TREE CONSULTANTS

ARBORICULTURAL REPORT

to BS 5837:2012 at:

Land at

Thornton Road,
Goxhill,
Barrow upon Humber,
Lincolnshire
DN19 7HN

Prepared for:
For-Ward Planning Consultancy Limited
45 Newbridge Hill,
Louth,
Lincolnshire
LN11 0NQ

Date: *December 2018*

Reference: *AWA2379*

Institute of Chartered Foresters
Registered Consultant

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Union Forge, 27 Mowbray Street, Sheffield, S3 8EN. AWA Tree Consultants Limited. Company No. 8520123. Registered in England & Wales.

Contents

1. Introduction

1.1 Instructions and Brief

1.1.1 We were instructed by Carl Forman of For-ward Planning Consultancy to visit the site and prepare our findings in a report.

1.1.2 The report is required in accordance with *BS 5837:2012 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 December 2018.

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 The tree positions were plotted on Ordnance Survey map base-layer 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. The tree survey data collection was carried out by Mr James Brown BSc (Hons) Arboriculture, MArborA, Arboriculturist at AWA Tree Consultants Ltd.

1.2.6 The author's 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 please refer to the Tree Constraints Plan at **Appendix 5.**

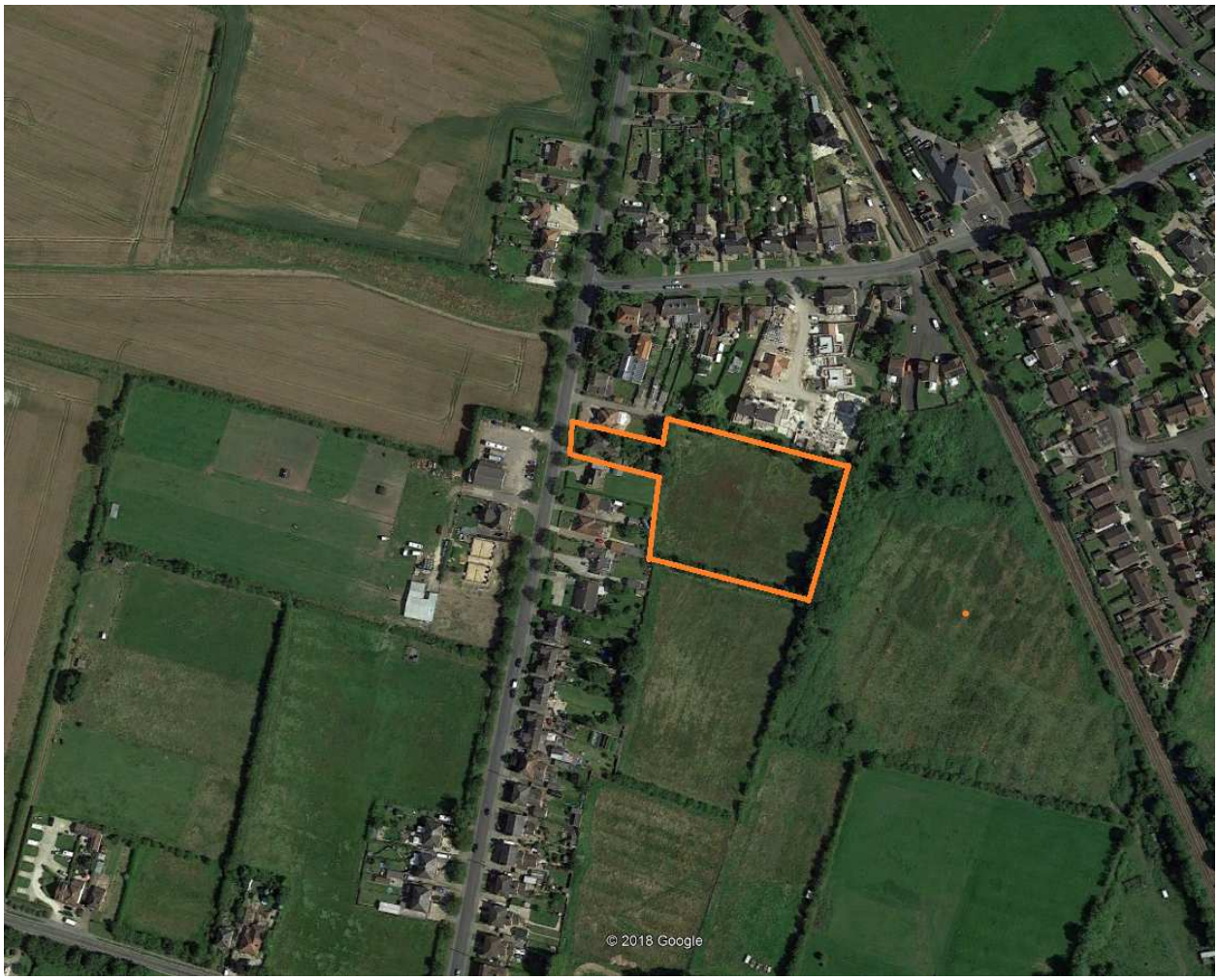
2. The Site

2.1 Location & Description

2.1.1 The site is on Thornton Road in Goxhill, a village and civil parish in North Lincolnshire.

2.1.2 The site comprises a vacant residential property with attached gardens and large open field to the rear. Thornton Road is situated to the west of the site, with neighbouring residential properties to the north. Further open fields are situated to the east and south.

2.1.3 The approximate area of the survey is highlighted in the (2017) image below:



3. The Trees

3.1 Legal

3.1.1 Due to the large potential penalties for illegally carrying out work to protected trees, before authorising any tree works a check should be made with the Local Planning Authority to see if the trees are covered by a Tree Preservation Order or if they are within a Conservation Area. If either applies, then statutory permission is required before any works can take place.

3.1.2 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 39 items of woody vegetation, comprised of 26 individual trees and 13 groups of trees or shrubs or hedges.

