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Arboricultural Report

Principle Formal Arboricultural Report/Survey

(in accordance with BS 5837:2012 Trees in Relation to Design, Demolition and Construction)

For:

Client: Tom Strawson

Location: land off Main St, Scawby, Nr Brigg, Lincs

Date: 22nd July 2021

(Note: this report should be read in conjunction with the attached plans)

Surveyor/Report Author: Andrew Hudson ND Btec Forestry/Arb / TechArborA

Senior Arboricultural Consultant

Arboricultural Association Technician Member

Arboricultural Consultancy

Client Details:

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1.0 Introduction

1.1 Purpose of Report

The purpose of this report is to provide a balanced approach with an assessment of trees/hedges in relation to a proposed residential development. This report is in accordance with the BS 5837:2012 Trees in Relation to Design, Demolition and Construction.

1.2 Terms of Reference

ENGIE Arboricultural Consultancy has been instructed by Tom Strawson to prepare a formal Arboricultural Report, inclusive of a Tree Constraints Plan. The survey and report will comply with the recommendations and guidance set out within the BS 5837:2012 and should be used to assist with site layout and design.

1.3 Timing

This tree/hedge survey has been completed prior to and independently of any specific proposals for development. This report will identify significant conflicts, of which should be set against the quality and value of affected trees/hedges. The results of this survey should be used, along with any other relevant baseline data, to inform feasibility studies and design options.

1.4 Description of the Development

The site is on the southern fringes of the village of Scawby, on land off Main Street. Feasibility studies are in progress to establish suitability for residential development.

1.5 Site Description

The site is located within village of Scawby. Scawby is a village and civil parish in North Lincolnshire situated 2 miles (3 km) south-west from Brigg, and just east from the A15 road, and south from the M180 motorway. Located on the southern fringes of the village the site can be accessed just off Main Street. Here there is a vehicle access point with a farm style metal gateway. There is no formal hardstanding driveway, only a natural grass track that has developed through passage of vehicles.

1.6 Within the sites ‘red edge’ development boundary line the area extends to around 1.16 hectares or 2.87 acres. Currently there is no obvious formal use for the site. The site is relatively open with mainly rough grassland dominating as ground vegetation. Established hedgerows mark the field boundaries and occasional trees are scattered within. Closer to adjoining properties the boundary hedges become more manicured and there is a change of boundary treatment to 1.8m timber fencing.

1.7 The tree population is limited, with a scattering of individual mature / semi-mature trees, many of which are fruit trees. The site has an irregular shape and essentially forms as two field compartments, of which is divided by a mature hawthorn hedgerow. The surrounding land use is mixed, with residential to the north-east and north-west sides and the remaining mostly paddock / agricultural use.

2.0 Status of the Site

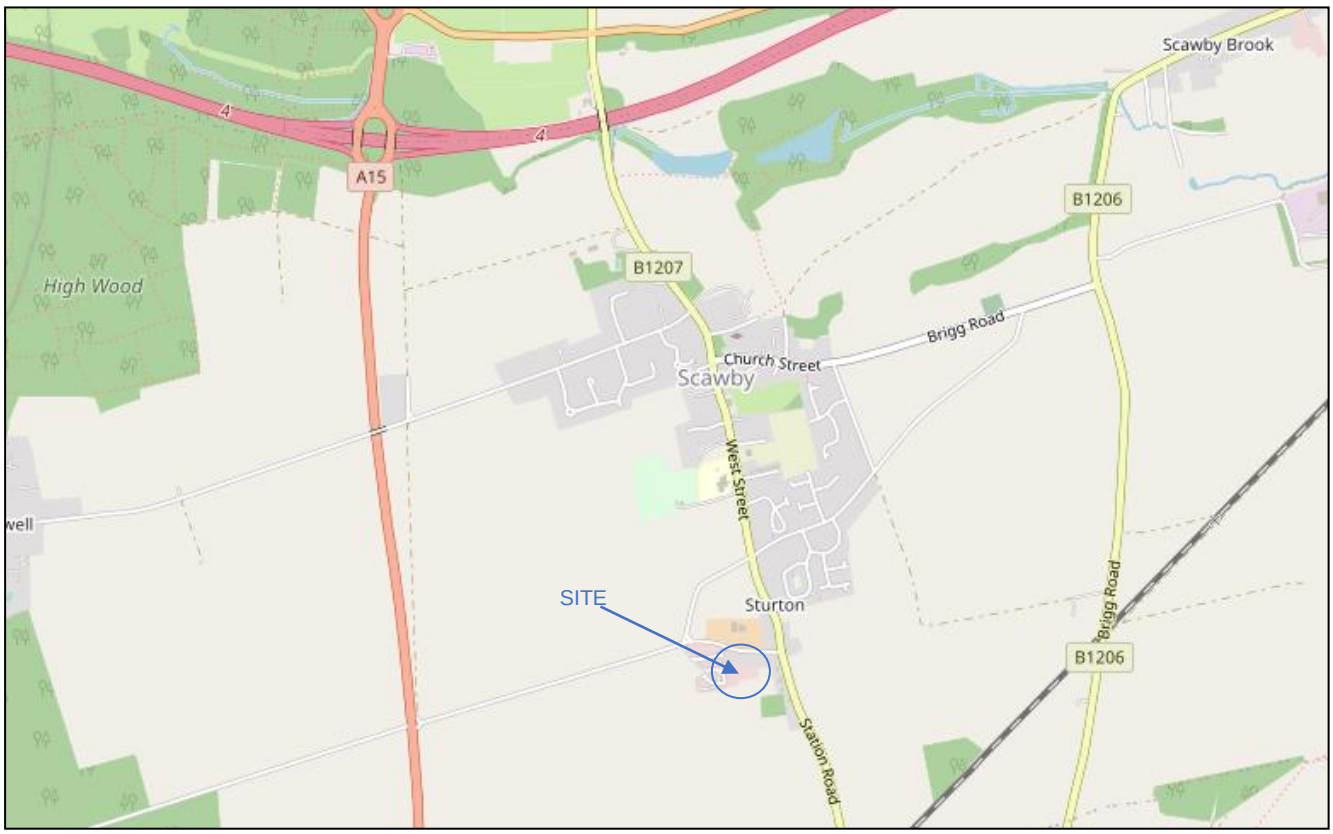
The Local Planning Authority (LPA) is North Lincolnshire Borough Council. In accordance with their online e-mapping system, accessed on the 21st of July 2021, this confirms there are no trees afforded the protection of a Tree Preservation Order. This also confirms that the site and land adjacent is not within a Conservation Area.

