Arboricultural Consultancy

Origin 2, Origin Way, Europarc, Grimsby, North East Lincolnshire, DN37 9TZ

Arboricultural Report

Principle Formal Arboricultural Report/Survey
(in accordance with BS5837: 2012 Trees in Relation to Construction)

For:

Client: Bob Johnson

Location: land r/o Birch Cottage, High Street, Barrow Upon Humber

Date: 16th August 2018

(this report should be read in conjunction with the attached plan/s)

Arboricultural Association Technician Member

Report Author:
Consultant: Andrew Hudson ND Btec Forestry/Arboriculture / TechArborA

Surveyor/s:
Consultant: Andrew Hudson ND Btec Forestry/Arboriculture / TechArborA

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Client Details

Bob Johnson
Bilton Grange
Town Street
Barrow
DN19 7DF

[redacted]

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Contents

1.0 Introduction

1.1 Purpose of Report

The purpose of this report is to provide a balanced approach with an assessment of trees in relation to the development of land rear of Birch Cottage, High Street, Barrow Upon Humber, with the intention to provide a residential dwelling. This report is in accordance with BS5837:2012 Trees in Relation to Construction.

1.2 Terms of Reference

ENGIE Arboricultural Services has been instructed by client, Bob Johnson to prepare a formal Arboricultural Report, Tree Constraints Plan and Tree Protection Plan. The survey and report will comply with the recommendations and guidance set out within the BS5837:2012 Trees in Relation to Construction and should be used to assist with site layout and design.

1.3 Timing

The tree survey has been undertaken after a design/layout has been prepared. This report will identify any significant conflicts, of which should be set against the quality and value of affected trees. Those trees that merit retention should be carefully considered in context with the proposed land use and where necessary, modifications to the design/layout should be made in order to accommodate the trees.

1.4 Site Description

The site is located within the village Barrow Upon Humber in North Lincolnshire. Situated near the Humber Estuary, Barrow Upon Humber is about 3 miles east from Barton Upon Humber and 1.5 miles north of Barrow Haven, the direct rail link to Barton Upon Humber Grimsby and Cleethorpes. On land to the rear of Birch Cottage, High Street, Barrow Upon Humber, the proposed plot is currently being used as amenity garden space to Birch Cottage, although, mostly, the land to the rear of Birch Cottage is under the ownership of the developer. Currently there is an agreement in place for Birch Cottage to use this land as additional garden space. The “red edge” area, proposed for development extends to around 754.6sq. m. The existing boundary features are mixed, generally between hedges/shrub borders and a brick wall. The northern boundary features a 3m high brick wall, an original and historic structure that dominates this boundary line. Along the southern boundary is a line of conifer Leylandii plants, forming a noticeable boundary feature. Within the site there is a mixture of individual trees and much shrub planting, plants commonly associated with residential garden space. The most dominating feature associated with this site is a large mature ash tree, off site within the neighbouring property, located towards the north west corner of the site. A significant part of this tree encroaches into the “red edge” proposed development site.

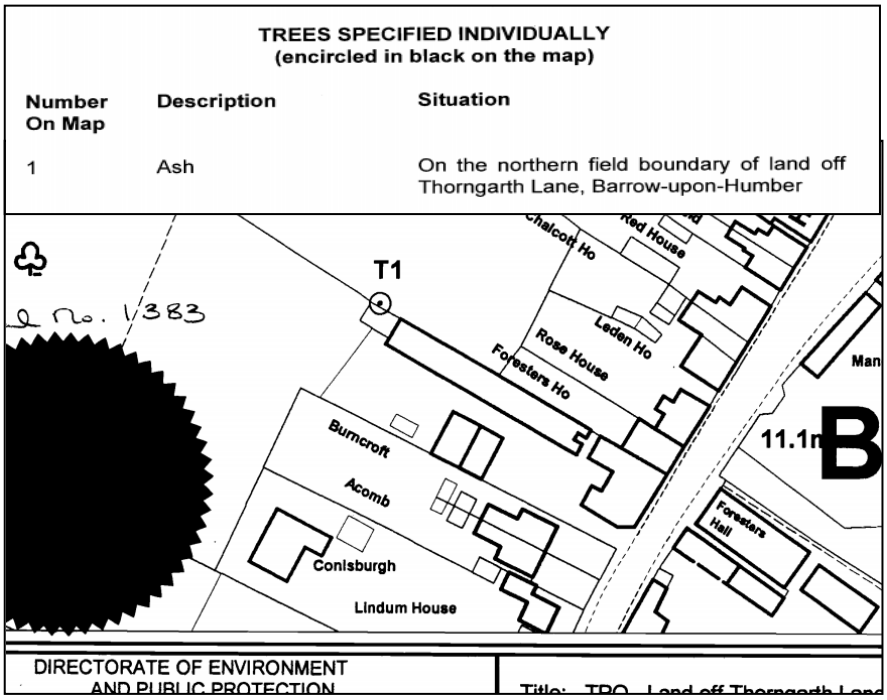
1.5 Description of Development

It is proposed to develop this site with the introduction of a single residential dwelling with associated access, driveway, turning area, garage and amenity garden space. It is proposed to access this site via an existing driveway, off High Street, that currently serves Birch Cottage.

