



ARBORICULTURAL REPORT

& Impact Assessment

to **BS5837:2012** at:

Neale Court Care Home
Neale Court
North Hykeham
Lincoln
LN6 9UA

Prepared for:
The Planning Hub
Jubilee House
79 Gertrude Road
West Bridgford
Nottingham
NG2 5DA

Date: *February 2020*

Reference: *AWA3050*



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1. Introduction

1.1 Instructions and Brief

- 1.1.1 We are instructed by Matt Hubbard of The Planning Hub to visit the site and prepare our findings in a report.
- 1.1.2 The report is required in accordance with BS5837:2012 *Trees in relation to design, demolition and construction – Recommendations*, to provide detailed, independent, arboricultural advice on the trees present, in the context of potential development.

1.2 Survey Details

- 1.2.1 The survey took place during January 2020.
- 1.2.2 The trees were surveyed visually from the ground using “Visual Tree Assessment” techniques and in accordance with the guiding principles of British Standard 5837:2012.
- 1.2.3 Any additional off-site trees that could impact a new development design have been included in the tree survey parameters.
- 1.2.4 We have been provided with a topographical survey with tree positions plotted. Where surveyed trees were not included on the topographical survey the tree positions were plotted using enhanced GPS technology (1-2m accuracy) and laser distance measurer.
- 1.2.5 This report has been prepared by Mr Adam Winson, Chartered Arboriculturist, MSc, BSc (Hons), MICFor, MArborA, Principle and Director of AWA Tree Consultants Ltd.
- 1.2.6 The tree survey data collection was carried out by Mr Dave Farmer FdSc (Arb), MArborA, PTI (Lantra), Arboriculturist at AWA Tree Consultants Ltd.
- 1.2.7 Full qualifications and experience are included within **Appendix 1**. Explanatory details regarding the survey methodology are included within **Appendix 2**. A full explanation of the tree data can be found at **Appendix 3**. Full details of all the trees surveyed are found in **Appendix 4**. For tree locations refer to the Tree Constraints Plan at **Appendix 5** and for detail of the impacts of the new development refer to the Tree Impacts Plan at **Appendix 6**.

2. The Site

2.1 Location and Description

- 2.1.1 The site is located North Hykeham, a town directly to the south west of the city of Lincoln, in the county of Lincolnshire.
- 2.1.2 The site comprises the buildings, vehicle parking areas and surrounding gardens of a residential care home. The site is surrounded by private residential properties.
- 2.1.3 The approximate area of the survey is highlighted in the (2016) image below:



3. The Trees

3.1 Legal

- 3.1.1 An online check has been carried out with North Kesteven District Council on 03/02/20. As of this date no trees are covered by a Conservation Area or protected by a Tree Preservation Order.
- 3.1.2 Due to the large potential penalties for illegally carrying out work to protected trees, before authorising any tree works a further check should be made with the Local Planning Authority to confirm if any trees are covered by a TPO or are within a Conservation Area (unless such works are approved by planning permission). If either applies, then statutory permission is required before any works can take place.
- 3.1.3 When appointing a tree surgeon, only properly qualified and experienced companies should be used, who have adequate Public Liability and Employer's Liability Insurance. All tree work should be carried out according to British Standard 3998:2010 *Tree Work - Recommendations*.

3.2 Tree Survey Results

- 3.2.1 The tree survey revealed 20 items of woody vegetation, comprised of 13 individual trees and 7 groups of trees or shrubs or hedges.
- 3.2.2 Of the surveyed trees: 1 tree is retention category 'U', 2 trees are retention category 'B', and the remaining 17 trees and groups are retention category 'C' (explanatory details regarding the retention categories are included within Appendix 3).
- 3.2.3 The significant tree cover within the site consists of individual trees and shrub groups located close to the boundary lines, both within the site and within the neighbouring properties.
- 3.2.4 The central areas of the site contain little of arboricultural significance, generally consisting of buildings and hard surfaced areas.
- 3.2.5 Species diversity at the site is relatively good. Tree species include Cherry, Field Maple, Hazel, Hornbeam, Lime, Oak, Robinia and Rowan, along with shrubs and hedges of Blackthorn, Hawthorn, Holly, Lawson Cypress and Leyland Cypress.