2.1 Hedgerow Regulations

With respect to the current land use the field boundary hedgerows as identified to this particular site would, generally, come under the Hedgerow Regulations (1997) and as such, outside of any planning approval, any proposed removal of hedgerow would require a Hedgerow Removal Notice. Quite simply, the Regulations contain a detailed arrangement for a system to protect “important hedgerows”. The presumption is in favour of protecting and retaining important hedgerows, although the LPA cannot refuse consent for removal if the hedgerow is not important. An important hedgerow must fulfil specific criteria to be deemed “important”. Having assessed this site and the hedgerows I would consider it extremely unlikely the hedgerows to this particular site are “important” as defined within the Regulations. It will, of course be the Local Planning Authority that would need to determine this. There would be an exemption for the need to notify the LPA where development has been authorised by a planning permission.

3.0 Site Location Plan

Map data: Google



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4.0 Method of Survey

4.1 The tree/hedge survey was carried out by Andrew Hudson on the 2nd of July 2021. All observations were made from ground level in clear/sunny weather conditions. To assist in gathering information about the trees, the following apparatus was used:

- Clinometer – for measuring the height of trees
- Diameter tape measure – for measuring the diameter of the main stem at 1.5m above ground level
- Monocular – to aid in the visual assessment of trees
- Probe – where required, to investigate further symptoms of decay/defects
- Thor hammer– where required, to investigate further symptoms of decay/defects

An overall assessment of 13 individual trees and 5 hedgerows was made. The individual trees are identified as T1 to T13 and the hedgerows as H1 to H5.

4.2 It should be taken into consideration that trees and shrubs are living organisms and run the risk of rapid condition changes, unpredictable climatic and manmade events. An assessment of risk during a survey is based upon factors evident at the time of inspection. Comments upon the condition and safety of any tree relate to the condition of the tree at the time of inspection. It should be recognised that tree condition is subject to change due to but not limited to, for example, the effects of disease, wind, development works or changes in land use. The results of an inspection are only applicable for a limited period of 12 months; any further inspections should be made periodically on a basis commensurate with the level of risk or following sudden or extreme weather conditions. The consultant is not responsible for events that happen after the date of the report or due to factors that were not apparent at the time of the inspection or due to factors unpredictable at the time of inspection.

4.3 An assessment was made of the trees physiological and structural condition, noting any disorders or biomechanical features that present an obvious hazard to present or future users of the site or effect the trees life expectancy. Preliminary management works are proposed in order to either remove/reduce hazards or promote good arboricultural management practice. These recommendations do not take account of any development proposals at this stage. The trees overall quality and value for retention was assessed in accordance with BS 5837:2012 Trees in Relation to Design, Demolition and Construction. This was dependant on the trees physiological and structural condition, safe useful life expectancy, arboricultural, landscape, cultural and ecological value. Arboricultural and landscape value takes account of the tree's amenity value, which was determined by tree size, prominence, visibility, appropriateness, attractiveness, and screening value.

4.4 This survey has been undertaken in accordance with the recommendations and guidance of the BS 5837:2012; it is not intended to be a tree hazard assessment. Incidental notes may be made on a tree's structural integrity, though where trees are considered to represent an immediate hazard, recommendations will be given for intervention. It will be the landowner's responsibility to make the necessary arrangements.

5.0 Root Protection Area (RPA)

The root protection area (RPA) radius and area for each tree was calculated in accordance with BS 5837:2012. The RPA is an area of ground that provides sufficient soil rooting volume to ensure the survival of the tree.

6.0 Tree/Hedge Survey Results (general comments)

6.1 An overall assessment of 13 individual trees and 4 hedgerows was made. The full survey results are shown in the Tree Survey Schedule in Appendix “A1” and in the Hedge Survey Schedule in Appendix “A2”. None of the trees included in this survey have been assigned to high quality and value, category “A”.