3.2.2 Of the surveyed trees: 3 trees are retention category 'U'; 7 trees are retention category 'B'; and 29 trees or groups are retention category 'C' (explanatory details regarding the retention categories are included within Appendix 3).

3.2.3 Species diversity at the site is good, with species present including Ash, Cherry, Field Maple, Cypress, Apple Yew, Holly, Privet and Elder. The site's trees had a good age diversity with a mix of semi-mature, early-mature and mature trees.

3.2.4 The site's most significant trees are the large Ash trees situated along the northern and eastern boundaries (T15, T23, T24, T28, T29, T30 and T31). These are prominent mature trees which provide moderate to high amenity value to the site and the surrounding properties. T29 has a rope swing tied to a large eastern limb and T31 has barbed wire wrapped around its main stem; the rope swing and barbed wire should be removed before they begin to cut into the cambium layers of the limb and stem.

3.2.5 The Field Maple T32 at the site's south eastern corner is a large mature tree in good overall condition which provides moderate amenity value to the site and the surrounding area.

3.2.6 Trees T20 and T22 are in poor overall condition and are recommended for removal regardless of development at the site due to their poor condition, and close proximity to existing residential properties. T20 has considerable dieback, major deadwood and occasional *Inonotus hispidus* fungal brackets to its crown, and moderate decayed cavities at the base of its main stem. T22 has a large *Perenniporia fraxinea* fungal bracket at the base of its main stem to the south, indicating the likelihood of extensive basal decay, and numerous large poor pruning wounds to the tree's lower crown which will further limit its future prospects.

3.2.7 The Cherries T1 and T2 are situated in a grass verge bordering Thornton Road at the site's western boundary. Both trees provide moderate amenity value due to their prominent roadside positions. T2 is in fair overall condition, while T1 is in poorer condition with a moderate decayed cavity to the southern side of its main stem at the base, and considerable deadwood and bark damage and decay in its lower crown.

3.2.8 Trees T4, T5, T6, T7, T8, T10, T11 and T12 are situated within the gardens of the vacant residential property at the site's western boundary. All the trees are of low value and should not pose significant constraints on development at the site. T12 appears to have been dead for some time and requires removal regardless of development at the site.