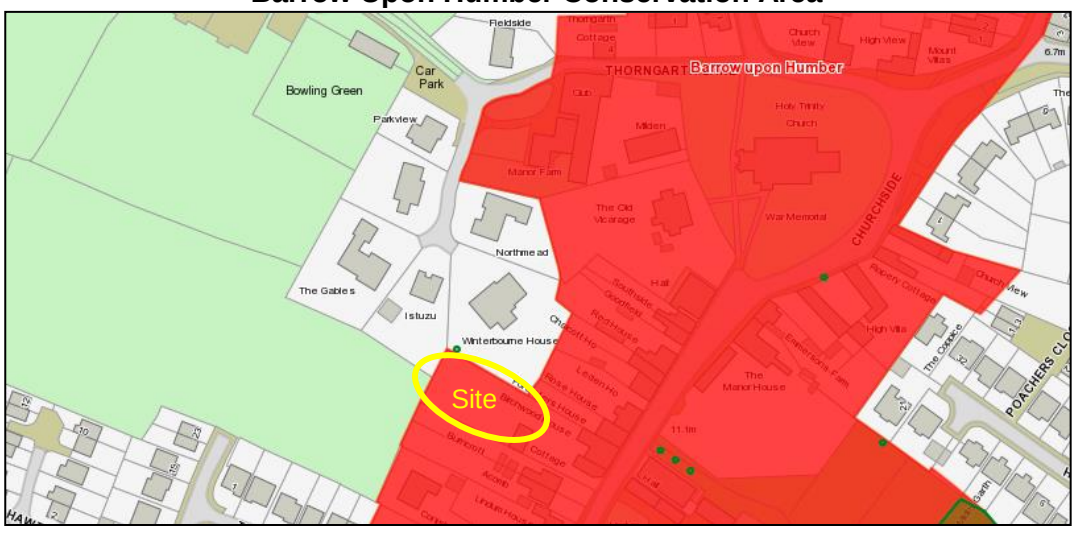
2.0 Status of the Site

The Local Planning Authority (LPA) is North Lincolnshire Borough Council. It was confirmed on the 15th August 2018, using the Council's on-line system, that one tree adjacent to the site, overhanging into the site, is afforded the protection of a Tree Preservation Order (TPO). It has also been confirmed that the site and land adjacent is within the Barrow Upon Humber Conservation Area.

TPO



Barrow Upon Humber Conservation Area



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Note: *Any works to protected trees outside of a planning permission will need permission from the Local Planning Authority*

Note: *The tree numbers as described above are specifically in association with the TPO map and schedule and bear no relevance to the BS 5837 survey/schedule*