6.2 There is no specific selection process for hedgerows as defined within the BS 5837:2012. However, the hedges have been assessed and categorised using a similar approach to the group categorisation, as a collective or landscape feature, namely boundary hedgerow. This is referred to within the comments section of this report and also shown in the survey schedule in Appendix “A2”.

6.3 Five individual trees, T1, T4, T6, T9 & T10 have been categorised as “U”. These trees have a serious, irremediable, structural defect, such that early loss or part failure is expected. Short- or long-term retention is not considered a viable option.

6.4 Two individual T11 & T12 have been assigned to the moderate quality and value, category “B”. These trees are considered to be of moderate quality and value with an estimated contribution of at least 20yrs. Trees lacking the special quality necessary to merit the category “A” designation.

6.5 Six individual trees T2, T3, T5, T7, T8 & T13 have been assigned to the low quality and value, category “C”. These trees are considered unremarkable trees of very limited merit or such impaired condition that they do not qualify in a higher category.

6.6 Cascade chart for tree quality assessment taken from the BS 5837:2012

Category and definition	Criteria (including subcategories where appropriate)		
Trees unsuitable for retention (see Note)			
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 **4.5.7**.*		
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**
Trees to be considered for retention			
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)
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

Note: Trees that have been categorized as "C", although may be a material consideration in a planning application, should not be allowed to impose a significant constraint on development of this site

7.0 Photos

View from Main Street, looking west

View from Main Street, looking east showing the existing access into the site

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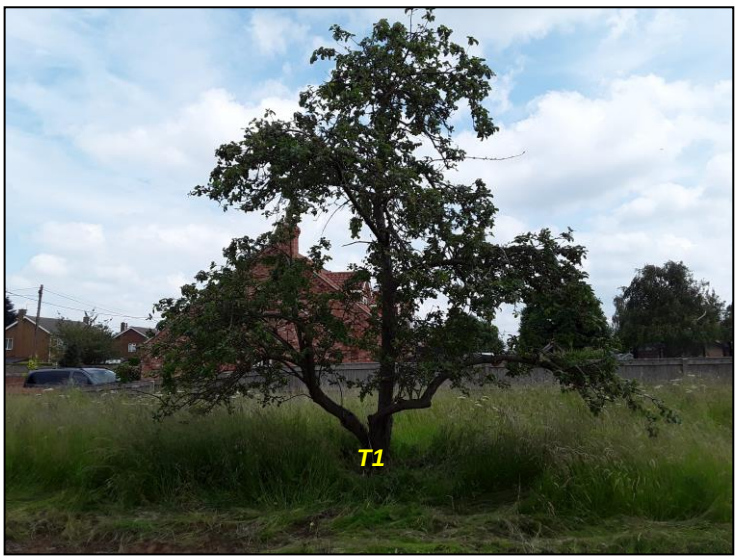
7.1 Photos

The existing access has no formal type of construction. From the gateway off Main Street the site is accessed via a rough grass track

View from the access track looking north towards Main Street

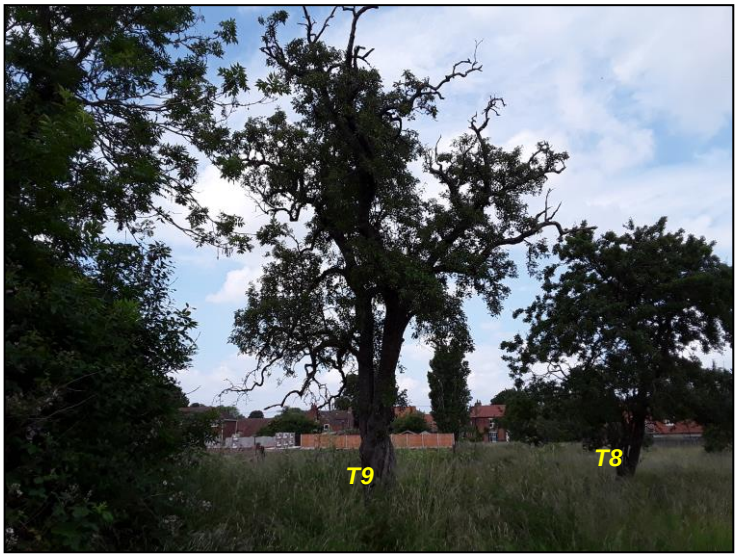


T1 is structurally compromised. Failure or part failure is expected

7.2 Photos

Further into the site, looking north towards Main Street. From here the site area increases. Mostly, the trees positioned along or close to the grass track are of a fruiting species.

Cavities, disease, and structural defects are commonly associated with many of the trees within the site, whereby retention is not a viable option



Trees T9 and T8 are low quality, low value trees considered to have very limited merit

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7.3 Photos

H1 is a single species privet hedgerow, marking the boundary between the site and an adjacent residential property. This hedge is regularly managed to a height of around 1m

H3 & H4 are located within the site, a field boundary dividing two field compartments. Neglect of management is now seeing hedge plants beginning to develop as individual trees

View from the southern boundary looking west towards hedgerow H2. The hedges associated with this site are typically rural in character and species.