3.2.9 Linear boundary groups G3, G9, G17, G21, G27, G33, G34 and G36 provide screening between the site and the neighbouring properties and land. G3, G9, G17, G21 and G36 have been managed as hedges, while G27, G33 and G34 are unmanaged and naturalistic. G27, G33 and G34 could be brought under management if required by a new development at the site.

3.2.10 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.

3.2.11 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.

3.2.12 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.

3.2.13 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.

3.3 Arboricultural Development Advice

3.3.1 The higher value retention category 'B' trees and groups should be retained, where possible, and incorporated into any new development design.

3.3.2 Where suitable, those category 'C' trees and groups with reasonable future prospects (as detailed in Appendix 4) should be retained as part of any new development. However, care should be taken to avoid misplaced tree retention; attempts to retain too many or unsuitable trees on a site can result in excessive pressure on the trees during demolition or construction work, or post-completion demands for their removal.

3.3.3 If required by the development proposals, occasional lower value, retention category 'C' trees and groups could be removed, and replacement planting would largely mitigate their losses.

3.3.4 The tree Root Protection Area (RPA) detailed on the Tree Constraints Plan at Appendix 5, should be 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.

3.3.5 If construction of new buildings is required within the trees RPA it may be possible to employ special foundation design such as mini/micro pile and suspended beam or a cantilevered foundation.

3.3.6 Construction of hard surfaces, for drives and paths, within the RPA, can have negative impacts on tree roots. However, the potential negative impacts can often be overcome or minimised by employing a 'no-dig' type construction methods with a porous final surface.

3.3.7 The design of the new development should consider tree crown positions in relation to any new dwellings. Whilst either shade or sunlight might be desirable, depending on the potential use of the area affected, the design should avoid unreasonable obstruction of light and should give adequate provision for future tree growth.

3.4 Protection of the Retained Trees

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

3.4.2 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.

4. Signature

I trust this report provides all the required information.

Signed

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

20th December 2018

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Appendices

Appendix 1: Authors Qualifications & Experience

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

Adam 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.*

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.*

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 *Cert Arb L3. TechArborA.*

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 Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T1	Cherry	*Prunus sp.*	Early-mature	6	1	460	No	1.5	5	2.5	4	2.5	No visual defects	Moderate cavity with decay to southern side of main stem at base. Single stemmed. Vertical. Stubs. Bark damage. Moderate cavity. Moderate decay	Numerous large pruning wounds to lower crown. Bark damage with decay in lower crown. Old pruning wounds. Minor deadwood	Nails in stem. Underneath telephone lines. Previously crown reduced and crown lifted. Limited long term value. Bleeds and staining to main stem.	Fair	Poor	10 to 20 yrs	Moderate	**C**	No works required in current site context
T2	Cherry	*Prunus sp.*	Early-mature	7	1	510	No	1.5	5.5	4.5	5	3.5	No visual defects	Single stemmed. Vertical. Bark damage	Minor deadwood. Old pruning wounds. Bark damage	Bark damage and decay in lower crown. Bleeds to main stems. Underneath telephone lines.	Fair	Fair	20 to 40 yrs	Moderate	**B**	No works required in current site context
G3	Privet. Elder. Holly. Yew.	*Ligustrum sp. Sambucus sp. Ilex sp. Taxus sp.*	Early-mature	1.5	10+	20	No	0	See plan				No visual defects	Single and Multiple stemmed. Old pruning wounds. Stubs	Normal	Well managed Privet hedge with occasional Elder, Holly, Yew and shrub	Good	Good	20 to 40 yrs	Moderate	**C**	No works required in current site context
T4	Holly	*Ilex aquifolium*	Early-mature	4	10+	40	No	0	2	2	2	2	No visual defects	Multiple stemmed at base. Vertical. Old pruning wounds. Stubs	Normal	Managed shrub	Good	Good	20 to 40 yrs	Low	**C**	No works required in current site context
T5	Box	*Buxus sp.*	Early-mature	4	10+	40	No	0	2	2	2	2	No visual defects	Multiple stemmed at base. Vertical. Old pruning wounds. Stubs	Normal	Managed shrub	Good	Good	20 to 40 yrs	Low	**C**	No works required in current site context

