

Arboricultural Impact Assessment
30 Long Lane January 2024



Cumbria Tree Surveys

Arboricultural Consultancy, Surveys, Inspections & Advice

30 Long Lane

Ormskirk

Arboricultural Impact Assessment

Tree Protection Plan

Method Statement

January 2024

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1.0 Terms of Reference

1.1 This 30 Long Lane Arboricultural Impact Assessment has been commissioned as a result of a development proposal within the curtilage of 30 Long Lane, Aughton, Ormskirk. L39 5AT.

1.2 The development proposal has the potential to affect a number of trees within the curtilage of the property and one mature Beech, *Fagus sylvatica*, situated on the boundary of a neighbouring property. As trees are to be given material consideration in the planning process, an arboricultural impact assessment is required.

1.3 The site visit, assessment, investigation and arboricultural impact assessment tree protection report, have been undertaken by Mr Daniel Bold M.Arbor.A., N.C. Arb., H.N.D. Arb., N.E.B.O.S.H. General Certificate, of Cumbria Tree Surveys Arboricultural Consultancy.

1.4 The site investigations, assessments and arboricultural impact assessment report have been established by implementing the following:

British Standard 5837:2012.

Trees in relation to design, demolition and construction – Recommendations.

British Standard 3998:2010.

Tree work – Recommendations.

National Tree Safety Group.

Common Sense Risk Management of Trees. Forestry Commission 2011.

Visual Tree Assessment (VTA) methods, and Cumbria Tree Surveys protocols.

1.5 The site survey being undertaken on the 2nd January 2024, from ground level with no exploratory excavation works undertaken. Weather at time of survey. Overcast with no breeze.

1.6 The purpose of this 30 Long Lane Arboricultural Impact Assessment is to evaluate the tree stock in relation to the proposed development on the date of survey. Whilst decay, defects and faults that are noticeable in the tree stock have been observed, commented on and recommendations stated. The impact assessment is not a Health and Safety inspection of the tree stock and no such inference should be arrived at from it. No liability will be held by the surveyor or Cumbria Tree Surveys for events that occur post survey date.



2.0 Arboricultural Impact Assessment Constraints, Details and Observations

2.1 In accordance with the requirement of British Standard 5837:2012. The tree stock in the proposed development area has been inspected to establish the following details.

2.2 Tree Species.

Common name first, with the scientific botanical name in *italics*.

2.3 Age Class, Life Stage.

Four age classes referred to in British Standard 5837:2012 as “Life Stages” are available for use. That is Young, Semi-Mature, Mature and Over Mature. This system represents the tree specimen within its life cycle.

Young being in the early formative years and still with the potential for future vigorous extension growth.

Semi-Mature being in essence middle aged with growth having slowed.

Mature is regarded as the stage in the life cycle of the tree specimen when extension growth has virtually ceased and the tree specimen is, in the main, sustaining the life cycle with little or no extension growth.

Over Mature is that stage in the life cycle of the tree where the specimen is in decline with evidence to suggest this is the case.

2.4 Number of Stems.

The number of stems originating from the base of the specimen.

2.5 Stem Diameter at 1.5 metres from ground level.

Stem diameter measured at 1.5 metres from ground level and referred to as Diameter at Breast Height, DBH, as recommended by British Standard 5837:2012. For trees with multiple stems the combined stem diameter should be calculated in accordance with the prescribed formula in BS 5837:2012.

2.6 Tree Height.

Expressed in metres and measured by means of a TruPulse 200e laser measure from ground level. Where sight lines for the laser have been restricted, an estimate has been provided.

2.7 Crown Spread.

As required by British Standard 5837:2012, representing the four compass cardinal points, expressed in metres.



2.8 Crown Height.

The existing height above ground level of the tree crown / canopy. That is the clearance from ground level to the underside of the crown / canopy.

2.9 Root Protection Area.

Calculated from the stem diameter at 1.5 metres from ground level. The root protection area is the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure is treated as a priority. British Standard 5837:2012 capping the maximum root protection area radius at 15 metres from stem base equating to an area of 707 square metres.

2.10 Arboricultural Observations and Comments.

Observations on the health and safety status, structural condition and overall physiological condition of the tree specimen.

2.11 Arboricultural Recommendations.

Recommendations required for the benefit of the proposed development, sound arboricultural practice, good tree care management and to abate any potential health and safety issues arising from the tree specimen.

2.12 Estimated Remaining Contribution.

The life expectancy, in years, of the specimen in its current condition. Four categories are recommended in BS 5837:2012, and are as follows: <10, 10+, 20+, 40+.

2.13 British Standard 5837:2012 Category.

A system as defined in British Standard 5837:2012 for tree categorisation and classification. Each specimen should be classified according to its category A, B, C or U and colour coded accordingly. All specimens in the category A – C being further defined into a subcategory 1, 2 or 3. In general terms:

- 1 being mainly arboricultural qualities.
- 2 being mainly landscape qualities.
- 3 being mainly cultural values including conservation.

