WATSON LINDSEY
ARBORICULTURE

2 Grange Cottages
Caistor Road
Swallow
LN7 6DL

[redacted]

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Arboricultural Report and Impact Assessment to BS 5837:2012

Site Address:
The Old Hall
Roxby
Scunthorpe
North Lincolnshire
DN15 0BB

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Report No:
200825

Prepared For:
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Contents

1. Introduction

1.1. Purpose of the Report

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 outline the condition of the existing vegetation on site and to define areas where development and existing trees 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 instructed to conduct a tree survey and prepare an arboricultural report for the site. The arboricultural report is to include an impact assessment based on the design proposal provided. The arboricultural survey and report conforms to the most recent specifications outlined in BS 5837: 2012 Trees in relation to design, demolition and construction - Recommendations.

1.2.2. We have been supplied with a drawing no. 18 74 500 that details the proposed development. This provides the basis for which this Arboricultural Impact Assessment has been prepared. The tree data has been overlaid onto the proposed designs to create the Tree Protection Plan, which can be found at in the appendices.

1.3. Scope of the Report

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. Preliminary recommendations are given with a view to the long-term management of a sustainable tree cover and to uphold the interests of health and safety.

1.3.3. All trees within the survey area with a stem diameter above approximately 75mm are included.

1.3.4. Where applicable trees outside the site boundary, but close enough to be affected by the proposed development, are included.

1.4. Survey Details

1.4.1. The survey took place on the 25th August 2020. The weather was wet with moderate winds.

1.4.2. During this 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.

2. Site Description

2.1. Land Use

2.1.1. The site identified for survey are the grounds of a large detached dwelling situated in a rural village. The site sits adjacent to the main dwelling and consists of a lawned area surrounded by numerous trees and shrubs.

2.2. Topography and Geology

2.2.1. Generally speaking, the site is level and appears to be well drained.

2.2.2. The superficial local geology is undefined. The bedrock geology is limestone. Where site geology contains significant clay content building foundations and infrastructure may suffer from tree related subsidence and heave. Where such conditions are deemed a possibility independent expert advice should be sought to better define site geology.

2.3. Treescape & Visual Amenity

2.3.1. The surrounding residential area is interspersed with a modest number of semi-mature and early mature trees.

2.3.2. The trees along the northern boundary of the site form a notable green feature when viewed from North Street. These trees form a significant part of the local treescape.

2.3.3. Individually T1, T2, T3 and T7 are clearly visible from North Street. These trees convey a moderate visual amenity value. The visual amenity value of the remining trees surveyed is low.

2.4. Rooting Conditions

2.4.1. In areas likely to be affected by tree rooting the site is free from subterranean structures and significant changes in ground level. As such the Root Protection Areas of all trees surveyed is assumed to be symmetrical and centred on the trees' stems.

3. Status of the Trees

3.1. A status check was made on 24th August 2020 with North Lincolnshire District Council via their online planning portal. We are informed that there is no Tree Preservation Order (TPO) in force and that the site is not within a Conservation Area.

3.2. Due to the large potential penalties for illegally carrying out work to protected trees, we recommend that a further check is carried out prior to any works being undertaken. This is especially relevant as the Council is able to serve a TPO at any time.

4. Discussion

4.1. Tree Condition & Recommended Works

4.1.1. During the survey the details of 16 individual trees were recorded. There were 11 trees identified as retention category B and five as retention category C.

4.1.2. During the survey the details of four groups of trees were recorded. All were identified as retention category C.

4.1.3. During the survey the details of one hedge were recorded. The hedge was identified as retention category C.

4.1.4. 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.

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

4.2. Removals Irrespective of Development

4.2.1. On this occasion, no trees have been identified as category 'U' and as such no trees are recommended for removal in the current context of the site.

4.3. Remedial Tree Works Irrespective of Development

4.3.1. On this occasion, no remedial works were deemed necessary at this time.

4.4. Monitoring/Further Investigations Irrespective of Development

4.4.1. In this case, no monitoring (re-inspecting and re-assessing) or further investigation works are considered necessary. However, all trees to be retained within the proposed development should be inspected on a regular basis in the interests of risk management.

5. Arboricultural Implications Assessment (AIA)

5.1. Proposed Development

5.1.1. The proposal for the site includes the addition of a new shared accessway from North Street leading to three detached dwelling with associated parking areas.

5.1.2. This Arboricultural Implications Assessment is based on drawing no. 18 74 500, which forms the basis for the Tree Protection Plan that accompanies this report.