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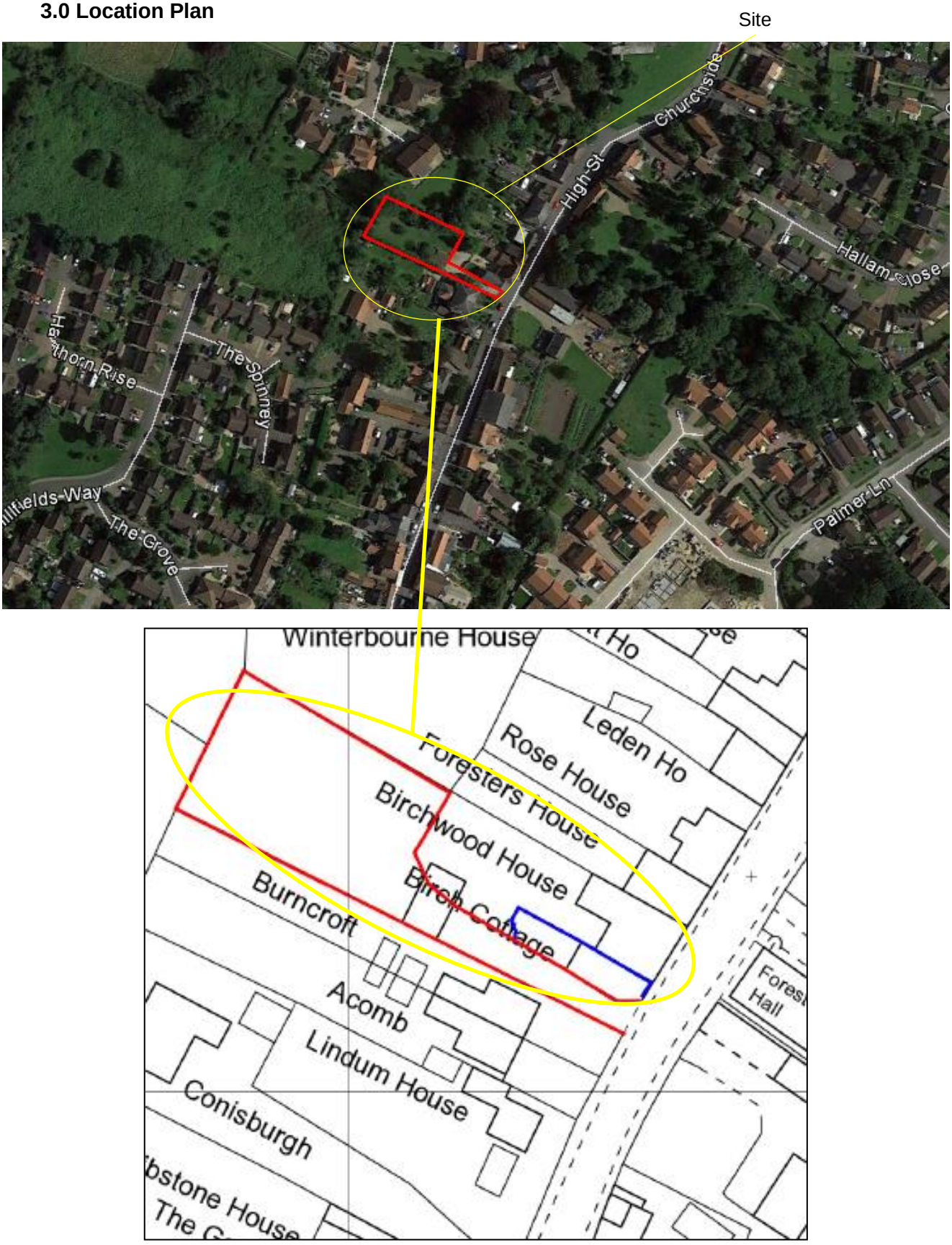
3.0 Location Plan



Method of Survey

4.0 Method of Survey

The tree survey was carried out by Andrew Hudson on the 2nd August 2018. All observations were made from ground level in clear/sunny weather conditions. To assist in gathering information about 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.
- Binoculars – to aid in the visual assessment of trees.
- Probe – were required, to investigate further symptoms of decay/defects.
- Thor Hammer - were required, to investigate further symptoms of decay/defects.

4.1 An overall assessment of 11 individual trees and 2 groups of trees was made. On the Constraints Plan (Appendix "B") the individual trees are identified as T1 to T11 and the groups as G1 to G2.

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 BS5837: 2012 Trees in Relation to 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 trees 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 trees structural integrity, though where trees are considered to represent an immediate hazard, recommendations will be given for intervention. It will be the land owner'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 BS5837: 2012. The RPA is an area of ground that provides sufficient soil rooting volume to ensure the survival of the tree. For any groups of trees, the RPA is calculated as an average to the group inclusive, rather than individual trees. This forms a realistic assessment of where the ground conditions are most favourable for root growth.

6.0 Survey Results (general comments)

The full survey results are shown in the survey schedule in Appendix "A". The survey assessed 11 individual trees and 2 groups of trees.

6.1 2 individual trees (No.2 & 8) have been assigned to the moderate quality and value, category "B1". These trees are considered to have moderate quality and value with a remaining life expectancy of at least 20 yrs.

6.2 8 individual trees and 2 groups of trees (No.1, 3, 5, 6, 7, 9, 10, 11 & G1, G2) have been assigned to the low quality and value, category "C1/C2". These trees are considered unremarkable of very limited merit or such impaired condition that it does not qualify in a higher category.

6.3 1 individual tree (No.4) has been assigned category "U", a tree in such a condition that early loss is expected due to structural defects and disease. This tree is in terminal decline and cannot realistically be retained in context with the current land use.