Category A, B and C trees have the potential to be considered for retention. Whilst category U are those trees that are recommended for removal. An abridged definition of the categorisation system follows.



2.13 continued.

A

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

A1. Trees that are particularly good examples of their species, especially if rare or unusual or form essential components of a group.

A2. Trees, groups or woodlands of particular visual importance as arboricultural and / or landscape features.

A3. Trees, groups or woodlands of significant conservation historical, commemorative or other value.

B

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

B1. Trees that might be included in Category A, but are downgraded because of impaired condition.

B2. Trees present in numbers, usually 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.

B3. Trees with material conservation or other cultural value.

C

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

C1. Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.

C2. Trees present in groups or woodlands, but without this conferring on them significant greater collective landscape value; and / or trees offering low or only temporary / transient landscape benefits.

C3. Trees with no material conservation or other cultural value.

U

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. This includes those specimens that are considered dead, dying or dangerous at time of survey.

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3.0 Arboricultural Impact Assessment Survey Data Table

3.1 30 Long Lane Arboricultural Impact Assessment Survey Data Table.

Tree No.	Species	Life Stage	No. of Stems	Stem Diameter mm	Tree Height m	Crown Spread m	Crown Height m	Root Protection Area	Arboricultural Observations and Comments	Arboricultural Recommendations	Estimated Rem. Contrib.	BS 5837 Retention Category
T1	Common beech (<i>Fagus sylvatica</i>)	Mature	1	900	18	N:9 E:9 S:9 W:9	2.5	Radius: 10.8m. Area: 366 sq m.	Mature specimen on boundary in garden of 32 and beyond construction zone. Crown over existing garage and construction zone. Crown may impede construction activities and be subject to damage as a result. Existing hard standing and garage within the root protection area.	Crown raise to achieve a height of at least 8 metres so as to avoid any potential damage from construction activities.	20+ Years	B1
T2	Sycamore (<i>Acer pseudoplatanus</i>)	Mature	1	450	17	N:5 E:5 S:5 W:5	3	Radius: 5.4m. Area: 92 sq m.	Specimen to immediate left hand side of drive on entering property. Existing hard standing within root protection area. Specimen of average shape and form with BT cables through crown.	No work required.	20+ Years	B3
T3	Sycamore (<i>Acer pseudoplatanus</i>)	Semi Mature	1	320	15	N:5 E:3 S:3 W:3	4	Radius: 3.8m. Area: 45 sq m.	Specimen on boundary to right hand side of access when entering property. Crown over Long Lane. BT cables through crown. Specimen generally of poor shape and form. Ivy starting to form.	Fell to facilitate construction activities required.	10+ Years	C1
T4	Cherry (<i>Prunus sp.</i> 'Cherry')	Mature	1	390	10	N:1 E:3 S:6 W:3	1.5	No RPA due to Retention Category of U.	Mature specimen with crown fork at 1.5 metres. Crown asymmetrical to the south due to closed upper crown canopies of adjacent trees. Evidence of minor pruning works. Extensive area of basal decay and damage. Specimen likely to fracture and failure at this location.	Fell.	<10 years	U
T5	Sycamore (<i>Acer pseudoplatanus</i>)	Mature	1	400	13	N:5 E:5 S:5 W:5	3	Radius: 4.8m. Area: 72 sq m.	Specimen of average shape and form. Situated at the boundary with crown over Long Lane. BT cables through crown with deflection as a result.	No work required.	10+ Years	C1
T6	Sycamore (<i>Acer pseudoplatanus</i>)	Mature	1	540	9	N:5 E:5 S:5 W:5	2	Radius: 6.5m. Area: 133 sq m.	Specimen with extensive bark deformation and Burrs on main stem. Minor deadwood throughout crown with specimen subject to crown reduction. Crown over Long Lane with BT cable present.	No work required.	10+ Years	C1
T7	Scots pine (<i>Pinus sylvestris</i>)	Mature	1	560	20	N:5 E:5 S:6 W:5	4	Radius: 6.7m. Area: 141 sq m.	Substantial mature specimen. Natural "S" bend and twist in main stem due to aspect. BT cable through crown.	No work required.	20+ Years	B1

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3.1 continued.