- 3.2.6 Most of the trees are semi-mature with only occasional early mature trees.
- 3.2.7 The most significant tree within the site is the early mature Lime tree, T10. This tree is visually prominent throughout the rear garden area of the site and from the surrounding residential properties, providing a moderate level of amenity value.
- 3.2.8 Situated within a neighbouring garden to the south east is the Red Oak, T4. This tree appears to have good prospects and provides a good level of amenity to the site and surroundings.
- 3.2.9 The Robinia, T9, is in a particularly poor condition, with only a very limited live area of crown remaining. It is advised that this tree is removed to ground level regardless of any future development at the site.
- 3.2.10 The remaining trees are of lower value, retention category 'C'. None of these trees should individually pose any significant constraint on the development potential of the site. However, the trees collectively provide some amenity value and are in keeping with the surrounding landscape character. As such large-scale removals should be avoided and suitable trees retained where compatible with the development proposals.
- 3.2.11 Some trees were covered in dense ivy or were inaccessible (as detailed in Appendix 4) in such cases measurements were estimated and the condition values are indicative only.
- 3.2.12 The tree Root Protection Area (RPA) detailed on the Tree Constraints Plan at Appendix 5, has been used as a layout design tool, to inform on the area around a tree where the protection of the roots and soil structure is treated as a priority.
- 3.2.13 Some lower value tree, hedge and shrub groups do not have RPAs detailed on tree plans. The detailed extent and spread of the low value groups, in conjunction with the tree schedule, is sufficient to assess the associated potential constraints.
- 3.2.14 The RPA for each tree has been plotted as a polygon centred on the base of the stem. Due to the presence of roads, structures, topography (and past tree management) the RPA is likely to be a simplified representation of the tree roots actual morphology and disposition. However, detailed modifications to the shape of the RPA would largely be based on conjecture and so have been avoided.

4. Arboricultural Impact Assessment

4.1 Proposed New Development

- 4.1.1 It is proposed to extend the current buildings within the site, with associated landscaping and facilities.
- 4.1.2 The development proposals have been provided by my client and inform this arboricultural impact assessment and the Tree Impacts Plan at Appendix 6.

4.2 Direct Impacts

- 4.2.1 From assessing the new development proposals, 1 tree will require removal as it is situated in the footprint of the structure and its retention and protection throughout the development is not suitable.
- 4.2.2 The tree that requires removal is the Hawthorn, T16. This tree is of negligible value, being a single heavily pruned stem that is likely to be a remnant from a previously removed hedgerow.
- 4.2.3 The development will also require the removal of two small and insignificant shrub groups as detailed in the tree plan at Appendix 6.
- 4.2.4 Due to the very low value of the tree and shrubs to be removed the removals will have only a negligible negative arboricultural impact.

4.3 Indirect Impacts

- 4.3.1 The tree Root Protection Area (RPA) detailed on the Tree Constraints Plan at Appendix 5, has been used as a layout design tool, to inform on the area around a tree where the protection of the roots and soil structure is treated as a priority. As such, no significant negative indirect impacts have been identified.
- 4.3.2 The design of the new development has considered the trees crown position in relation to the extension. Some shade from trees may be beneficial. In particular, deciduous trees give shade in summer but allow access to sunlight in winter. However, the design proposals avoid excessive shading, and give adequate provision for future tree growth.

4.3.3 The buildability of the proposed development has been assessed in terms of access, adequate working space and provision for the storage of materials, including topsoil, in relation to the trees.

4.4 Suitable Mitigation

4.4.1 The development of the site provides an excellent opportunity to undertake new tree planting throughout the site as part of a soft landscaping scheme.

4.4.2 As such, suitable new tree planting has the potential to mitigate for the required tree removals and, in the longer term, has the potential to improve the sites tree cover.