7.4 Photos

Trees T11, T12 & T13 are located towards the rear of the site. T11 is a particularly large dominating tree

Only 2 trees, T11 & T12 are considered to have some merit for retention

8.0 Discussion (general comments)

8.1 Trees occupy a limited part of this development site and will pose only a limited constraint in terms of how this site is developed. With a scattering of individual trees and some field boundary hedges there are fewer concerns over the above ground constraints the trees/hedges pose by virtue of their size and position, which can easily be controlled through correct arboricultural management, it would be the below ground constraints represented by the root protection area (RPA) where careful planning would be needed to ensure a harmonious relationship between trees/hedges and the introduction of structures and/or hard surfaces.

8.2 The morphology and disposition of the roots to some trees will be influenced by the existing site conditions. An important aspect of root growth and development is that it is dynamic and highly dependent on the soil environment. The existing ground conditions around the trees are generally quite good for root growth and proliferation with areas that are rich in water and minerals. Any modification to the RPA that may be required due to existing site conditions will reflect a soundly based arboricultural assessment of likely root distribution.

8.3 Five individual trees have been categorised as 'U'. All five trees are fruit species. Mainly these trees have serious structural defects showing signs of significant irreversible decline. Recovery is unlikely. Short term retention is not viable.

8.4 2 individual trees, T11 & T12, have been identified as having moderate quality and value, category "B" trees. Any design/layout should avoid undue pressure on these trees and special consideration should be given to ensure a harmonious and sustainable relationship with the development achieved.

8.5 6 individual trees, T2, T3, T5, T7, T8 & T13, have been assigned to the low quality and value, category "C". Although these trees may be a planning consideration, such trees should not allow a significant constraint on how the site is developed. It would be reasonable to suggest that trees of such low quality and value would not be worthy of being given any significant weight in any planning decisions. If there is space to retain a category "C" tree, and it does not compromise the proposed layout, then it may be appropriate to retain in the short term.

8.6 There are 5 defined hedgerows that form boundary features to this site. All 5 hedgerows, H1, H2, H3, H4 & H5, have been identified as having moderate quality and value, category "B2". The hedgerows have been considered mainly by their landscape qualities, occurring as a boundary hedgerow, and the visual contribution they may give to the wider locality. Generally, the hedges are in good condition and considered moderate in terms of importance. Hedgerow H1 is more of a residential

boundary feature, a well-managed privet hedge kept to a manageable height of around 1m. The remaining hedges associated with this site are typical field boundary features of a native species. Currently there is no defined management to these hedges, to the point where some hedge plants are beginning to develop as individual trees.

8.7 There is a clear opportunity for new landscaping and landscaping will be a planning requirement of any development proposal. This should be looked on as an opportunity in enhancing the site and its locality in context with its proposed use. The results of the Tree Constraints Plan clearly show that the existing tree population is mostly considered to be of low quality and value or in such a condition that decline is obvious. On this basis, the opportunity for development presents an opportunity to refresh the tree stock at a strategic level and to a high standard.

8.8 The quality and value of the existing tree stock, that I have been instructed to survey, has been identified allowing informed decisions to be made concerning which trees should be removed or retained should development occur. The results of this survey and constraints plan should be used to assist with feasibility studies and any final site layout and design.

8.9 It is essential that details of design proposals should be developed in conjunction with the project arboriculturalist and, where required, input from a suitably qualified engineer. When incorporating existing trees into a development proposal it is essential to demonstrate that proposals are technically feasible. Such details should be included within planning applications.

8.10 Where the Local Planning Authority recognises and accepts the impact of a proposal on trees, there may be a planning requirement for more concise arboricultural information. Where this is a requirement a formal Arboricultural Method Statement and Tree Protection plan will expand on details in this report focusing on tree protection and specialist techniques if required, with illustrative specifications, timing and phasing of construction operations also including were necessary a performance specification. A formal Arboricultural Method Statement and Tree Protection Plan should be undertaken by an Arboriculturalist who is familiar with trees and development and the BS 5837: 2012.

9.0 Foundation Design

There are no special requirements for foundation design at this stage, however, should matters change during the planning process it should be taken into consideration that there are solutions for inserting structures close to trees should matters change during the planning process.

9.1 Design Options (*referenced from the BS 5837:2012*)

The use of traditional strip footing can result in extensive root loss and should be avoided. The insertion of specially engineered structures within RPA's may be justified if this enables the retention of a good quality tree that would otherwise be lost, usually category "A" or "B". Designs for foundation design that would minimise adverse impact on trees should be site specific with specialist advice being sought from a suitably qualified engineer.

9.2 Root damage can be minimised by using:

- Piles, with site investigation used to determine their optimal location whilst avoiding damage to roots important for the stability of the tree, by means of hand tools or compressed air soil displacement, to a minimum depth of 600mm.
- Beams laid at or above ground level and cantilevered as necessary to avoid tree roots identified by site investigation.

9.3 Slabs for large structures such as dwellings should be constructed with a ventilated air space between the underside of the slab and the existing soil surface (to enable gas exchange and venting through the soil surface). In such cases, a specialist irrigation system should also be employed (e.g., roof run-off re-directed under the slab). The design of the foundation should take account of the effect of the load bearing properties of underlying soil from the re-directed roof run-off. Approval in principle for a foundation that relies on topsoil retention and roof run-off under the slab should be sought from the building control authority prior to this approach being relied on.