6.4 Cascade chart for tree quality assessment

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 maybe a material consideration in a planning application should not be allowed to impose a significant constraint on the development of this site.*

7.0 Photos

Existing and proposed access into the site, off High Street

Existing access driveway with views of the site beyond the double garage

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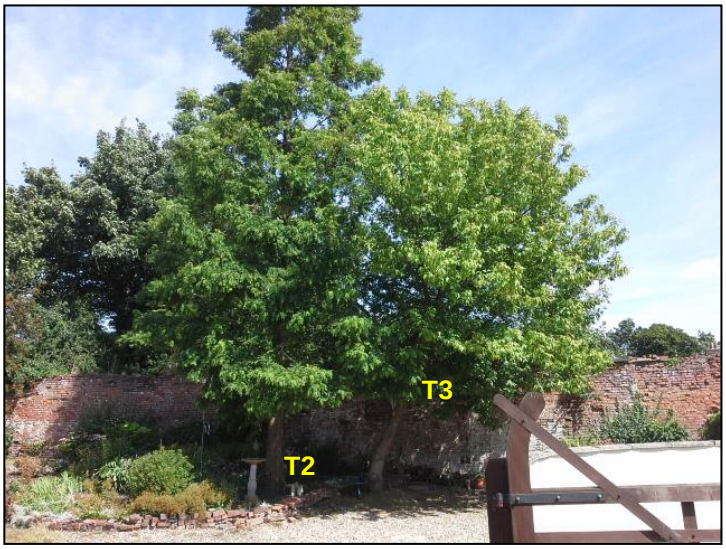
7.1 Photos

T1 sits close to the boundary along the existing drive. There is an obvious and ongoing conflict with the drive and the neighbouring property



Trees T2 and T3 are off site, within the boundary of Birch Cottage. These trees are not expected to have any influence in terms of how this site is developed

Views into the site from the garden space of Birch Cottage

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7.2 Photos

North side boundary wall. A 3m high brick-built wall, an original, historic feature to this area.

There is an obvious existing and future conflict with the boundary wall from some trees and shrubs

Tree T7 with a small tree house constructed within

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7.3 Photos

Principal area of development. Noticeably, most tree/shrub cover are located towards the boundaries

T8 – Off site, although is a dominant feature with extensive overhang into the site

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7.4 Photos

Group G1, trees with very limited quality and value. Screening is likely the principle benefit

A major fork on T8 has been braced in an attempt to secure a union defect

8.0 Discussion (general comments)

Generally, the trees that occupy this site or are associated with this site are located towards the “red edge” boundaries. Although off-site, T8 is the most dominant feature. A large spreading tree that has a significant overhang into the site, either represented by the RPA or by virtue of the trees size and position. Due consideration will need to be given to the above ground constraints the trees pose by virtue of their size and position, although it should be recognised that tree size can easily be controlled through correct arboricultural management. More importantly 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 and the introduction of structures and/or hard surfaces. Another constraint that should be considered is nuisance, in terms of how trees may affect future occupiers.

8.1 The morphology and disposition of the roots to some trees may 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 is good, mainly being soft landscaping, areas that are rich in water and minerals.