5.2. Tree Removals for Development

5.2.1. To allow for the footprint of the new buildings and the associated hard surfacing it will be necessary to remove G1, G2, G4 and T5. As these trees are modest in size and of limited quality their removal will result in little or no loss of amenity value. There is space available on site to replace the loss of these trees if desired.

5.2.2. To help mitigate shading effects on the dwellings along the southern boundary it will be necessary to remove H1, G3, T10 and T13. As these trees are modest in size and of limited quality their removal will result in little or no loss of amenity value. There is space available on site to replace the loss of these trees if desired.

5.3. Remedial Tree Works and Pruning for Development

5.3.1. To provide overhead clearance for the new access from North Street T2 shall be crown lifted as detailed in Appendix 1. Given the species and condition of the tree it is unlikely to suffer any lasting ill effects.

5.3.2. To provide overhead clearance for the new access from North Street and for the parking of the adjacent dwelling T3 shall be crown lifted as detailed in Appendix 1. Although the works are significant, given the age and condition of the tree, it is reasonably unlikely to suffer severe lasting ill effects.

5.3.3. To provide space for scaffolding and access to the south of the adjacent dwellings T9 and T12 require crown spread reductions as detailed in Appendix 1. Due to the condition of the trees and the modest nature of the work neither should suffer any lasting ill effects.

5.4. Monitoring/Further Investigations to Accommodate Proposed Development

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

5.5. The Protective Barrier

5.5.1. In order to ensure the effective protection of retained trees during development, a protective barrier will be installed, in accordance with BS5837: 2012 and may comprise of protective fencing and/or ground protection. This will be the first job on site following the tree removal and pruning works. The fencing and ground protection should be positioned to protect the entire Root Protection Area (RPA) of the retained trees. The position of protective fencing and ground protection is detailed on the Tree Protection Plan. The specifications for the construction of a protective barrier can be found in the appendices.

5.5.2. Routes for pedestrian and site traffic should ideally be located outside, and diverted away from, the RPAs of the retained trees. Where this is not possible, temporary protective surfaces (ground protection) must be laid over the exposed RPAs which will distribute the weight of site vehicles, machinery or pedestrians whilst allowing moisture to reach the tree rooting area beneath. Such surfaces should be constructed in accordance with BS5837: 2012.

5.6. Access/Construction of Hard Surfacing

5.6.1. To provide access both during and after development new hard surfacing will be required within the RPA of T2 and T3. This surfacing must be installed using a ‘no-dig’ 'roll-out' technique and must be able to distribute the weight of development and domestic traffic. This surfacing must be permeable in nature and should remain as such for the lifetime of its use. Failure to install the surfacing in this manner will likely lead to the compromised condition and early loss of the trees.

5.7. Demolition

5.7.1. In this instance no demolition is required within the RPA of retained trees.

5.8. Construction/ Foundation Design

5.8.1. In this instance no new foundations fall within the RPA of retained trees.

5.9. Utilities

5.9.1. To prevent unnecessary damage to tree roots underground utilities should be brought onto site between the new site accessway and site's western boundary. Failure to do so may lead to compromised condition and early loss of retained trees.

5.10. Landscaping

5.10.1. Any proposed fence lines may be constructed within the RPA if necessary, providing that appropriate considerations are made to the protection of the tree. This is providing that no continual trenching is undertaken (e.g. for small walls onto which panel fencing is installed). Excavation must be kept to a minimum and therefore only fence designs requiring intermittent posts will be acceptable within the RPA of retained trees.

5.10.2. Any patios, garden paths or other hard surfaces within RPAs which may not be shown on the plans provided may be constructed using no-dig techniques, providing that they do not cover more than 20% of the RPA and are implemented in accordance with BS5837: 2012. If there is any concern of damaging retained trees, further advice should be sought from a qualified Arboriculturalist.

5.10.3. No ground level changes are to be undertaken within the RPA of retained trees, unless otherwise stated or agreed with the appointed Arboricultural consultant or the LPA. The requirement to raise/lower ground levels within RPAs should be communicated to these parties at the earliest practical convenience.

5.11. Shading

5.11.1. Shading effects on the two dwellings along the southern boundary are likely to be significant. The shade cast by H1, T8 and T12 will be the most notable however the shade cast by T14-16 will be much less significant due to their very high crown break and light crown structure. The remaining vegetation along the southern boundary will contribute to the shading by a moderate degree.

5.11.2. To help mitigate the shading issues H1, G3, T10 and T13 will be removed. In addition, efforts should be made to locate primary habitation areas away from the shade cast of retained trees. Also, natural light penetration into the dwellings should be improved by enlarging windows and where possible by adding features such as skylights and lightwells. Failure to take such measure may lead to the removal of retained trees post-development.