9.4 Where piling is to be installed near to trees, the smallest practical pile diameter should be used, as this reduces the possibility of striking major tree roots and reduces the size of the rig required to sink the piles. If a piling mat is required, this should conform to the parameters of temporary ground protection as per BS 5837:2012. Use of the smallest practical piling rig is also important where piling within the branch spread is proposed. The pile type should be selected bearing in mind the need to protect the soil and adjacent roots from the potential toxic effects of uncured concrete e.g., sleeved bored pile or screw pile.

9.5 An arboriculturalist can provide a performance specification comprising of a list of arboricultural requirements the insertion of a structure must meet. Engineers will assess the particular site characteristics and use the performance specification to devise an appropriate design.

10.0 Installation of Services

The installation of services for this proposal must be kept as far as practically possible from the root protection area (RPA) of any retained trees/hedges. Trenching near trees/hedges by conventional means, using a mechanical excavator, inevitably causes root loss, as the bucket easily rips through roots. For services such as foul, surface, electric, gas, BT etc., the most practical solution would be to run all services through one trench. Where encroachment into the RPA cannot be avoided trench-less techniques should be adopted. An alternative would be to hand dig a trench minimising the cutting of roots. Pipes and ducted cables can then be thread through enabling installation with very little damage, provided that the borehole is small and deeper than the main lateral roots.

10.1 In the UK, the usual guidelines for trenching by utility companies are provided by NJUG Volume 4 (previously NJUG 10), which is available to download at http://www.njug.org.uk/publications/. By agreeing to the guidelines to be followed during trenching, all parties are assured that problems can be solved using a common set of criteria. Supervisors from the appointed contractor should direct operatives to follow the agreed practices and it is quite likely that the Local Authority Tree Officer will monitor for compliance.

11.0 Conclusion

11.1 The results of this survey and tree constraints plan should be made available to all interested parties. Trees that have been given a low quality and value category “C” would not usually be retained where they would impose a significant constraint on the development of the site.

11.2 It should be recognised that mostly the trees surveyed are sub-standard, low quality trees with limited long-term prospects, having a deteriorating structural or physiological condition there is no realistic potential for the trees to improve.

11.3 The prospect of development has created a valuable opportunity for a strategic enhancement over the current situation. Public interest would be best served where development would deliver a qualitative and quantitative enhancement over the current situation

11.4 Should there be a need to remove trees in order to facilitate the development of this site I am confident that a well thought out Landscape Scheme will mitigate any adverse impact of removal, giving opportunity to enhance the site and its locality.

12.0 Reference to "*Tree Survey Schedule*" Tree Descriptions and Recommendations

Data collected in the "Tree Survey Schedule" of App. "A1". Headings in the schedule are as follows:

Tree No. Reference numbers for each tree(s) as it appears in the documents are:

T = Individual tree (numbering starts at T1)

G = Groups of trees (numbering starts at G1)

Species: The common (generic) name for the species has been used

Age Class: The maturity of the tree/s is defined in 5 categories:

Y = Young – small/recently planted tree not yet established

SM = Semi mature – fully established tree in the early stages

M = Mature – biologically mature tree.

The "M" may be prefixed by an "E" for early or an "L" for late

OM = Over mature – old tree showing signs of terminal decline

V = Veteran

Stem Diameter: Stem diameter to the nearest centimetre (cm) taken at 1.5m above ground level unless specified otherwise. For multi-stem trees the reading relates to immediately above the root flare

RPA radius: Root protection area calculated in metres (m)

Stem No.: Appears in documents as twin stemmed or multi-stemmed. Multi-stemmed will show number of stems

Height: Tree height calculated with the use of a clinometer in metres (m)

Crown Spread: Estimated in metres (m) taken at four cardinal points (N, S, E, W) from the stem

Physiological Condition: This is based on an assessment of the tree's health and vigour, i.e., Good, Fair, Poor, Dead. Groups of trees are allocated an overall assessment. Thus, individual trees within a group may have a higher or lower score

Structural Condition: Description of defects or symptoms of defects (where applicable), i.e., collapsing, compression forks, bark inclusions, fungi

Comments: A summary of comments on each tree or group of trees

Management Recommendations: Arboricultural works required

Remaining Contribution: Estimated in years, i.e., -10, 10-20, 20-40, 40+

Category Grade:

A = Trees of high quality and value. Shown as green on the tree constraints plan (TCP)

B = Trees of moderate quality and value. Shown as blue on the TCP

C = Trees of low quality and value. Shown as grey on the TCP

U = Trees to be removed. Shown as red on the TCP

Personal Professional Statement

13.0 Personal Professional Statement (Andrew Hudson ND Btec Forestry/Arboriculture / TechArborA**)**

Acting consultant preparing reports for various organisations including British Standard reports for architects and developers in supporting planning applications.

Andrew holds a Btec National Diploma in Forestry and Arboriculture which was awarded at distinction level.