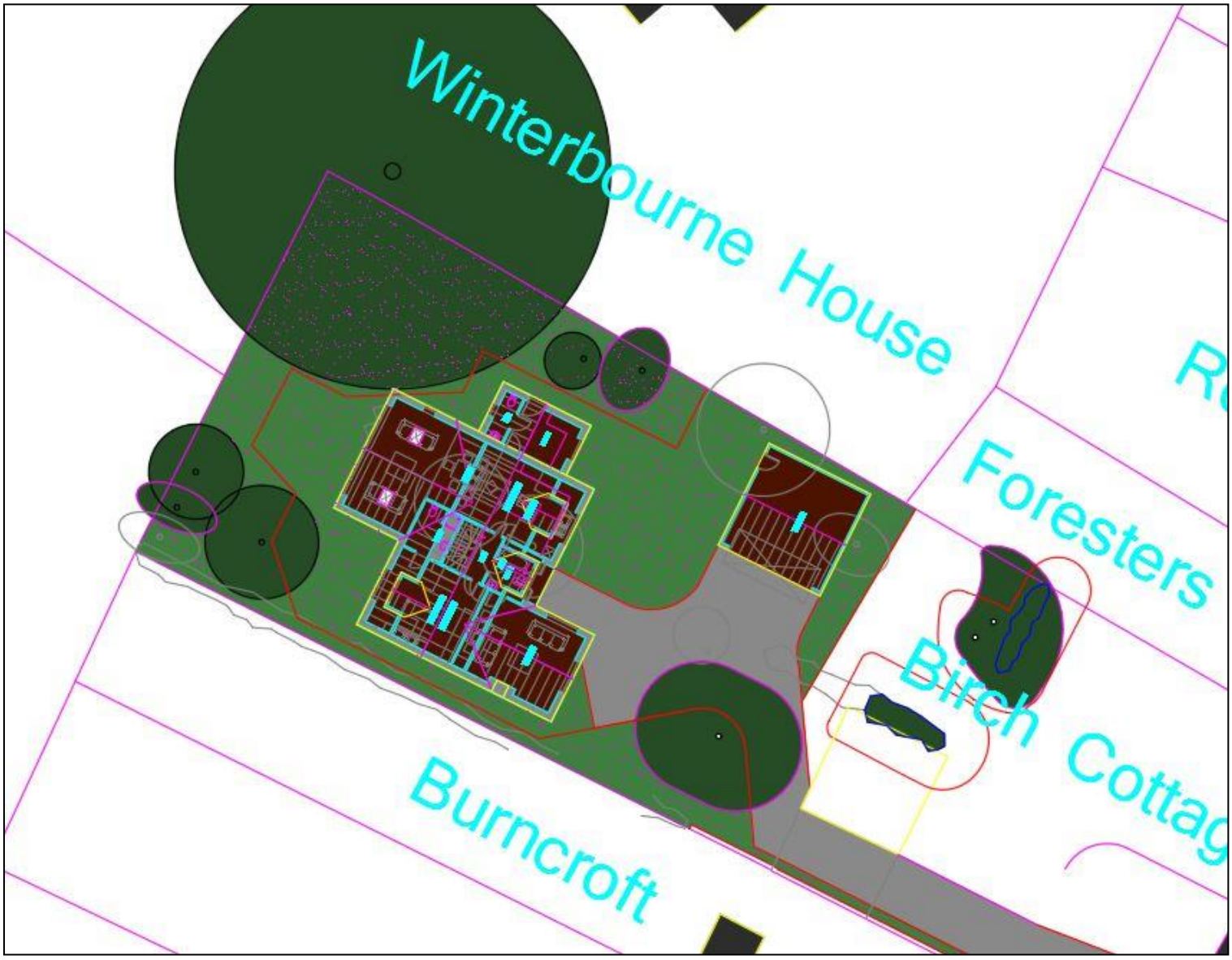
8.2 Mostly, the trees included as part of this survey, inclusive of the group trees, have a low quality and value, unremarkable trees of very limited merit or in such a condition that short term retention is not viable. Although the low quality, category “C”, trees may be a planning consideration they should not allow a significant constraint on how the site may be developed. If there is space to retain a C tree/s, and it does not compromise the proposed layout, then it may be appropriate to retain in the short term. Although a category “C” tree/s may be considered low quality, unremarkable trees, there may be some transient benefits such a screening. However, it would be reasonable to suggest that substandard trees, such as “C” category, would not be worthy of being given any significant weight in any planning decisions.

8.3 Although off-site, special consideration should be given to tree T8. Having assessed the tree stock on and immediately adjacent, this tree is considered to have moderate quality and value. Categorised “B1”, the tree is a relatively good example of the species. A detailed visual inspection of this tree is restricted due to being off-site. Although an inspection was made from a distance, within the site boundaries, it is obvious that a various amount of remedial works has previously taken place. This includes a reduction of parts of the crown, a reduction of the lower laterally spreading limbs and the installation of, what appears to be, a cable bracing system. I would assume that the works carried out, including the bracing of a main fork, is an attempt to secure any structural defect, most likely the fork union. The current structural condition of this fork is not known, due to access restrictions. The previous works carried out was possibly within the last 10yrs. It could be that the bracing has stabilised the fork union, allowing incremental growth to develop. However, this can only be confirmed by a close inspection of the fork union, an opportunity not available at the time of this survey. Due to the size and position of tree T8 there may be some conflict with the proposed development site.

8.4 It is proposed to develop this site with the introduction of a single, detached residential development with associated access, driveway & turning area, garage and landscaped spaces. Concept designs are in progress and an initial design/layout has been prepared, of which has been made available for the preparation of this report.

8.5 The plan below shows the initial design/layout prior to the commissioning of this report and Tree Constraints Plan.

Initial Design/Layout



8.6 Following my assessment of the site any significant conflicts in relation to the initial design/layout have now be identified. Such conflicts will be set against the quality and value of the affected trees, to the extent which, in this case, recommendations have been given for modifications to be made in order to allow a much better use of the site in terms of the quality and value of the existing tree population. It is important to avoid misplaced tree retention. Category “C” trees can be retained, provided they do not impose a significant constraint in terms of how the site may be developed, especially where adjustments can be made to secure the long-term retention of the better-quality trees on or adjacent to the site. Following discussions with the agent and the developer adjustments have been made to allow a much better use of the site in context with the quality and value of the existing tree stock.

