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Arboricultural Report and Impact Assessment to BS 5837:2012

Site Address:

Lyme House, The Green
Nocton
Lincoln
LN4 2BG

Issue Date:

2nd March 2023

Report No:

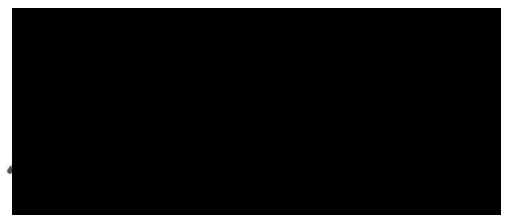
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1. Introduction

1.1. Objective

- 1.1.1. This report is required to provide detailed, independent, arboricultural advice on the trees present in the context of potential development.
- 1.1.2. The purpose of this report is to identify and detail the existing vegetation on site, as well as areas where development and trees or hedges have the potential to conflict. In addition, recommendations will be made based on the current context of the site.

1.2. Terms of Reference

- 1.2.1. We have been commissioned to conduct a tree survey and prepare an arboricultural report for the site. The report is to include an Arboricultural Impact Assessment based on the design proposal provided. This document and the associated survey adhere to the relevant protocols detailed in BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations.
- 1.2.2. The Arboricultural Impact Assessment has been formulated in line with the design proposal detailed in drawing ref. p-Site Plan-pre-app. The tree constraints have been superimposed onto this drawing to create the Tree Protection Plan, which can be found at in the appendices.

1.3. Scope

- 1.3.1. This report is compiled in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' and is based on an objective assessment of the existing vegetation.
- 1.3.2. All trees within the survey area with a stem diameter above approximately 75mm are included.
- 1.3.3. Where applicable trees outside the site boundary, but close enough to be affected by the proposed development, are included.
- 1.3.4. Preliminary recommendations are given with a view to the long-term management of sustainable tree cover and to uphold the interests of health and safety.

1.4. Methodology

- 1.4.1. The survey took place on the 28th February 2023. The weather was showery and overcast with light winds.
- 1.4.2. During the survey, all trees were inspected from ground level. Further investigation, such as climbed inspections or decay detection surveys, have not been undertaken but may be recommended where this is considered appropriate.
- 1.4.3. Measurements were obtained using clinometers, specialist tapes or electronic distometers. Where this was not possible, measurements were estimated to the best ability of the surveyor. We endeavour to provide accurate information and will always take measurements unless inhibited by restricted access or other mitigating circumstances.
- 1.4.4. In the absence of a topographical survey a Trimble TDC100 has been used to capture northing and easting coordinates for each tree and key site features. As the stated accuracy of the device is 1-2

meters, tree positions should be considered indicative only. Where a specific design proposal is being considered, trees likely to be in conflict are located to an accuracy of 0.5m with measurements from existing site features.

2. Site Description

2.1. Current Site Usage

2.1.1. The site identified for survey are the grounds of a detached residential property on a quiet cul-de-sac in a rural village. The site contains the main dwelling with adjoining garage, a driveway and outdoor amenity space.

2.2. Treescape & Visual Amenity

2.2.1. The surrounding residential area is interspersed with a significant number of semi-mature to mature trees.

2.2.2. Tree T5 forms a moderate sized green feature when viewed from the cul-de-sac of The Green and from the public footpath adjacent to the site (see Appendix 5, images 1-3). The tree is of notable size and quality and has a reasonable degree of visibility from the immediate surrounding area. The tree forms a significant part of the local treescape and conveys a moderate visual amenity value.

2.2.3. Trees T2, T3 and T4, and hedges H2 and H3, form a modest sized green feature when viewed from the cul-de-sac of The Green and from the public footpath adjacent to the site (see Appendix 5, images 1-3). The vegetation is modest in size, is of adequate quality and has a reasonable degree of visibility from the immediate surrounding area. This vegetation forms a minor part of the local treescape and conveys a low visual amenity value.

2.2.4. Tree T1 is modest in size, is largely hidden from public view and conveys little or no visual amenity value (see Appendix 5, images 1-3).

2.3. Topography and Geology

2.3.1. In general, the site is level and at the time of survey appeared to be well drained.

2.3.2. A desktop investigation was made into site geology using the British Geological Survey's Geology Viewer service. The local geology was defined as superficially till over mudstone bedrock.