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	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T6	Cypress	*Cupressus sp.*	Early-mature	5.5	10+	50	No	0.5	1.5	2.5	1.5	1	No visual defects	Multiple stemmed at base. Slight lean. Tight unions	Normal	Managed Cypress	Good	Good	20 to 40 yrs	Low	**C**	No works required in current site context
T7	Holly	*Ilex aquifolium*	Semi-mature	2.5	10+	30	No	0	1	1	1	1	No visual defects	Multiple stemmed at base. Vertical	Normal	Managed shrub	Good	Good	10 to 20 yrs	Low	**C**	No works required in current site context
T8	Spruce	*Picea sp.*	Early-mature	10	1	380	No	4	4	4.5	3	2.5	Exposed roots, Lifting paving at base.	Single stemmed. Vertical. Old pruning wounds. Stubs. Bark damage	Minor deadwood	Heavily crown lifted in past. Bird box nailed to stem. North western main limb has cable wrapped arpund it at 6m approx. which needs removing regardless of development.	Fair	Fair	10 to 20 yrs	Moderate	**C**	Remove cable from north western limb regardless of development
G9	Leyland Cypress	*x Cupressocyparis leylandii*	Early-mature	5	10+	120	No	0.5	See plan				No visual defects	Single and Multiple stemmed. Vertical. Tight unions	Normal	Cypress hedge. Some screening value.	Good	Good	20 to 40 yrs	Moderate	**C**	No works required in current site context

	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T10	Apple	*Malus domestica*	Mature	6	3	220, 140, 230	No	1.5	2	2.5	3	4	No visual defects	Multiple stemmed at base. Vertical. Stubs. Old pruning wounds. Bark damage. Minor cavities. Minor decay. Tight unions. Partially included bark	Old pruning wounds. Minor deadwood	Moderate decayed wound at base to east. Bird boxes nailed to stems.	Fair	Fair	10 to 20 yrs	Low	**C**	No works required in current site context
T11	Yew	*Taxus baccata*	Semi-mature	5	1	180	No	0.5	1.5	1.5	1.5	1.5	No visual defects	Single stemmed. Vertical. Tight unions	Old pruning wounds	Stem measurement estimated	Good	Good	>40 yrs	Low	**C**	No works required in current site context
T12	Ash	*Fraxinus excelsior*	Dead	10	2	200, 300	No	5	3	2.5	1	3	No visual defects	Twin stemmed at base. Vertical. Stubs. Old pruning wounds. Bark damage. Major decay	All dead/ absent. Major dieback. Moderate deadwood	Remove	Dead	Dead	n/a	Dead	**U**	Removal required regardless of development
G13	Elder. Hawthorn.	*Sambucus sp. Crataegus sp.*	Mature	5	2	200, 120	No	1	0.5	1.5	3	3	No visual defects	Twin stemmed at base. Slight lean. Stubs. Bark damage. Tight unions. Minor cavities. Minor decay. Ivy covered	Small/ sparse. 50% dead/ absent. Minor dieback. Minor deadwood	Elder and Hawthorn forming one crown	Poor	Fair	<10 yrs	Low	**C**	No works required in current site context
G14	Elder. Hawthorn.	*Sambucus sp. Crataegus sp.*	Mature	10	1	300	No	1.5	2	2	3	2.5	No visual defects	Single and Multiple stemmed. Slight lean. Stubs. Bark damage. Tight unions. Minor cavities. Moderate decay. Ivy covered	Minor dieback. Minor deadwood. Ivy covered	Elder and Hawthorn forming one crown	Fair	Fair	10 to 20 yrs	Low	**C**	No works required in current site context