Modified Design/Layout – to make better use of the site

8.7 Mostly the trees that have been surveyed are considered to be of low quality and value, unremarkable trees of very limited merit. Generally, such trees would not be retained where they may compromise the successful development of the site. In order to make the best use of the site in context with its future use and to avoid structural damage to the 3m high brick wall, I would expect that trees T1, T4, T5, T6, T7, T9, G1 and G2 to be removed. The most important tree associated with this site has been incorporated into the design/layout, avoiding the RPA and any other possible constraint.

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 has been used to assist with possible modifications to the design/layout to accommodate trees meriting retention.

8.9 It is accepted the impacts of this proposal may have on trees and there may be a requirement for more concise arboricultural information. This comes in the form of an Arboricultural Method Statement. A formal Arboricultural Method Statement will expand on details in this report focusing on tree protection, with illustrative specifications, timing and phasing of construction operations. Due to the obvious constraints associated with this site, specifically in relation to T8, a formal arboricultural method statement has been included as an accompanying supporting document.

9.0 Installation of Services

When considering development for this site the installation of services must be kept as far as practically possible from the root protection area (RPA) of any retained trees/hedges. Trenching near trees 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

9.1 In the UK, the usual guidelines for trenching by utility companies are provided by NJUG 10, which is available to download at www.njug.org.uk/publications.html . 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.

Conclusion

10.0 Conclusion

The tree survey has been undertaken after an initial design/layout has been prepared. This report has identified any significant constraints, of which have been set against the quality and value of the existing tree stock. The principal area of constraint, in accordance with the initial design/layout, was mainly misplaced tree retention. Modifications to the design/layout have been made that makes much better use of the site but also ensures the successful retention of the better-quality trees, specifically T8.

10.1 There is no doubt that T8 does pose a degree of constraint in terms of how this site may be developed. However, any such constraint has been considered and a design/layout has been prepared that will ensure the long-term retention of T8. The principle key to successful retention will be tree protection during the development of the site and I am satisfied this can easily be addressed through a detailed Tree Protection Plan, of which is included in the Arboricultural Method Statement as an accompanying supporting document.

10.2 Although there are limited constraints associated with this site, I am satisfied that the options, as described in this report will ensure the effects of development will not be detrimental to the health and benefit of retained trees, either short term or long term. This is of course provided the recommendations and guidance of this report are adhered to.

[redacted]

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

Data collected in the "Tree Survey Schedule" of appendix "A". 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 a "L" for late

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

V = Veteran

Stem Diameter: stem diameter to the nearest 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 meters

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

Height: Trees height calculated with the use of a clinometer in meters

Crown Spread: Estimated in meters taken at four cardinal points from the stem

Physiological Condition: This is based on an assessment of the trees 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 high or lower score

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

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

Management Recommendations: Arboricultural works required

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

Category Grade:

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

B = Trees of moderate quality and value. Shown as blue on the tree constraints plan

C= Trees of low quality and value. Shown as grey on the tree constraints plan

U= Trees to be removed. Shown as red on the tree constraints plan

[redacted]

Personal Professional Statement

12.0 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 A "Tree Survey Schedule"

Site: land rear of Birch Cottage, High St, Barrow Upon Humber
Client: Bob Johnson
Brief: BS5837 Tree Survey

Surveyor: Andrew Hudson
Assessment Date: 2nd August 2018
Viewing Conditions: Clear/Sunny