6. Arboricultural Method Statement – Operations for Inclusion

6.1.1. The installation method for the protective fencing

6.1.2. The installation of the temporary ground protection in the RPA of T14

6.1.3. Installation of new hard surfacing within the RPA of T2 and T3

Appendix 1: Survey Schedule

Tree ID	Common Name	Maturity	Height (m)	Stem Diameter (mm)			RPA Radius (m)	Crown Spread (m)				Category	Life Expectancy	Structural Condition	Physiological Condition	Comment	Recommendations
				No.1	No.2	No.3		N	E	S	W						
T1	Horse Chestnut	Semi-mature	8	360			4.3	4.5	4.5	4	5	B1	>40 yrs	Good	Good	Girdling root to N. Bifurcated from 3m with sound union. Crown break at 3.5m. A well-balanced developing crown free from notable defects. A reasonable specimen.	
T2	Common Yew	Early-mature	9	370			4.4	5	4	3	4	B1/2	>40 yrs	Good	Good	Significant basal growth to S. Crown break at 1.5m. Bifurcated from 2m with included but adequate main union. Crown suppressed to S and E by neighbouring trees. A reasonable specimen free from notable defects.	Development Recommendation: Remove basal growth to S. Crown lift to 3.5m to W and N to allow for new access.
T3	Horse Chestnut	Semi-mature	12	370	310		5.8	3.5	5	6.5	5.5	B2	>40 yrs	Good	Good	Bifurcated from 1m with included but adequate main union. Crown break at 2m. A health developing crown suppressed to N by neighbouring trees. A reasonable specimen free from significant defects.	Development Recommendation: Crown lift to 3.5m to W and S to allow for new access and driveway.
T4	Common Yew	Semi-mature	7	230			2.8	5	3.5	2	0	C2	20 to 40 yrs	Fair	Fair	Heavily ivy clad preventing detailed inspection. Heavily suppressed to W and S neighbouring trees. A poor specimen but northern crown visible from the road.	
T5	Norway Maple	Semi-mature	12	290	250		4.6	5.5	5.5	6	3	C2	20 to 40 yrs	Fair	Good	Bifurcated from 0.5m with very weak bark included main union. Historical wound with strong adaptive growth on W leader adjacent to main union. An unremarkable specimen.	Development Recommendation: Remove and grind out stump

Tree ID	Common Name	Maturity	Height (m)	Stem Diameter (mm)			RPA Radius (m)	Crown Spread (m)				Category	Life Expectancy	Structural Condition	Physiological Condition	Comment	Recommendations
				No.1	No.2	No.3		N	E	S	W						
T6	Common Yew	Semi-mature	8.5	230			2.8	3	3	3.5	3	B2	>40 yrs	Good	Fair	Crown break at 2m. Bifurcated at 3.5m with adequate main union. A balanced developing crown with slightly sparse foliage. A reasonable specimen.	
T7	Common Yew	Mature	10	450			5.4	5	5	4	5.5	B1/2	>40 yrs	Good	Good	Basal growth to W. Notable volume of deadwood on lower stem resulting from natural crown development. Stem and crown ivy clad preventing detailed inspection. A good specimen with significant visual amenity value when viewed from the road.	
T8	Sycamore	Semi-mature	13	460			5.5	7	5.5	6.5	4.5	B1/2	>40 yrs	Good	Good	Primary ascending limbs to N and S on lower stem between 1m and 2m. All primary limb unions appear sound. Lower crown suppressed by H1. A developing crown with healthy foliage. A reasonable specimen.	
T9	Orchard Apple	Mature	8	380	270		5.6	6.5	4.5	3	5	B1/2	20 to 40 yrs	Good	Good	Bifurcated from ground level. Slightly congested crown structure with four main leaders. Crown break at 2.5m. A mature spreading crown with healthy foliage. Slightly suppressed to S by H1. A reasonable specimen.	Development Recommendation: Reduce crown spread to N by 1m to facilitate development access.
T10	Wild Cherry	Semi-mature	7	200	160	130	3.4	7	4.5	1	4.5	C2	10 to 20 yrs	Fair	Fair	Multi-stemmed from ground level. Crown heavily bias to N. Notable volume of deadwood in crown. Slightly sparse foliage. A poor specimen.	Development Recommendation: Remove and grind out stump
T11	Rowan	Early-mature	5.5	190			2.3	4	2	2.5	3	B2	20 to 40 yrs	Good	Good	Single stemmed to full height. Notable epicormic growth on stem. Balanced mature crown. A reasonable specimen. Would benefit from removal of neighbouring trees.	