	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T15	Ash	*Fraxinus excelsior*	Early-mature	12	5	250, 200, 200, 200, 150	No	3	6	2.5	4.5	5	No visual defects	Multiple stemmed at base. Vertical. Stubs. Bark damage	Minor deadwood. Ivy covered	Ivy prevented detailed inspection and accurate stem measurement	Fair	Fair	20 to 40 yrs	Moderate	**C**	No works required in current site context
T16	Hawthorn	*Crataegus monogyna*	Mature	9	1	300	No	3	3.5	2.5	0.5	2.5	No visual defects	Single stemmed. Slight lean north. Stubs. Old pruning wounds. Bark damage. Ivy covered	Small/ sparse. Minor dieback. Minor deadwood. Ivy covered	Ivy prevented detailed inspection and accurate stem measurement. By site entrance.	Fair	Fair	10 to 20 yrs	Low	**C**	No works required in current site context
G17	Hawthorn. Blackthorn.	*Crataegus sp. Prunus sp.*	Early-mature	2.5	10+	70	No	0.5	See plan				Soil erosion. Exposed roots. Waterlogged	Single and Multiple stemmed. Vertical. Stubs. Old pruning wounds. Epicormic growths. Ivy covered. Bark damage. Tight unions. Partially included bark. Minor cavities. Minor decay	Small/ sparse. Minor dieback. Minor deadwood. Old pruning wounds. Ivy covered	Boundary linear group. Mostly Hawthorn and Blackthorn. Very Ivy covered. Very heavily pruned. Drainage ditch at base to south. Some screening value.	Fair	Fair	10 to 20 yrs	Moderate	**C**	No works required in current site context
T18	Ash	*Fraxinus excelsior*	Early-mature	12	2	250, 120	Yes	3	4	2	3	4	Soil erosion. Exposed roots. Waterlogged. Limited access around base	Twin stemmed at base. Vertical. Stubs. Old pruning wounds. Bark damage. Minor decay	Minor deadwood	Boundary tree. Limited access. Drainage ditch at base to south.	Fair	Fair	20 to 40 yrs	Moderate	**C**	No works required in current site context
T19	Ash	*Fraxinus excelsior*	Semi-mature	11	3	160, 150, 120	No	3	0.5	3	3.5	3	Soil erosion. Exposed roots. Waterlogged	Multiple stemmed at base. Vertical. Stubs. Bark damage. Minor decay	Minor deadwood	Extensive bark damage with decay to main stems. Drainage ditch at base to north.	Fair	Fair	10 to 20 yrs	Low	**C**	No works required in current site context

	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T20	Ash	*Fraxinus excelsior*	Mature	14	3	600, 250, 150	Yes	2	5	5	4.5	4.5	Soil erosion. Exposed roots. Waterlogged	Multiple stemmed at base. Vertical. Pruning wounds from crown lifting. Bark damage. Major cavities. Moderate decay	25% dead absent. Moderate dieback. Major deadwood. Snapped/ hanging branches	Limited access. Drainage ditch at base to south. Moderate cavities with moderate decay at base of main stem. Numerous large pieces of deadwood in crown and some limbs have *Inonotus hispidus* fungal brackets. Unsuitable near development.	Fair	Poor	<10	Moderate	**U**	Removal recommended regardless of development
G21	Hawthorn. Blackthorn. Elder.	*Crataegus sp. Prunus sp. Sambucus sp.*	Early-mature	3	10+	80	No	0.5	See plan				Soil erosion. Exposed roots. Waterlogged	Single and Multiple stemmed. Vertical. Stubs. Old pruning wounds. Epicormic growths. Ivy covered. Bark damage. Tight unions. Partially included bark. Minor cavities. Minor decay	Small/ sparse. Minor dieback. Minor deadwood. Old pruning wounds. Ivy covered	Boundary linear group. Mostly Hawthorn and Blackthorn. Very Ivy covered. Recently heavily and poorly pruned. Drainage ditch at base to south. Some screening value.	Fair	Fair	10 to 20 yrs	Moderate	**C**	No works required in current site context

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	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T22	Ash	*Fraxinus excelsior*	Mature	18	1	1000	Yes	5	2	10	7.5	7	Soil erosion. Exposed roots. Waterlogged	Single stemmed. Vertical. Stubs. Fungal bracket. Bark damage	50% absent. Old pruning wounds. Moderate deadwood. Epicormic growths	Limited access. Drainage ditch to south. Large fungal bracket on southern side of base of main to south, likely *Perenniporia fraxinea.* Large western and north eastern limbs imb previosuly removed at 6m and 8m approx. leaving large wounds. Iron bar embedded in stem at 5m. Numerous snapped limbs in crown. Stem measurement estimated.	Fair	Poor	10 to 20 yrs	Moderate	**U**	Removal recommended regardless of development
T23	Ash	*Fraxinus excelsior*	Early-mature	18	1	350	Yes	2	5	0.5	2.5	6.5	Exposed roots. Soil erosion. Waterlogged	Single stemmed. Slight lean west. Stubs. Ivy covered	Minor deadwood	Limited access. On drainage ditch banking . Drainage ditch to south. Ivy prevented detailed inspection and accurate stem measurement.	Fair	Fair	20 to 40 yrs	Moderate	**C**	No works required in current site context