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 lremaining ife 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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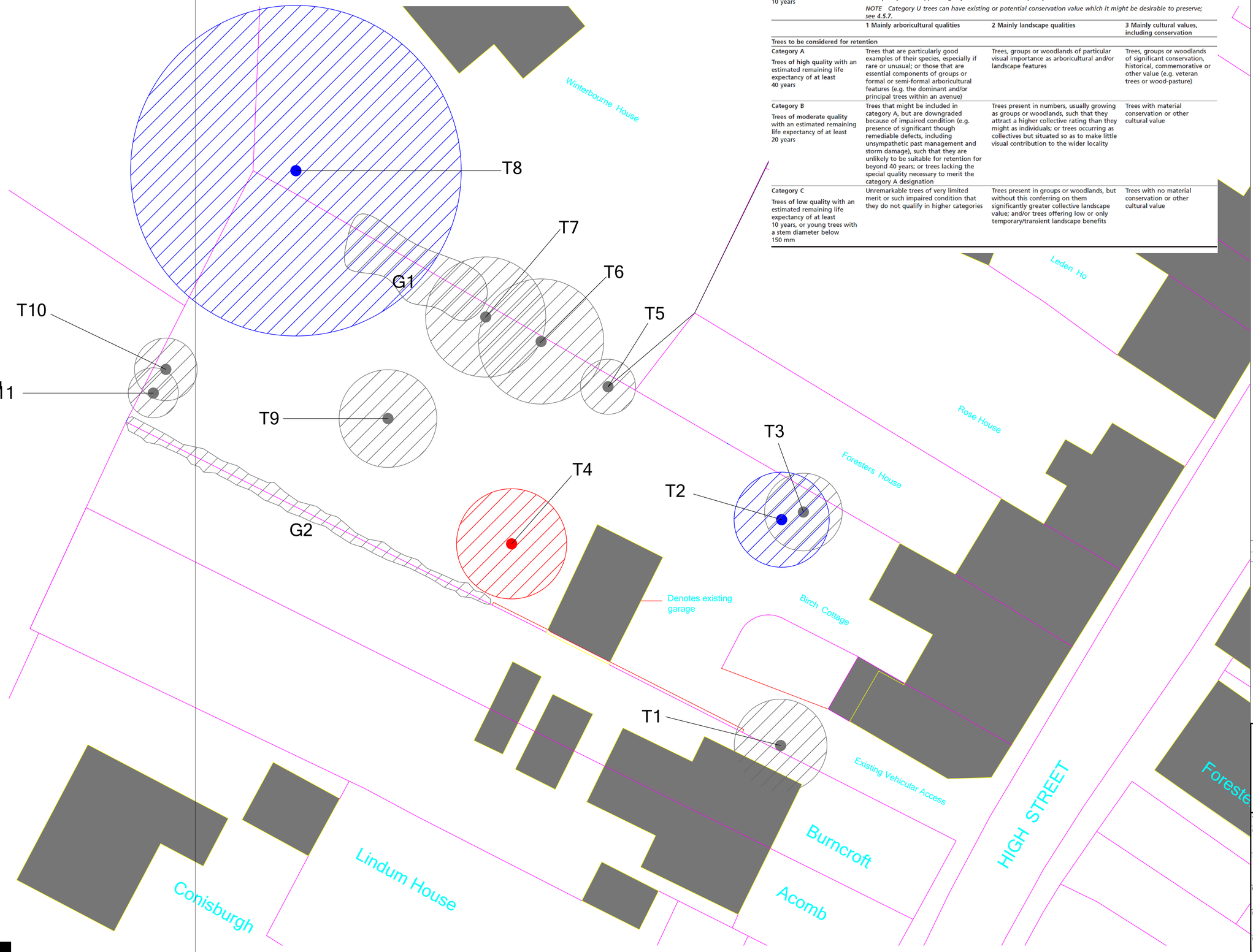
Tree No.	Species	Age Class	Stem Diameter (cm)	RPA Radius (M)	Stem No.	Height	Crown Spread (M)	Physiological Condition	Structural Condition	Comments	Management Recommendations	Remaining Contribution (yrs)	Category Grading
T1	Willow	Semi - Mature	31	3.7	1	6	N4, E3, S3, W4	Good	Fair	Previous works include a pollard to approx 4m. The tree has since continued a management regime to this height. Main stem naturally leans to the east. There is existing conflict with boundary wall, neighbouring property and overhang to the drive. Long term retention may not be viable. The continued nuisance will outwat the need for this tree to be retained.	Fell	10	C1
T2	Dawn Redwood	Mature	32	3.8	1	13	N2, E3, S3, W2	Good	Good	Single straight stem up to the current height. Low canopy spread to approx 1m from ground level. North side lower to mid canopy suppressed by adjacent tree cover. This presents an unbalanced crown structure. Minor dead wood present.	None recommended	20	B1
T3	Maple	Semi - Mature	26	3.1	1	11	N4, E6, S4, W4	Good	Good	Single stem up to approx 3m, from here the tree develops it's main canopy structure. There is a natural lean in a northerly direction with a large amount of canopy spread over the garden wall and towards the patio area. This presents an unbalanced crown structure. Previous works include crown lifts over the garden area. Minor dead wood present. Duplicating branches.	None recommended	10+	C1
T4	Cherry	Mature	37	4.4	1	9	N4, E6, S3, W4	Poor	Fair	Single stem up to approx 1m, from here the tree develops it's main structural scaffold limbs. Main stem and structural scaffold limbs colonised by ivy growth. This restricts visual inspection. Tree exhibits significant die back of canopy. Major / minor dead wood present. Tree in terminal decline with 80 % of the canopy dead.	Fell	5	U
T5	Sycamore	Semi - Mature	19	2.2	1	10	N3, E3, S3, W2	Good	Fair	Looks to be a self regenerated tree, close to the high boundary wall. Single stem up to approx 3m, from here the tree forks to develop the main canopy structure. Major crossing branches at around 4m.	In context with the current land use no works are recommended. Should development occur tree should be removed.	10	C1
T6	Sycamore	Mature	42	5	1	13	N6, E5, S6, W3	Good	Good	Main stem and structural scaffold limbs colonised by ivy growth. This restricts visual inspection. Single stem up to approx 2.5m, from here the tree develops it's main structural scaffold limbs. Look to fork at this point, however ivy cover restricts view. Most likely grown from natural regeneration the main stem at around 1m is only 5inch from the 3m high boundary wall. The trees basal area is touching the wall and will be applying pressue to the footings and lower brick work. There is significant conflict with an historic feature. Long term retention is not be viable. Structural damage or failure of the boundary wall is highly likely if tree is left to increase its growth	Fell	5	C1
T7	Laurel (multi stem)	Mature	23, 14, 14, 12, 17, 15	4.8	6	6	N5, E3, S5, W4	Good	Fair	Multi stem at base x6. A wide spreading tree with a low branch structure to ground level. A timber structure has been built within the lower canopy to create a tree house type play area. Minor dead wood, crossing, duplicating branches.	In context with the current land use no works are recommended. Should development occur tree should be removed.	10	C1