2.3.3. Both till and mudstone deposits may contain significant clay content as such independent expert advice should be sought to better define site geology. Where significant clay content exists, due consideration must be given in relation to foundation design near retained and removed trees. Failure to do so may lead to subsidence and heave related issues.

2.4. Rooting Conditions

2.4.1. It is acknowledged that root growth is unlikely to follow symmetrical patterns, but will instead favour undeveloped areas that are free from hard-surfacing and subterranean structures. However, given their subterranean nature, it is not possible to accurately predict root architecture as such the Root Protection Areas of the trees surveyed are shown to be symmetrical and centred on their stems.

3. Tree Status

- 3.1. A status investigation was made on 2nd March 2023 with North Kesteven District Council via their online planning portal. We are informed that there are no Tree Preservation Orders (TPO) in force on or immediately adjacent to the site. We do however advise a further status investigation is carried out prior to any tree works. Conducting work without permission to a tree subject to protection is a criminal offence.
- 3.2. An investigation into Conservation Area status was also made. We are informed that the site is within a Conservation Area. Such status offers protection to all woody plants with a stem diameter of 75mm and above when measured at 1.5m above ground level (exceptions apply). Prior to works being carried out on such trees, the local authority must be given at least six weeks' notice to allow them to consider whether the proposed works are appropriate. The removal of dead branches from a living tree is permitted without prior notice or consent.

4. Tree Works in the Current Site Context

4.1. Overview

4.1.1. Within the survey, tree works may have been identified for reasons of public safety, to ensure the long-term health of the trees or for general maintenance purposes. Such recommendations have been made without regard to any projected layout and should be undertaken irrespective of development. These are summarised in the following sections.

4.1.2. For the full details of all vegetation surveyed and recommendations made, please refer to Appendix 1.

4.2. Tree Removals in the Current Site Context

4.2.1. No trees require removal in the current site context.

4.3. Remedial Tree Works in the Current Site Context

4.3.1. No trees require remedial works in the current site context.

4.4. Further Inspection in the Current Site Context

4.4.1. No trees require further inspection in the current site context. It is however advised that all trees are periodically inspected in the interests of general risk management.

5. Arboricultural Impact Assessment (AIA)

5.1. Development Proposal

5.1.1. The proposal for the site includes the conversion of the existing garage for residential use, and the addition of a new double garage with parking area.

5.1.2. This Arboricultural Impact Assessment is based on drawing ref. p-Site Plan-pre-app, which forms the basis for the Tree Protection Plan that accompanies this report.

5.2. Tree Removals for Development

5.2.1.No tree removals are required to facilitate development.

5.3. Remedial Tree Works and Pruning for Development

5.3.1.No pruning or remedial tree works are required to facilitate the development.

5.4. Further Investigations Related to Development

5.4.1.No further investigations are required to facilitate the development.

5.5. Tree Protection Measures

5.5.1.To avoid undue harm to retained trees, appropriate tree protection measures must be employed. Such measures include, but may not be limited to, protective fencing and ground protection. The installation of tree protection must be the first job on site following the approved tree works. The protection must conform to BS5837:2012 and enclose the entire Root Protection Area (RPA) and crown of retained trees, unless otherwise stated in this document or in an associated Arboricultural Method Statement.

5.5.2.Areas subject to tree protection must not be breached by construction traffic/activity, unless stated otherwise in this document or in an associated Arboricultural Method Statement. Where such incursions are deemed unavoidable further tree protection measures and/or specialist construction techniques may be required. These must conform to BS5837:2012. In the even such incursions are thought to be necessary the project arboriculturist must first be consulted.

5.5.3.The position of protective fencing and ground protection are detailed on the Tree Protection Plan. The specifications for the construction of the protective fencing can be found in Appendix 4.

5.6. Construction Access & New Hard-surfacing

5.6.1. No new hard-surfacing or construction access is required within the RPA of retained trees.

5.7. Demolition

5.7.1.No demolition is required within the RPA of retained trees.

5.8. Foundations

5.8.1.No new foundations fall within the RPA of retained trees.

5.9. Services & Utilities

5.9.1.No new underground services fall within the RPA of retained trees.

5.10. Landscaping

5.10.1. Increases or decreases in ground level within the RPA can be extremely detrimental to trees and must be avoided.

5.10.2. Continuous trenching techniques within the RPA can be extremely detrimental to trees and must be avoided. Where boundary infrastructure is required, fencing supported on intermittent post is acceptable provided all reasonable efforts are made to avoid harm to adjacent trees.