Andrew began working with trees as a forestry contractor, obtaining extensive knowledge and practical experience on various contracts throughout Lincolnshire, East Midlands, East Yorkshire, and East Anglia. Having worked for a number of years within the forestry sector Andrew moved to arboriculture, eventually becoming a fully qualified tree surgeon. This presented a broad spectrum of experience in arboriculture, which was enough to acquire the position of Arboricultural Officer at Local Authority level. This provided valuable experience in all aspects of arboriculture providing him with an inclusive insight into the social, legal and safety issues associated with the management of urban trees in the planning system and Local Authority owned tree stock.

Andrew is part of ENGIE Services Ltd Arboricultural Consultancy providing a service advising on a whole range of tree issues.

Arboricultural ASSOCIATION Technician Member No. TE04053

Appendix A1 "Tree Survey Schedule"

Site: land off Main St, Scawby, Nr Brigg, Lincs
Client: Tom Strawson
Brief: BS 5837 Survey

Surveyor: Andrew Hudson
Assessment Date: 2nd July 2021
Viewing Conditions: Sunny / Clear

Category Grading and Definition

- Trees of high quality with an estimated remaining life expectancy of at least 40 years
- Trees of moderate quality with an estimated remaining life expectancy of at least 20 years
- Trees of low quality with an expected remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm
- Trees 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

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Tree No.	Species	Age Class	Stem Diameter (cm)	RPA Radius (m)	RPA (m^2)	Stem No.	Height (m)	Crown Spread (m)	Physiological Condition	Structural Condition	Comments	Management Recommendations	Remaining Contribution (yrs)	Category Grading
T1	Apple (twin stem)	Mature	38 (at base)	4.6	65.3	2	7	N3, E2, S3, W3	Fair	Poor	Twin stem at base. Extensive decay and cavities at fork union. Main stems hollow.	Fell	<5	U
T2	Lombardy Poplar	Mature	est.68	8.2	209.2	1	15	N2, E2, S2, W2	Good	Fair	Access to the main stem and basal area is restricted due to dense ivy growth and boundary fencing, this restricts visual inspection. Main stem and central canopy area heavily colonised by ivy growth, this restricts visual inspection. Tree forks at approx 2m, fork union obscured by ivy growth. Previous works include a crown reduction, originally to approx 10m-12m. Major/minor dead wood present.	In context with the current land use sever ivy at the base and re-inspect. Should development occur management should be reconsidered in context with the proposed land use.	10	C1
T3	Plum	Mature	25, 31	5.1	81.5	2	7	N5, E5, S4, W4	Fair	Fair	Twin stem at base. Included bark at point of union. Low canopy structure, approx 1.5m from ground level. Main stem epicormic growth. Minor canopy die back. Major/minor dead wood present. Crossing branches.	In context with the current land use no works recommended. Should development occur management should be reconsidered in context with the proposed land use.	10	C1
T4	Apple	Semi-Mature	22	2.6	21.9	1	5	N0, E2, S3, W1	Fair	Poor	Extensive decay and cavities in the main stem. Failure is expected.	Fell	<5	U
T5	Apple	Mature	39	4.7	68.8	1	9	N5, E5, S4, W3	P3	Fair	Single stem up to approx 1m, from here the tree forks to develop the main canopy structure. Damage to west side basal area, buttress root damage and minor cavity. Canopy die back. Major/minor dead wood present, crossing branches.	In context with the current land use no works recommended. Should development occur management should be reconsidered in context with the proposed land use.	10	C1
T6	Apple	Mature	49	5.9	108.6	1	7	N3, E2, S3, W2	Fair	Poor	Single stem up to approx 1m, from here the tree forks to develop the main canopy structure. Extensive decay and cavities in main stem and fork stems. Nesting bird in north side fork stem, close to union. canopy die back. Major/minor dead wood present. Failure/collapse is expected.	Fell	<5	U
T7	Apple (twin stem)	Semi-Mature	15, 12	2.3	16.7	2	4	N1.5, E1, S2, W2	Fair	Fair	Twin stem at base, with corkscrew growth, crossing stems. Extensive decay and cavities around basal area. Minor canopy die back. Minor dead wood, crossing branches.	In context with the current land use no works recommended. Should development occur management should be reconsidered in context with the proposed land use.	10	C1
T8	Plum	Mature	32	3.8	46.3	1	7	N3, E4, S3, W3	Fair	Fair	Historically twin stemmed, with a west side stem failure having previously occurred. Callous repair growth is good at point of failure. Single stem up to approx 0.5m, from here the tree develops it's main canopy structure. Major crossing branches. Minor canopy die back. Minor dead wood, crossing and duplicating branches.	In context with the current land use no works recommended. Should development occur management should be reconsidered in context with the proposed land use.	10	C1
T9	Pear	Over Mature	70	8.4	221.7	1	10	N5, E3, S4, W4	Poor	Poor	Single stem up to approx 2m, from here the tree develops two co-dominant stems. Elephant ear on east side union. Extensive decay and cavities on the lower to mid main stem. Thor hammer test reveals hollowness around main stem. Probe investigation reveals extensive cavities. Canopy die back with stag headed dead wood. Major/minor dead wood present.	Fell	<5	U

Appendix A1 "Tree Survey Schedule"

Site: land off Main St, Scawby, Nr Brigg, Lincs
Client: Tom Strawson
Brief: BS 5837 Survey

Surveyor: Andrew Hudson
Assessment Date: 2nd July 2021
Viewing Conditions: Sunny / Clear