4.5 Protection of the Retained Trees

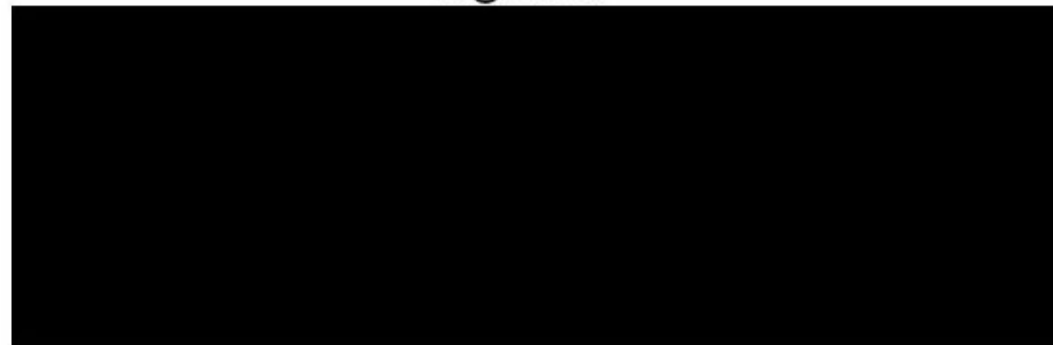
4.5.1 The retained trees will require protection by fencing in accordance with BS 5837: 2012, during the development phase.

4.5.2 If required by the Local Planning Authority, an associated Arboricultural Method Statement, detailing protective fencing specifications and construction methods close to the retained trees can be provided.

5. Signature

I trust this report provides all the required information.

Signed



Adam Winson, *Chartered Arboriculturist, MSc, BSc (Hons), MICFor, ACIEEM.*

11th February 2020

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Appendices

Appendix 1: Authors Qualifications and Experience

Appendix 2: Survey Methodology and Limitations

Appendix 3: Explanation of Tree Descriptions

Appendix 4: Tree Data

Appendix 5: Tree Constraints Plan

Appendix 6: Tree Impacts Plan

Appendix 1: Authors Qualifications & Experience

Mr Adam Winson *Chartered Arboriculturist, MSc, BSc (Hons), MICFor, MArborA, ACIEEM, QTRA Registered.*

Adam is the company Director and Principle Consultant. He has a mix of the highest level academic qualifications and relevant work experience. He has worked within the tree care profession for over 20 years, and was awarded an MSc in Arboriculture and Urban Forestry, with distinction. Adam is a Chartered Arboriculturist and a Registered Consultant with the Institute of Chartered Foresters, a Professional Member of the Arboricultural Association and has original research published by the UK Forestry Commission. His work ranges from individual expert tree inspections to managing trees on major multimillion pound housing developments and infrastructure projects. His work often involves trees with preservation orders or litigation, and he has appeared as a tree expert, at planning appeal hearings up to the Crown Court.

Mr James Brown *BSc (Hons) Arboriculture, MArborA. PTI (Lantra).*

James has a BSc (Hons) in Arboriculture, attaining first class honours, as well as being awarded the Institute of Chartered Forester's Student award. He is a Professional Member of the Arboricultural Association and an Associate of the Institute of Chartered Foresters. James previously worked in Europe's largest tree nursery and has experience of Local Authority tree officer work. His main work consists of tree surveys for development projects and preparing Tree Protection Schemes to BS 5837:2012.

Mr Dave Farmer *FdSc (Arb), MArborA, PTI (Lantra).*

Dave has a Foundation Degree in Arboriculture (with Distinction) and is qualified in Professional Tree Inspection. He is a Professional Member of the Arboricultural Association and an Associate of the Institute of Chartered Foresters. Dave has many years of experience within the tree care profession, including lecturing in arboriculture. His work focuses on diagnosing potential tree risk problems, and recommending appropriate treatments and work programmes.

Dr Felicity Stout *Ph.D, MA, BA (Hons), Cert Ed (Forestry), TechArborA. PTI (Lantra).*

Felicity has worked in the tree care profession for the last 10 years. She has a Certificate in Higher Education in Forestry, with a focus on Urban Forestry. She has practical arboricultural contractor experience and is a qualified and experienced Social Forestry practitioner. Felicity has a PhD in History, with a particular interest in the history of woodland and tree management and has published in The Arboricultural Journal on this subject.