5.10.3. Hard surfacing intended for pedestrian use, that may or may not be detailed on the plans provided, must not exceed 20% of the undeveloped RPA of any tree and must not be laid closer than 0.5m to tree stems or surface roots. The surfacing must be permeable and installed using the 'no-dig' method as detailed in BS5837:2012. Any hard surfacing intended for use by vehicles must be included on the design proposal for consideration during the planning phase.

5.11. **Shading**

5.11.1. In this instance there are no significant detrimental shading effects on proposed habitation areas.

6. Arboricultural Method Statement – Operations for Inclusion

6.1.1. No operations are required within the RPA or crown spread of retained trees as such an Arboricultural Method Statement (AMS) is not required.

Appendix 1: Survey Schedule

Tree ID	Common Name	Maturity	Height (m)	Stem Diameter (mm)			RPA Radius (m)	Crown Spread (m)				Structural Condition	Retention Category	Life Expectancy	Physiological Condition	Comment	Recommendations
				1	2	3		N	E	S	W						
T1	Common Holly	Young	2.5	80			1.0	1	1	1	1	Good	C1	>40 yrs	Good	Single stemmed to full height. Well pruned standard form.	n/a
T2	Tibetan Cherry	Semi-mature	3	100			1.2	1	1	1	1	Good	C1	>40 yrs	Good	Single stemmed to full height. Well pruned standard form.	n/a
T3	Tibetan Cherry	Semi-mature	3	100			1.2	1	1	1	1	Good	C1	>40 yrs	Good	Single stemmed to full height. Well pruned standard form.	n/a
T4	Tibetan Cherry	Semi-mature	3	100			1.2	1	1	1	1	Good	C1	>40 yrs	Good	Single stemmed to full height. Well pruned standard form.	n/a
T5	Sycamore	Semi-mature	15	400#	350#	300#	7.3	5.5	6.5	6.5	4	Fair / Good	B1/2	>40 yrs	Good	Off-site ivy clad tree, location and ivy prevented detailed inspection. Trifurcated from ground level with bark included unions. Congested crown structure with multiple leaders. Crown with healthy shoot structure slightly suppressed to W by neighbouring tree.	n/a

denotes estimated measurement

Tree ID	Common Name	Maturity	Height (m)	Stem Diameter (mm)			RPA Radius (m)	Crown Spread (m)				Structural Condition	Retention Category	Life Expectancy	Physiological Condition	Comment	Recommendations	
				1	2	3		N	E	S	W							
H1	A Hedgerow		2						0.5			0.5		B2	>40 yrs	Good	Well managed beech hedge. Uniform in condition and density providing very good screening.	n/a
H2	A Hedgerow		2					0.5	0.5	0.5	0.5			B2	>40 yrs	Good	Well managed beech hedge. Western 15m gap planted in recent past. Relatively uniform in condition and density providing good screening.	n/a
H3	A Hedgerow		2						0.5			0.5		B2	>40 yrs	Good	Well managed beech hedge. Southern 6m gap planted in recent past. Relatively uniform in condition and density providing good screening.	n/a

Appendix 2: Retention Categories

Trees Unsuitable for Retention	
<p>Category U</p> <p>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.</p>	<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 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. <p><i>NOTE Category U trees can have existing or potential conservation value, which it might be desirable to preserve; see [BS5837: 2012] 4.5.7</i></p>

Tree to be Considered for retention	1 For Arboricultural Reasons	2 For Landscaping Qualities	3 For Cultural Values, Including Conservation
<p>Category A</p> <p>Trees of high quality with an estimated remaining life expectancy of at least 40 years.</p>	<p>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).</p>	<p>Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.</p>	<p>Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture).</p>

Tree to be Considered for retention	1 For Arboricultural Reasons	2 For Landscaping Qualities	3 For Cultural Values, Including Conservation
<p>Category B</p> <p>Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.</p>	<p>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.</p>	<p>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.</p>	<p>Trees with material conservation or other cultural value.</p>
<p>Category C</p> <p>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.</p>	<p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.</p>	<p>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.</p>	<p>Trees with no material conservation or other cultural value.</p>

Appendix 3: Guidelines & Limitations

Where trees are inspected for the purposes of risk management recommendations are not intended to eliminate all risk but to mitigate obvious risks of an unacceptable level. This approach is considered reasonable and proportionate when facilitating tree owners and managers in meeting their duty of care.