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	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T24	Ash	*Fraxinus excelsior*	Mature	18	2	400, 400	Yes	1.5	2	8	9.5	7.5	Soil erosion. Exposed roots. Waterlogged	Twin stemmed at 1m. Slight lean. Stubs. Ivy covered. Minor cavities. Minor decay	Minor deadwood	Limited access. Drainage ditch to south. Ivy prevented detailed inspection. Moderate cavity with decay at base of eastern stem at 1m.	Fair	Fair	>40 yrs	Moderate	**B**	No works required in current site context
T25	Hawthorn	*Crataegus monogyna*	Early-mature	9	1	300	Yes	2	2	2	1.5	3	Limited access around base. Soil erosion	Single stemmed. Slight lean. Stubs. Bark damage. Ivy covered. Tight unions	Small/ sparse. Minor deadwood. Ivy covered	Adjacent Hawthorn. Limited access.	Fair	Fair	10 to 20 yrs	Low	**C**	No works required in current site context
T26	Ash	*Fraxinus excelsior*	Semi-mature	9	1	180	Yes	3	2	3	3	1	Soil erosion. Exposed roots. Waterlogged	Single stemmed. Slight lean. Stubs	Minor deadwood	Adjacent Ash. Limited access.	Fair	Fair	20 to 40 yrs	Low	**C**	No works required in current site context
G27	Hawthorn	*Crataegus monogyna*	Early-mature	8	10+	120	No	1.5	See plan				Soil erosion. Exposed roots. Waterlogged	Single and Multiple stemmed. Old pruning wounds. Stubs. Bark damage. Ivy covered. Tight unions. Partially included bark. Minor cavities. Minor decay	Minor dieback. Minor deadwood. Snapped/ hanging branches	Linear boundary group of Hawthorn bordering drainage ditch. Likely once managed hedge now row of individual trees. Bark damage, cavities and decay throughout. Some screening value. Drainage ditch immediately to east.	Fair	Fair	20 to 40 yrs	Moderate	**C**	No works required in current site context

	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T28	Ash	*Fraxinus excelsior*	Mature	18	2	280, 710	No	1.5	6	7	5	8	Soil erosion. Exposed roots. Damage to buttress roots	Twin stemmed at base. Vertical. Stubs. Bark damage. Minor decay, Metal and fence embedded in main stem at base.	Minor deadwood. Snapped/ hanging branches	Western stem has extensive bark damage and some decay, likely from horses. Western stem would need removal if near development. Recent moderate snapout from western crown at 6m approx.	Good	Fair	>40 yrs	Moderate	**B**	No works required in current site context
T29	Ash	*Fraxinus excelsior*	Mature	18	1	770	No	5	4	9	6	6.5	Soil erosion. Exposed roots	Single stemmed. Vertical. Bark damage. Minor cavities. Minor decay	Minor deadwood	Minor cavity to western side of main stem at 0.5m but healing well. Rope swing in eastern crown. Nails in stem. Horse damage to western side of main stem.	Good	Fair	>40 yrs	Moderate	**B**	Remove rope swing from eastern crown regardless of development
T30	Ash	*Fraxinus excelsior*	Mature	16	2	430, 420	No	2.5	5	7	3.5	5	Exposed roots. Soil erosion	Twin stemmed at 0.5m. Vertical	Minor deadwood. Snapped/ hanging branches		Good	Good	>40 yrs	Moderate	**B**	No works required in current site context