Mr Patrick Rowntree. *Arboricultural Technician. Cert Arb L3. TechArborA. PTI (Lantra).*

Patrick is a trained arborist with 5 years of experience in the private and commercial sectors, both in the UK and New Zealand. Formerly a professional rugby player, Patrick was awarded a distinction in the Extended Diploma in Forestry & Arboriculture and is a technician Member of the Arboricultural Association. Patrick now uses his experience at AWA focusing on BS5837:2012 tree surveys for development projects; this involves accurate tree data collection and the preparation of tree reports to BS 5837:2012.

Appendix 2: Survey Methodology and Limitations of Report

The survey was undertaken in accordance with British Standard 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*. The trees were assessed objectively and without reference to any proposed site layout. The trees were surveyed from the ground using 'Visual Tree Assessment' (VTA) methodology. VTA is appropriate and is endorsed by industry guidance. It is used by arboriculturists to evaluate the structural integrity of a tree, relying on observation of trees biomechanical and physiological features. Measurements are obtained using a diameter tape, clinometer, laser distometer and loggers tape. Where this is not practical measurements are estimated. Tree groups have been identified in instances as defined in BS 5837:2012. Shrubs and insignificant trees may have been omitted from the survey.

This report represents a BS5837 tree survey and should not be accepted as a detailed tree safety inspection report; however, tree related hazards are recorded and commented upon where observed, yet no guarantee can be given as to the absolute safety or otherwise of any individual tree. All recommended tree work must be to BS 3998:2010 - *'Tree Work: Recommendations'*.

The findings and recommendations contained within this report are valid for a period of twelve months from the date of survey. The author shall not be responsible for events which happen after this time due to factors which were not apparent at the time, and the acceptance of this report constitutes an agreement with these guidelines and terms.

Appendix 3: Explanation of Tree Descriptions

HEIGHT of the tree is measured from the stem base in metres. Where the ground has a significant slope the higher ground is selected.

CROWN HEIGHT is an indication of the average height at which the crown begins and includes information of the first significant branch and direction of growth.

STEM DIAMETER is measured at 1.5 metres above (higher) ground level. Where the tree is multi-stemmed at this point; the diameter is measured close to ground level or else a combined stem diameter is calculated.

CROWN SPREAD is measured from the centre of the stem base to the tips of the branches in all four cardinal points.

AGE CLASS of the tree is described as young, semi-mature, early-mature, mature, or over-mature.

PHYSIOLOGICAL CONDITION is classed as good, fair, poor, or dead. This is an indication of the health of the tree and takes into account vigour, presence of disease and dieback.

STRUCTURAL CONDITION is classed as good, fair or poor. This is an indication of the structural integrity of the tree and takes into account significant wounds, decay and quality of branch junctions.

LIFE EXPECTANCY is classed as; less than 10 years, 10-20 years, 20-40 years, or more than 40 years. This is an indication of the number of years before removal of the tree is likely to be required.

Retention Categories

A (marked green on Appendix 5) = retention most desirable. These trees are of very high quality and value with a good life expectancy.

B (marked in blue on Appendix 5) = retention desirable. These trees are of good quality and value with a significant life expectancy.

C (marked in grey on Appendix 5) = trees which could be retained. These trees are of low or average quality and value, and are in adequate condition to remain until new planting could be established.