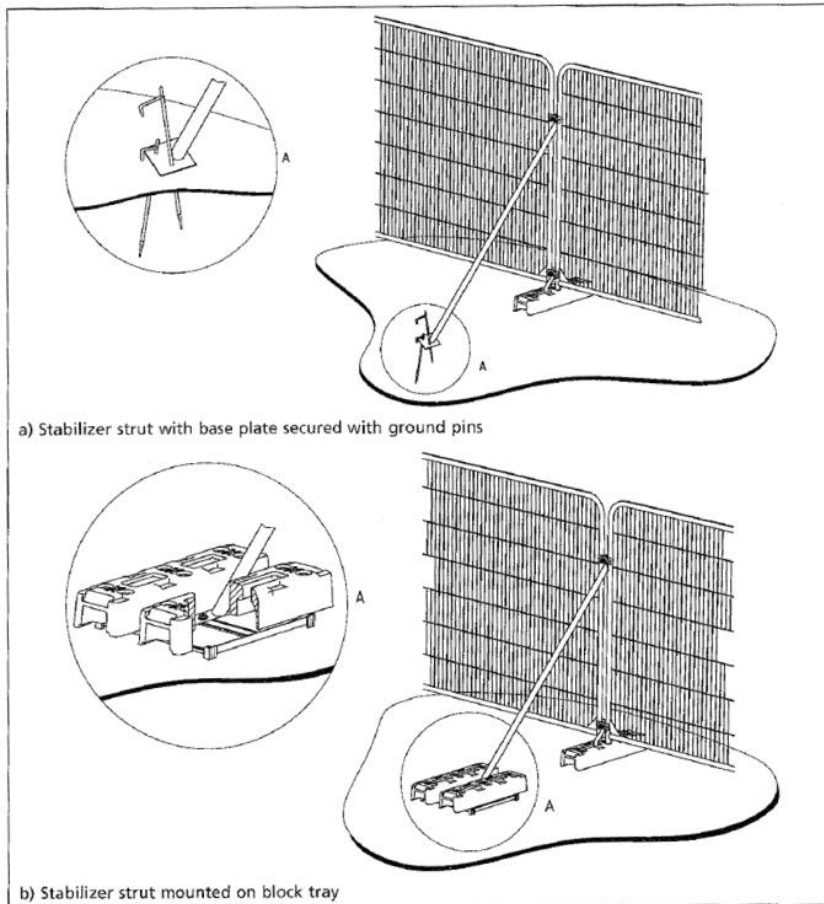
Recommendations made are based on the current site context and upon other usages brought to our attention prior to the survey. Site usage conditions taken into consideration are detailed in this report. Where these are thought to be inaccurate this must be brought to our attention at the soonest opportunity.

We advise that all trees are inspected with a regularity and level of detail appropriate to site usage. It is also recommended that trees are re-inspected following certain events. These include; severe weather events, significant changes in site usage, and changes that affect wind loading on trees (e.g. removal of neighbouring trees, erection/demolition of buildings).

Tree work recommendations must only be undertaken by suitably experienced and qualified contractors. Such service providers must hold appropriate public liability insurance and work to the British Standard BS 3998:2010 Tree work – Recommendations, or other industry best practice guidelines. During tree work operations any notable defects not identified in this report must be brought to our attention at the soonest opportunity.

Appendix 4: Tree Protection Fencing

Figure 1. Specification for Above Ground Stabilised Protective Fencing



The protective fencing will be installed in accordance with BS 5837: 2012 and will comprise of weld mesh panel fencing, situated in rubber or concrete feet. Panels will be joined together using a minimum of two anti-tamper couplers, positioned so that they can only be removed from inside the barrier. The fencing will be supported at each joint (where two panels meet) with a stabiliser strut, attached to the fencing at one end and a base plate at the other, which will be secured with ground pins, driven into the underlying soil.