Category Grading and Definition

- Trees of high quality with an estimated remaining life expectancy of at least 40 years
- Trees of moderate quality with an estimated remaining life expectancy of at least 20 years
- Trees of low quality with an expected remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm
- Trees 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

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Tree No.	Species	Age Class	Stem Diameter (cm)	RPA Radius (m)	RPA (m^2)	Stem No.	Height (m)	Crown Spread (m)	Physiological Condition	Structural Condition	Comments	Management Recommendations	Remaining Contribution (yrs)	Category Grading
T10	Apple	Mature	75	9	254.5	1	4	N3, E0 S0, W0	F3	Poor	Catastrophic failure has occurred with, essentially, only the stump remaining. One solitary branch at approx 1m on the north side main stem. Regrowth from failure point at approx 1m is vigorous. Main stem has extensive decay and cavities.	Fell	<5	U
T11	Ash (multi stem)	Mature	55, 60, 52	11.6	422.1	x3	16	N8, E7, S7 W9	Good	Good	Tree has good form and good vigour. Single stem up to approx 0.5m, from here the tree develops three co-dominant stems. U shaped unions. Extensive ivy growth has colonised the central and west side main stems. This restricts visual inspection. Large spreading tree with a low canopy structure, approx 1m from ground level. Some lower canopy die back of branches on the north side. Minor dead wood present, crossing and duplicating branches.	In context with the current land use no works recommended. Should development occur management should be reconsidered in context with the proposed land use.	20	B1
T12	Ash	Mature	53	6.4	127.1	1	12	N3, E4, S4, W3	Good	Good	Single stemmed tree with good form and good vigour. Large spreading tree with a low canopy structure on the east and south side, close to ground level. Minor dead wood present.	In context with the current land use no works recommended. Should development occur management should be reconsidered in context with the proposed land use.	20	B1
T13	Ash	Mature	41	4.9	76.1	1	10	N4, E4, S4, W2	Good	Good	Single stemmed tree up to approx 2m, from here the tree develops it's main canopy structure. West side canopy supressed by adjacent tree cover, this presents an unbalanced crown structure. Minor die back. Minor dead wood present, crossing and duplicating branches.	In context with the current land use no works recommended. Should development occur management should be reconsidered in context with the proposed land use.	10+	C1

Appendix A2 "Hedge Survey Schedule"

Site: land off Main St, Scawby, Nr Brigg, Lincs
Client: Tom Strawson
Brief: Hedge Survey

Surveyor: Andrew Hudson
Assessment Date: 2nd July 2021
Viewing Conditions: Sunny / Clear

Category Grading and Definition

- Hedgerows of high quality with an estimated remaining life expectancy of at least 40 years
- Hedgerows of moderate quality with an estimated remaining life expectancy of at least 20 years
- Hedgerows of low quality with an expected remaining life expectancy of at least 10 years
- Hedgerows 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