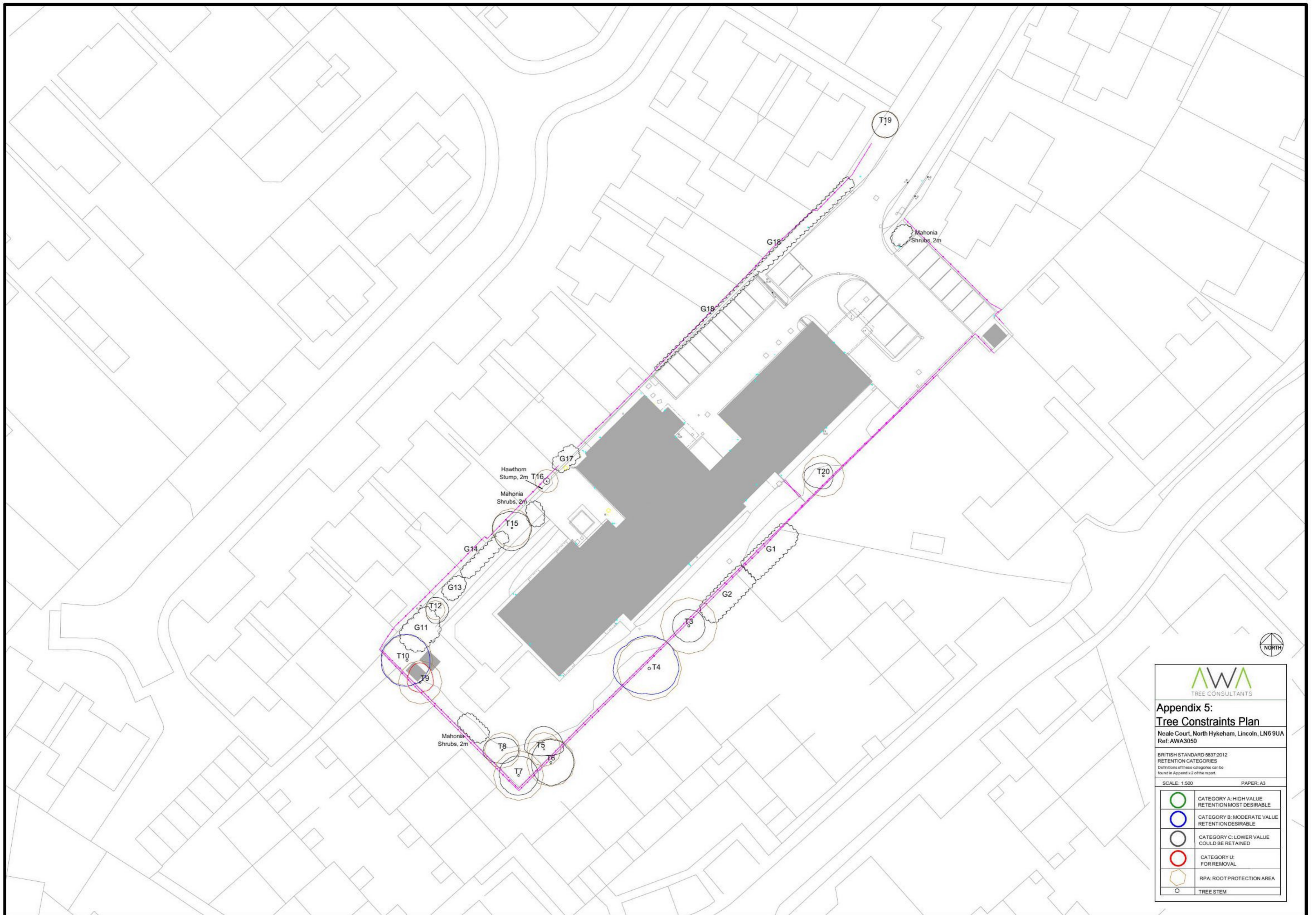
U (marked in red on Appendix 5) = trees for removal. These trees are in such a condition that any existing value would be lost within 10 years.