Figure 2. Example Signage for Protective Fencing



Appendix 5: Site Images



Image 1 – Site viewed from south west showing T1-4, H2 and H3



Image 2 – T5



Image 3 – Site viewed from The Green, H2 and T5 left of centre

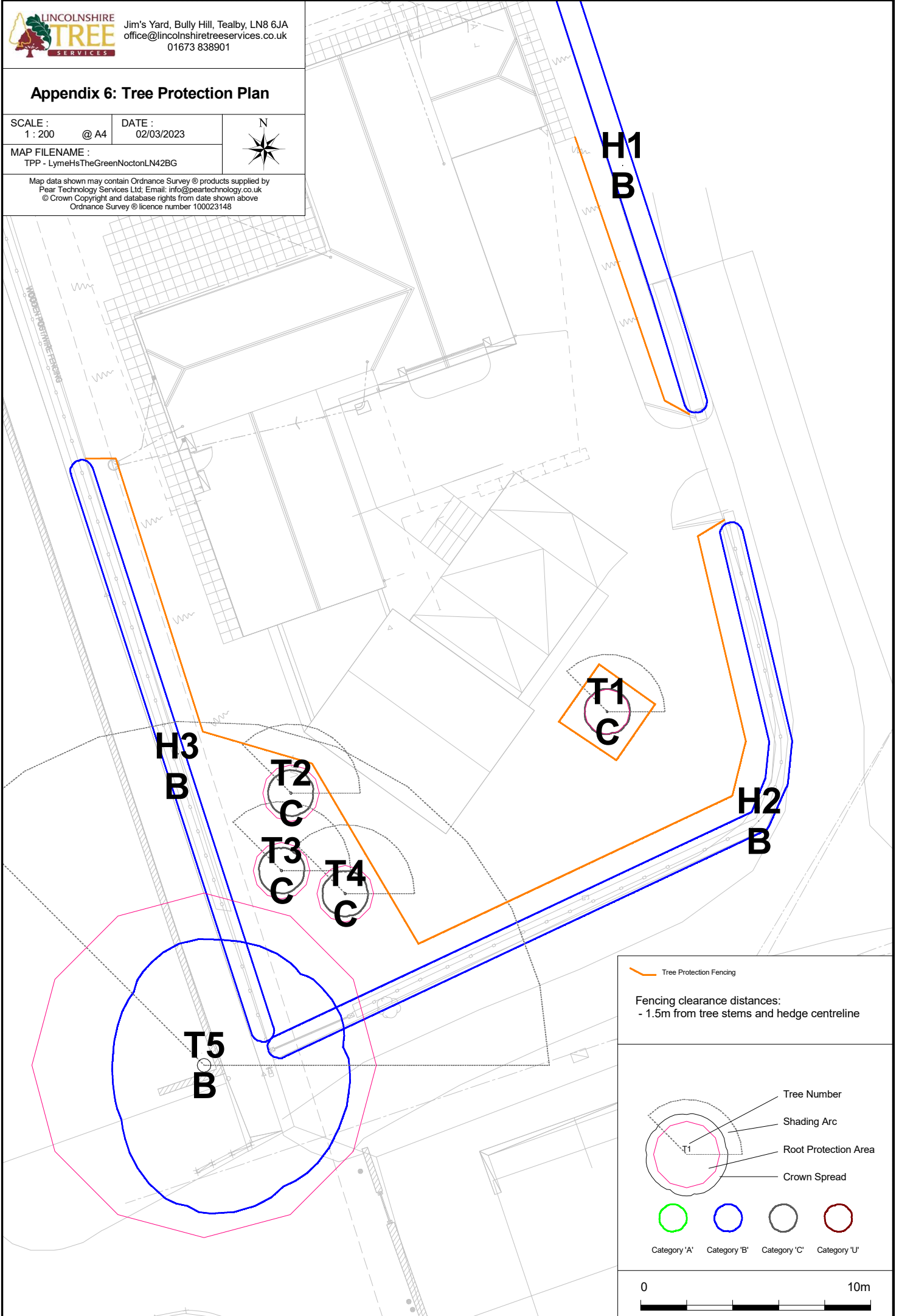
Appendix 6: Tree Protection Plan

SCALE : 1 : 200 @ A4 DATE : 02/03/2023



MAP FILENAME : TPP - LymeHsTheGreenNoctonLN42BG

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Tree Protection Fencing

Fencing clearance distances:
 - 1.5m from tree stems and hedge centreline

Tree Number
 Shading Arc
 Root Protection Area
 Crown Spread

Category 'A'
 Category 'B'
 Category 'C'
 Category 'U'

0 10m