metres measured in four directions (North, East, South, West) from the trunk.
- Phys Cond Physiological Condition Indicating the health of the tree
  - o (G) Good
  - o (F) Fair
  - o (P) Poor
  - o (D) Dead
- Struc Cond Structural Condition indicating the structural integrity of the tree
  - o (G) Good No, or remediable physical defects or decay
  - o (F) Fair Physical non-remediable defects or decay present, not presenting imminent danger but should be monitored
  - o (P) Poor physical non-remediable defects or decay present, tree liable to imminent collapse or loss of major limbs.
  - o (D) Dead
- Est. Remain Contrib (<10, 10+, 20+, 40+)</li>

The trees estimated remaining contribution in years, recorded as:

- o <10 less than 10 years
- o 10+ at least 10 years
- o 20+ at least 20 years
- o 40+ at least 40 years
- Comments Additional Comments, if required
- **Preliminary Management Recommendations** Work Recommendations, including further investigation of suspected defects that require more detailed assessment and pose potential for wildlife habitat.

- **Work Priority** Work Priority This gives a work priority rating of preliminary management for each tree.
  - o H High Urgent work to be carried out as soon as practicable due to safety reasons (Within 14 days).
  - o H/M High Medium Work to be carried out within 6 months/or before the construction phase begins
  - o M Medium Work to be carried out in 12 months
  - o L Low After consideration/Re-inspect in 18-24 months
  - o Blank No work required.
- RPR Root protection radius / RPA Root Protection Area Is a layout design tool
  indicating the minimum area around a tree deemed to contain sufficient roots and
  rooting volume to maintain the tree's viability and where the protection of the roots
  and soil structure is treated as a priority. RPR is a circular area measured as a radius
  in metres from the tree's centre, or RPA is an area in metres squared. This area may
  be changed in shape but not reduced in size, providing adequate protection for the
  tree's rooting system.

# 10.0 Appendix 4 – Tree Protection Plan



# **10.0** Appendix 5 – Tree Photographs

Tree ID#G1



Tree ID#T1 + G5



Tree ID#G2 + G4



Tree ID#G2



Tree ID#G2 Tree ID#G4





Tree ID#G3 Tree ID#G3