Tree ID	Tree Species		Maturity	Measurements				Crown (m)				Tree Condition						Value		Management		
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
G1	Leyland Cypress	<i>X Cuprocyparis leylandii</i>	Semi-mature	7	10+	100 avg	Yes	2	See Plan				No visual defects, Limited access around base	Single stemmed, Vertical, Stubs, Tight union	Normal, Minor deadwood	Boundary hedge, growing in neighbouring land.	Fair	Fair	20 to 40 yrs	Low	C	No works required
G2	Hazel, Hornbeam	<i>Corylus sp.</i> <i>Carpinus sp.</i>	Semi-mature	7	10+	100 avg	Yes	2	See Plan				No visual defects, Limited access around base	Single stemmed, Vertical, Stubs, Tight union	Normal, Minor deadwood	Boundary hedge, growing in neighbouring land.	Fair	Fair	20 to 40 yrs	Low	C	No works required
T3	Field Maple	<i>Acer campestre</i>	Semi-mature	9	1	350	Yes	2	2.5	2.5	2.5	2.5	No visual defects, Limited access around base	Ivy covered	Normal	Situated in neighbouring land. Dense ivy prevented detailed inspection.	Fair	Fair	>40 yrs	Moderate	C	No works required
T4	Oak	<i>Quercus rubra</i>	Early-mature	10	1	400	Yes	1.5	5	4.5	4	5.5	No visual defects, Limited access around base	Twin stemmed at 2m, Slight lean, Old pruning wounds, Stubs	Old pruning wounds, Minor deadwood	Situated in neighbouring land.	Good	Good	>40 yrs	Moderate	B	No works required
T5	Rowan	<i>Sorbus aucuparia</i>	Semi-mature	7.5	1	210	No	2	3.5	3	1	3	No visual defects	Single stemmed, Vertical, Old pruning wounds, Stubs, Epicormic growths, Tight union	Old pruning wounds, Stubs, Minor deadwood, Unbalanced		Fair	Fair	>40 yrs	Low	C	No works required

Tree ID	Tree Species		Maturity	Measurements				Crown (m)				Tree Condition						Value		Management		
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T6	Cherry	<i>Prunus avium</i>	Early-mature	9	1	300	Yes	2	3.5	3.5	3.5	3	No visual defects, Limited access around base	Multiple stemmed at 2m, Vertical, Old pruning wounds, Stubs, Epicormic growths	Old pruning wounds, Minor dieback, Minor deadwood, Stubs, Slightly unbalanced	Situated in neighbouring land.	Fair	Fair	20 to 40 yrs	Moderate	C	No works required
T7	Lime	<i>Tilia europaea</i>	Semi-mature	11	1	310	No	1.5	3	3	3	3	No visual defects	Multiple stemmed at 3m, Vertical, Tight union, Partially included bark	Old pruning wounds, Minor deadwood		Good	Fair	>40 yrs	Moderate	C	No works required
T8	Rowan	<i>Sorbus aucuparia</i>	Semi-mature	7.5	1	220	No	2	2	2.5	2	3	No visual defects	Single stemmed, Vertical, Old pruning wounds, Stubs, Epicormic growths, Tight union	Old pruning wounds, Stubs, Minor deadwood, Unbalanced		Fair	Fair	>40 yrs	Low	C	No works required
T9	Robinia	<i>Robinia pseudoacacia</i>	Early-mature	9	1	270	No	3	3	2	1.5	2	No visual defects	Single stemmed, Vertical, Bark damage, Tight union, Partially included bark, Epicormic growths	75% dead / absent, Major dieback, Major deadwood	In severe decline.	Poor	Poor	<10 yrs	Low	U	Remove regardless of development
T10	Lime	<i>Tilia europaea</i>	Early-mature	10	1	320	No	2	4	3.5	4	4	No visual defects	Single stemmed, Vertical, Tight union, Ivy covered	Minor deadwood		Good	Good	>40 yrs	Moderate	B	No works required