Tree ID	Common Name	Maturity	Height (m)	Stem Diameter (mm)			RPA Radius (m)	Crown Spread (m)				Category	Life Expectancy	Structural Condition	Physiological Condition	Comment	Recommendations
				No.1	No.2	No.3		N	E	S	W						
T12	Sycamore	Semi-mature	12	300			3.6	5	4.5	3	4.5	B1/2	>40 yrs	Good	Good	Single stemmed to full height. Crown break at 2m. All primary limb unions appear sound. A balanced, developing crown with healthy foliage. A reasonable specimen.	Development Recommendation: Reduce crown spread to N by 1m to facilitate development access.
T13	Weeping Willow	Mature	9.5	860			10.3	4	4	4	4	C1/2	10 to 20 yrs	Poor	Fair	Stem heavily ivy clad preventing detailed inspection. Major bark wound at 1m girdling 50% of stem. Previously topped at 4m with moderate regrowth present. A poor specimen with limited remaining contribution.	Development Recommendation: Remove and grind out stump
T14	Silver Birch	Mature	16	380			4.6	6.5	6	2	3	B1/2	20 to 40 yrs	Good	Good	Single stemmed to full height. Crown break at 5m. A mature columnar crown free from notable defects. A reasonable specimen. Crown height over site to E 6m.	
T15	Silver Birch	Mature	16	480			5.8	6	2.5	4	6	B1/2	20 to 40 yrs	Good	Good	Crown break at 2m. Bifurcated at 5m with sound union. A spreading crown with healthy foliage suppressed to E by neighbouring trees. A reasonable specimen.	
T16	Silver Birch	Early-mature	16	310			3.7	7.5	3.5	0	2	C2	20 to 40 yrs	Good	Good	Heavily clad and suppressed by climbing vegetation preventing detailed inspection. Very high crown bias to N due to phototropic growth.	
G1	A Group											C2				Mixed trees and shrubs lining the N boundary. Generally poor specimens either <150mm stem diameter or having significant structural and/or physiological issues. Species include; cypress, laburnum, yew and cherry. The more notable specimens have been recorded individually.	Development Recommendation: Remove and grind out stumps

Tree ID	Common Name	Maturity	Height (m)	Stem Diameter (mm)			RPA Radius (m)	Crown Spread (m)				Category	Life Expectancy	Structural Condition	Physiological Condition	Comment	Recommendations
				No.1	No.2	No.3		N	E	S	W						
G2	A Group											C2				Remnant of former orchard lining E boundary. All specimens either <150mm stem diameter or having significant structural and/or physiological issues. Species include; apple, plumb, sycamore, elder, cockspur hawthorn, hazel and lilac.	Development Recommendation: Remove and grind out stumps
G3	A Group											C2				Minor trees and shrubs lining S boundary. All poor specimens either <150mm stem diameter or having significant physiological/structural issues. Species include; rowan, sycamore, plumb and mulberry.	Development Recommendation: Remove and grind out stumps
G4	A Group											C2				Group of minor trees and shrubs. All poor specimens either <150mm stem diameter or having significant physiological/structural issues. Species include; silk tassel tree, yew and cypress.	Development Recommendation: Remove and grind out stumps
H1	Leyland Cypress	Semi-mature	8	250			3.0	2	2	2	2	C2	20 to 40 yrs	Good	Good	Leyland cypress hedge. Unremarkable and intermittent but provides screening along the S boundary.	Development Recommendation: Remove and grind out stumps

Appendix 2: Retention Categories

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

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

Tree to be Considered for retention	1 For Arboricultural Reasons	2 For Landscaping Qualities	3 For Cultural Values, Including Conservation
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years.	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.	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.	Trees with material conservation or other cultural value.
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural value.

Appendix 3: Guidelines & Limitations

All work must be to BS 3998: 2010 - 'Recommendations for tree work'.

Staff carrying out the work must be qualified, experienced contractors, and should be covered by adequate public liability insurance.

This report is based upon a visual inspection. The consultant 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 the guidelines and the terms listed in this report.

Any defects seen by a contractor or the employer that were not apparent to the consultant must be brought to the consultant's attention immediately.

No liability can be accepted by the consultant in respect of the trees unless the recommendations of this report are carried out as outlined and within the stated timescales.

It is advisable to have trees inspected by an arboricultural consultant regularly. In this instance it is recommended that these inspections are made as per the recommended re-inspection timings in this report. Furthermore it is recommended that trees be re-inspected following certain events. These include; severe weather events, significant changes to site usage, changes that affect wind loading on the trees (e.g. Removal of neighbouring trees, erection/demolition of buildings).

Appendix 4: Tree Protection Plan

See A2 PDF (Tree Protection Plan - 200825 OldHallRoxbyDN150BB East) for Details