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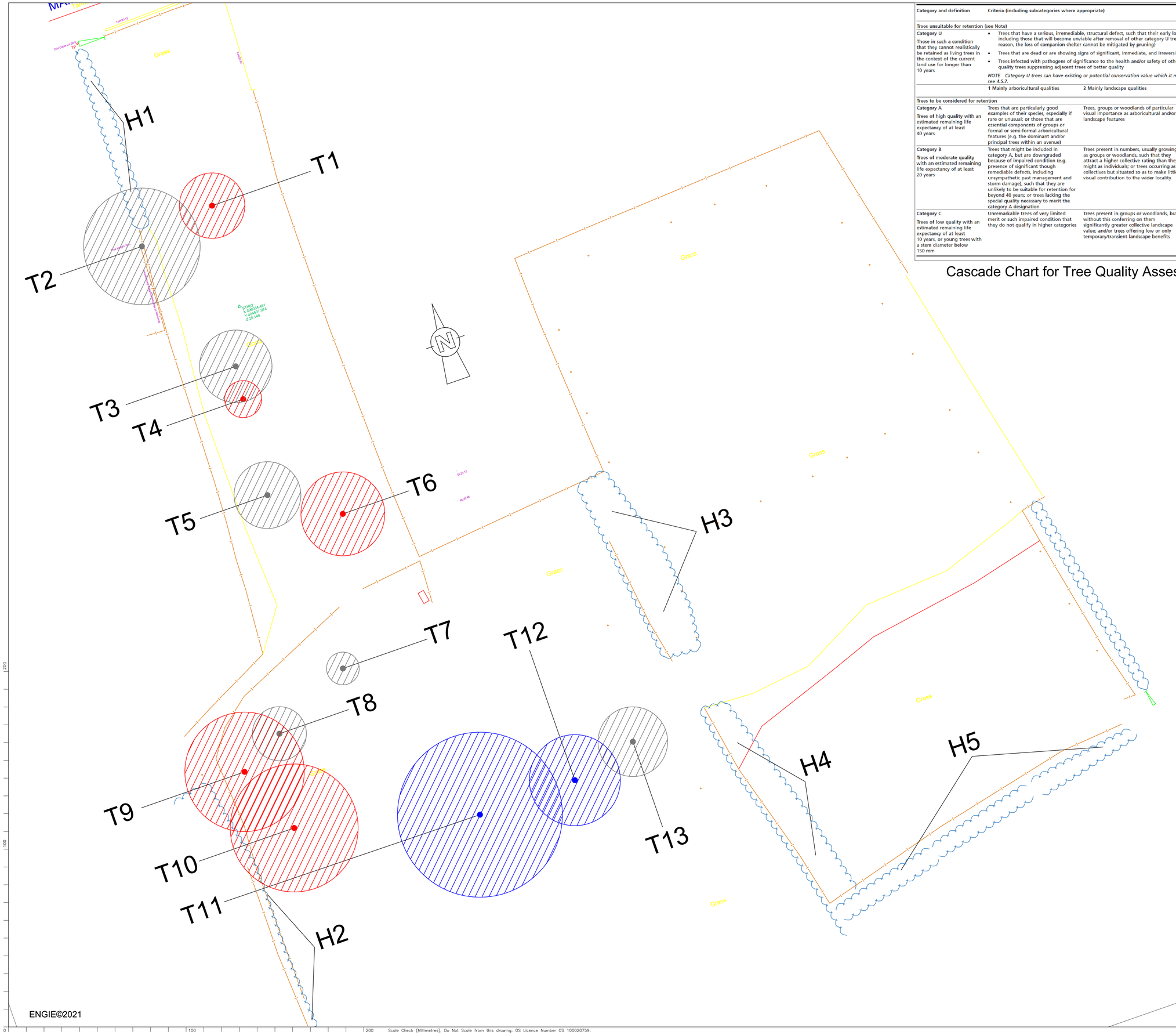
Hedge No.	Species	Height (m)	Physiological Condition	Structural Condition	Comments	Recommendations	Remaining Contribution (yrs)	Category Grading
H1 (ownership unknown)	Privet	1m	Good	Good	Ownership unknown. Regularly managed at a height of 1m. Single species hedge. Hedge has good form and good vigour.	In context with the current land use no works recommended. Should development occur management should be reconsidered in context with the proposed land use.	20+	B2
H2 (ownership unknown)	Predominantly Hawthorn and Blackthorn	Approx 6m	Good	Good	Mixed hedgerow, predominantly Hawthorn and Blackthorn. Other species include, although very limited in numbers, Guelder Rose and Ash. Ownership is unknown, although the existing fence line suggests tge hedgerow is off site. This hedgerow has no regular formal management in place and has become overgrown and untidy.	In context with the current land use no works recommended. Should development occur management should be reconsidered in context with the proposed land use.	20+	B2
H3	Hawthorn	7m	Good	Good	Single species hedgerow, with good form and good vigour. Management neglect is resulting in hedge plants beginning to establish as individual trees. Minor dead wood present, crossing and duplicating branches.	In context with the current land use hedgerow should be brought back into formal management. Should development occur management should be reconsidered in context with the proposed land use	20+	B2
H4	Hawthorn	7m	Good	Good	Single species hedgerow, with good form and good vigour. Management neglect is resulting in hedge plants beginning to establish as individual trees. Minor dead wood present, crossing and duplicating branches.	In context with the current land use hedgerow should be brought back into formal management. Should development occur management should be reconsidered in context with the proposed land use	20+	B2
H5 (off site)	Hawthorn	7m	Good	Good	Hedgerow off site. Single species hedgerow, with good form and good vigour. Management neglect is resulting in hedge plants beginning to establish as individual trees. Minor dead wood present, crossing and duplicating branches.	In context with the current land use hedgerow should be brought back into formal management. Should development occur management should be reconsidered in context with the proposed land use	20+	B2



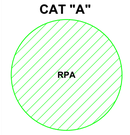
Category and definition	Criteria (including subcategories where appropriate)		
Trees unsuitable for retention (see Note)			
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have 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 4.5.7.*		
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**
Trees to be considered for retention			
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)
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

Cascade Chart for Tree Quality Assessment

Appendix "B"

Category and Definition

CAT "A"

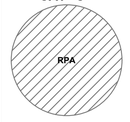


Trees of high quality with an estimated remaining life expectancy of at least 40yrs

CAT "B"

Trees of moderate quality with an estimated remaining life expectancy of at least 20yrs

CAT "C"



Trees of low quality with an estimated remaining life expectancy of at least 10yrs, or young trees with a stem diameter below 150mm

CAT "U"

Those trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10yrs

ALL NECESSARY DIMENSIONS SHALL BE CHECKED ON SITE BEFORE ANY WORK IS PUT IN HAND. DO NOT SCALE.

REVISIONS

Letter	Amendment	Drawn	Date

ARBORICULTURAL CONSULTANCY

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George Street
Grimsby
North East Lincolnshire
DN31 1HB
Tel: 01472 324271

CLIENT	Tom Strawson
PROJECT	Residential Development land off Main St, Scawby, Nr Brigg, North Lincs
TITLE	Tree Constraints Plan

DRAWN	CHECKED	APPROVED
AH		
DATE	**ORIGINAL SIZE**	**SCALE**
22nd July 2021	A1 (594 x 841)	1:250
FILE REF	**DRAWING No.**	**REVISION NO**
AH-ENGIE	TCP_01_220721_AH	

V2.0