Tree ID	Tree Species		Maturity	Measurements				Crown (m)				Tree Condition						Value		Management			
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works	
G11	Holly	<i>Ilex aquifolium</i>	Semi-mature	6.5	10+	100 avg	No	0	See Plan				No visual defects	Single & multiple stemmed, Vertical, Stubs, Tight union	Old pruning wounds, Minor deadwood		Fair	Good	>40 yrs	Moderate	C	No works required	
T12	Rowan	<i>Sorbus aucuparia</i>	Semi-mature	5	1	120	No	2	2	2	2	1.5	No visual defects	Single stemmed, Slight lean, Tight union	Slightly unbalanced		Good	Good	>40 yrs	Low	C	No works required	
G13	Holly	<i>Ilex aquifolium</i>	Semi-mature	6.5	5	100 avg	No	0	See Plan				No visual defects	Single & multiple stemmed, Vertical, Stubs, Tight union	Old pruning wounds, Minor deadwood		Fair	Good	>40 yrs	Moderate	C	No works required	
G14	Hawthorn	<i>Crataegus monogyna</i>	Semi-mature	4	10+	100 avg	No	1	See Plan				No visual defects	Multiple stemmed at 1m, Vertical, Old pruning wounds, Stubs, Epicormic growths, Tight union	Old pruning wounds, Minor deadwood, Stubs	Previously managed hedgerow, now becoming overgrown.		Fair	Fair	20 to 40 yrs	Low	C	No works required
T15	Rowan	<i>Sorbus aucuparia</i>	Semi-mature	7	1	240	No	2	2.5	3	3.5	3	No visual defects	Multiple stemmed at 2m, Slight lean, Old pruning wounds, Tight union	Minor deadwood, Slightly unbalanced		Good	Fair	>40 yrs	Low	C	No works required	

Tree ID	Tree Species		Maturity	Measurements				Crown (m)				Tree Condition					Value		Management			
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T16	Hawthorn	<i>Crataegus monogyna</i>	Semi-mature	2.5	3	120, 70, 40	No	0.5	0.5	0.5	0.5	0.5	No visual defects	Slight lean, Old pruning wounds, Stubs, Epicormic growths, Tight union, Bark damage	Small / sparse, Old pruning wounds	Single remaining stem from a managed hedge.	Fair	Fair	20 to 40 yrs	Low	C	Remove to facilitate development
G17	Leyland Cypress	<i>X Cuprocypris leylandii</i>	Early-mature	6	5	210 avg	No	2	See Plan				No visual defects, Soil erosion	Single stemmed, Vertical, Old pruning wounds, Stubs, Tight union	Old pruning wounds, Minor deadwood	Managed hedge with lower branches removed, recently topped at 6m.	Fair	Good	20 to 40 yrs	Low	C	No works required
G18	Blackthorn, Hawthorn, Holly	<i>Prunus sp.</i> <i>Crataegus sp.</i> <i>Ilex sp.</i>	Semi-mature	3	10+	80 avg	No	0	See Plan				No visual defects, Soil compaction	Multiple stemmed at base, Vertical, Old pruning wounds, Stubs, Tight union	Small / sparse, Old pruning wounds	Managed hedgerow. Occasional Elder.	Fair	Fair	20 to 40 yrs	Low	C	No works required
T19	Lawson Cypress	<i>Chamaecyparis lawsoniana</i>	Semi-mature	8	2	150, 80	No	0	2	2	2	2	No visual defects	Twin stemmed at base, Vertical, Tight union	Minor deadwood		Good	Fair	>40 yrs	Low	C	No works required
T20	Cherry	<i>Prunus sp.</i>	Semi-mature	5	1	260	No	2	2	1.5	2	3	No visual defects	Single stemmed, Slight lean, Old pruning wounds	Old pruning wounds, Stubs, Minor deadwood		Good	Fair	>40 yrs	Low	C	No works required