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	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T31	Ash	*Fraxinus excelsior*	Mature	18	1	750	No	1.5	8.5	6.5	5	5	Soil erosion. Exposed roots	Single stemmed. Vertical. Stubs. Bark damage. Minor cavities	Snapped/ hanging branches. Moderate deadwood	Barbed wire wrapped around main stem. Fence nailed to eastern side of stem. *Inonotus hispidus* fungal bracket on ground but no brackets visible in crown. Occasional moderate piece of deadwood and snapout in crown.	Good	Fair	>40 yrs	Moderate	**B**	Remove barbed wire from stem regardless of development
T32	Maple	*Acer campestre*	Mature	15	3	450, 350, 440	No	2	4.5	7	5	5	Soil erosion. Exposed roots	Multiple stemmed at base. Vertical. Stubs. Bark damage. Minor cavity	Minor deadwood	Minor cavity from snapout on eastern side of southern main stem. Occasional canker to main stems.	Good	Good	>40 yrs	Moderate	**B**	No works required in current site context
G33	Hawthorn. Blackthorn.	*Crataegus sp. Prunus sp.*	Semi-mature	3	10+	30	No	1	See plan				No visual defects	Single and Multiple stemmed	Minor deadwood	Dense shrubby linear group of Hawthorn and Blackthorn. Leaning west. Some screening value.	Fair	Fair	20 to 40 yrs	Moderate	**C**	No works required in current site context

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	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
G34	Hawthorn. Blackthorn. Elder. Ash.	*Crataegus sp. Prunus sp. Sambucus sp. Fraxinus sp.*	Early-mature	6	10+	80	No	1	See plan				No visual defects	Single and Multiple stemmed. Old pruning wounds. Stubs. Bark damage. Ivy covered. Tight unions. Partially included bark. Minor cavities. Minor decay	Minor deadwood. Minor dieback	Dense Boundary group of Hawthorn and Blackthorn with occasional Elder and taller Ash sapling. Likely once managed hedge, now unmanaged. Good screening value.	Fair	Fair	20 to 40 yrs	Moderate	**C**	No works required in current site context
G35	Hawthorn	*Crataegus monogyna*	Semi-mature	5	10+	50		1	2	2	2	2	No visual defects	Single and Multiple stemmed. Stubs. Bark damage. Ivy covered. Tight unions. Partially included bark	Minor deadwood	Group of Hawthorn stems forming one crown	Fair	Fair	10 to 20 yrs	Low	**C**	No works required in current site context
G36	Hawthorn	*Crataegus monogyna*	Semi-mature	1.5	10+	40	No	0.5	See plan				No visual defects	Single and Multiple stemmed. Old pruning wounds. Stubs. Bark damage. Ivy covered. Tight unions. Partially included bark	Minor deadwood	Managed boundary Hawthorn hedge	Fair	Good	10 to 20 yrs	Moderate	**C**	No works required in current site context
G37	Hawthorn	*Crataegus monogyna*		5	10+	50		1	See plan				No visual defects	Single and Multiple stemmed. Stubs. Bark damage. Ivy covered. Tight unions. Partially included bark	Minor deadwood	Group of taller Hawthorn stems within hedge	Fair	Fair	10 to 20 yrs	Low	**C**	No works required in current site context

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	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T38	Elder	*Sambucus nigra*	Early-mature	4	10	50	No	1	2.5	2.5	2	2	No visual defects	Multiple stemmed at base. Stubs. Bark damage. Ivy covered. Tight unions. Partially included bark	Minor deadwood	Elder in hedge	Fair	Fair	10 to 20 yrs	Low	**C**	No works required in current site context
G39	Hawthorn. Elder. Buddleia.	*Crataegus sp. Sambucus sp. Buddleia sp.*	Early-mature	5	10+	50	No	1	2	2.5	2	2	No visual defects	Single and Multiple stemmed. Stubs. Bark damage. Ivy covered. Tight unions. Partially included bark	Minor deadwood. Ivy covered	Ivy covered Hawthorn, Elder and Buddleia forming one crown	Fair	Fair	10 to 20 yrs	Low	**C**	No works required in current site context

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Appendix 5: Tree Constraints Plan

Land at Thornton Road, Goxhill
Ref: AWA2379

BRITISH STANDARD 5837:2012
RETENTION CATEGORIES
Definitions of these catagories 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