G1	x1 Larch, x1 Ash, x1 Sycamore, x1 Elder.	Semi - Mature	17, 17, 14, 24	Up to 2.8	4 trees	12	South into site 4m	Good	Good	Ash, Syc & Larch tall spindly trees with limited quantity and value. Elder is a large spreading tree with a low canopy structure, around 0.5m from ground level, major and minor dead wood present. This group provides screening benifits only.	In context with the current land use no works are recommended. Should development occur reduce south side canopy overhang into the site by 2m, to leave a finished canopy spread of 2m from the base of the trees.	10+	C2
T8 (off site) TPO	Ash	Mature	est. 110	13.2	1	9.5	South East into site 8m	Good	Fair	Tree off site, inspection made from a distance. A large spreading tree with good form and good vigour. Single stem up to approx 6m, from here the tree develops it's main structural scaffold limbs. A various amount of remedial works has previously occured. Large laterally spreading lower limbs have been reduced, the upper canopy has been thinned and above a major fork there is a system of, what appears to be, cable bracing. This suggests a union weakness, although cannot be seen from site side. Minor dead wood present and duplicating branches.	In context with the current land use no works are recommended. Should development occur reduce the branch spread from the lower south side laterally spreading limb by 2m, to leave a finished branch spread of 2m from the tip end of the lateral limb.	20	B1
T9	Laburnum	Mature	33 (at base)	3.9	1	5	N3, E2, S2, W1	Fair	Fair	Tree forks at around 20in from the base, here the tree develops it's main structural scaffold limbs. Vigour is fair with signs of yellowing of the leaves. Included bark at south side fork union and other branch unions. Previous works include a slight height reduction of around 0.5m Minor dead wood, duplicating branches. Poor quality and very limited value	In context with the current land use no works are recommended. Should development occur tree should be removed.	10	C1
T10	Ash	Semi - Mature	21	2.5	1	11	East into site 3m	Good	Good	Most likely self set regeneration growing close to the rear boundary. Main stem colonised by ivy growth, this resticts visual inspection. Single stem up to approx 1.5m, here the tree develops it's main canopy structure. Tree presents very limited quantity and value. Screening benefits only.	None recommended	20	C1
T11	Sycamore	Semi - Mature	17	2	1	11.5	East into site 0.5	Good	Good	Tall spindly tree with very little canopy spread. Most likely a natural regeneration, growing close to the rear boundary. Tree presents very limited quantity and value. Screening benefits only.	None recommended	10	C1
G2	Leyland cypress	Semi - Mature	None Recorded	None Recorded	Numerous	4	None Recorded	Fair	Good	This row of trees is obviously defined as a boundary hedge. Previously reduced by around 50%, the hedge looks quite scruffy. In places the sides have been cut back too far, now showing visible dead wood. This boundary feature has very limited value, only screening benefits.	In context with the current land use no works are recommended. Should development occur trim to tidy.	10	C2

Cascade Chart for Tree Quality Assessment

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



Appendix "B"

Category and Definition

CAT "A"

RPA

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

CAT "B"

RPA

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

CAT "C"

RPA

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"

RPA

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

ENGIE

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CLIENT	Bob Johnson
PROJECT	Residential Development r/o Birch Cottage, High St, Barrow Upon Humber
TITLE	Tree Constraints Plan

DRAWN	CHECKED	APPROVED
AH		
DATE	**ORIGINAL SIZE**	**SCALE**
16/08/2018	A1 (594 x 841)	1:150
FILE REF	**DRAWING No.**	**REVISION NO**
AH-ENGIE	TCP-01-16-08-18	

V 2.0

0 100 200

Scale Check (Millimetres), Do Not Scale from this drawing. OS Licence Number OS 100020759.