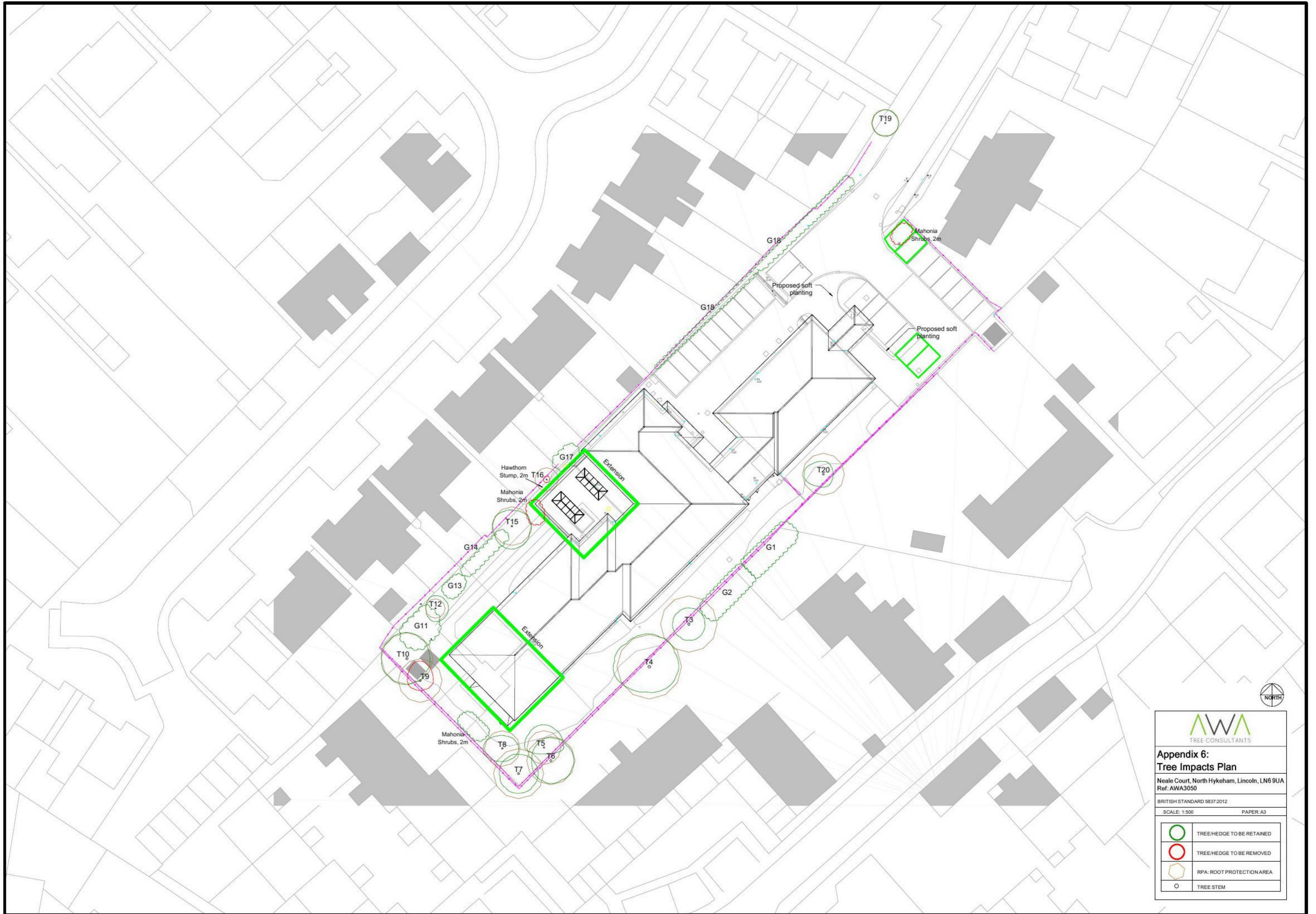
**Appendix 5:
Tree Constraints Plan**

Neale Court, North Hykeham, Lincoln, LN6 9UA
Ref. AWA3050

BRITISH STANDARD 5837:2012
RETENTION CATEGORIES
Definitions of these categories can be found in Appendix 2 of the report.

SCALE: 1:500 PAPER: A3

	CATEGORY A: HIGH VALUE RETENTION MOST DESIRABLE
	CATEGORY B: MODERATE VALUE RETENTION DESIRABLE
	CATEGORY C: LOWER VALUE COULD BE RETAINED
	CATEGORY U: FOR REMOVAL
	RPA: ROOT PROTECTION AREA
	TREE STEM




Appendix 6:
Tree Impacts Plan
 Neale Court, North Hykeham, Lincoln, LN6 9UA
 Ref: AWA3050
 BRITISH STANDARD 5837:2012
 SCALE: 1:500 PAPER: A3

	TREE/HEDGE TO BE RETAINED
	TREE/HEDGE TO BE REMOVED
	RPA: ROOT PROTECTION AREA
	TREE STEM