Tree No.	Species	Life Stage	No. of Stems	Stem Diameter mm	Tree Height m	Crown Spread m	Crown Height m	Root Protection Area	Arboricultural Observations and Comments	Arboricultural Recommendations	Estimated Rem. Contrib.	BS 5837 Retention Category
T8	Cherry (<i>Prunus sp.</i> 'Cherry')	Mature	1	420	6	N:3 E:5 S:6 W:6	1.5	Radius: 5.0m. Area: 79 sq m.	Specimen suppressed in growth with asymmetrical crown due south as a result of T7. Evidence of minor pruning works. Lateral fissure establishing on main stem. Specimen of average shape and form for age and species.	Fell to facilitate construction activities required.	10+ Years	C1
T9	Prunus (<i>Prunus sp.</i>)	Semi Mature	2	234	5	N:1 E:1 S:4 W:3	1	Radius: 2.8m. Area: 25 sq m.	Specimen suppressed in growth with asymmetrical crown due south as a result of T7.	Fell to facilitate construction activities required.	10+ Years	C1
T10	Silver birch (<i>Betula pendula</i>)	Mature	1	390	19	N:4 E:5 S:5 W:5	4	Radius: 4.7m. Area: 69 sq m.	Mature specimen in rear garden of good shape and form.	Fell to facilitate construction activities required.	20+ Years	B1

3.2 Arboricultural Impact Assessment Survey Data Table Analysis.

Retention Category	No. of Trees	Common Name	No. of Trees	Life Stage	No. of Trees
B	4	Cherry	2	Mature	8
C	5	Common beech	1	Semi Mature	2
U	1	Prunus	1		
		Scots pine	1		
		Silver birch	1		
		Sycamore	4		
Total	10	Total	10	Total	10

3.3 T1 mature Beech has a root protection area that has previously been subject to construction activities. The specimen predates the current property at 30 Long Lane. Any potential damage to the rooting system from previous construction activities being therefore unknown. The crown of the mature Beech extends over the current attached garage of 30 Long Lane. So as to avoid any damage to the crown as a result of construction activities, the recommendation is to raise the height of the crown so as to achieve a height of at least 8 metres.

3.4 The arboricultural impact assessment has established removal of T3, T8, T9 and T10 are required to facilitate construction activities. T4, mature Cherry being recommended for removal due to the severely impaired structural condition.

3.5 T10, mature Silver Birch being situated in the rear garden being the only tree in the rear garden to be affected by the proposed development.

3.6 The retained trees are to be offered the required tree protection measures necessary as detailed in the Arboricultural Method Statement.

4.0 Root Structure and Root Protection Area

4.1 Collectively known as the Root Protection Area. Rooting systems of trees are made up essentially of two rooting types. Fine / ephemeral fibrous feeding roots and structural stability roots.

4.2 Fibrous feeding roots are those that absorb water and nutrients from the soil, whilst structural stability roots are those that form a frame that supports the stem and crown.

4.3 The spread of these roots from the base of the stem for single stemmed trees is regarded in British Standard 5837:2012 as being the area equivalent to a circle with a radius 12 times stem diameter. Diameter, in general, being measured at 1.5 metres from ground level.

4.4 As tree roots grow radially from the base of the stem, they are usually contained within the upper most 300mm – 600mm of soil and can be quite shallow. Fibrous feeding roots are usually in the upper most 300mm where oxygen, moisture and nutrient content is concentrated and are usually fine and often ephemeral. Structural stability roots are usually deeper so as to offer good stability into the growing medium. Local soil conditions, the presence of hard standing and soil compaction through continued use, have a direct influence on the depth and spread roots will penetrate.

4.5 The root protection area is the area where soil disturbance should be avoided as this is likely to damage the rooting system. The consequences of such damage and disturbance being detrimental to the health and stability of the tree.

4.6 Damage to the fibrous feeding roots will impede the trees ability to absorb oxygen, moisture and nutrients. This is detrimental to tree health and depending on the degree of disturbance and damage may take 3 to 5 years for the effects of this disturbance to become evident as the tree starts to decline.

4.7 The usual form of damage to the structural stability roots takes the form of being cut / severed during construction, excavation and or trenching activities. This form of damage will also have a detrimental effect on the health of the tree whilst also affecting the trees stability. Any actions detrimental to tree stability may weaken the trees ability to withstand wind and storm events. This may predispose the tree to failure and windblow.



5.0 Arboricultural Impact Assessment Tree Protection Method Statement

5.1 The basis for this Tree Protection Method Statement is that disturbance to the root protection area of the retained tree stock shall be kept to an absolute minimum. At all stages of design, demolition, (site clearance) and construction, consideration shall be given to tree protection, reducing excavation, ground disturbance and soil compaction.

5.2 The development proposal requires ground breaking works within the theoretical root protection area of T1, mature Beech. The mature Beech is situated in the garden boundary of 32 Long Lane. An existing managed hedge being on the boundary and prevents access to the base of the specimen. Due to the location of the mature Beech, installing tree protection fencing would impede access and construction activities. Mature Beech represented below.



5.3 Subject to the ground breaking works being undertaken sympathetically and in accordance with this arboricultural method statement. Such works should not be to the detriment of the mature Beech.

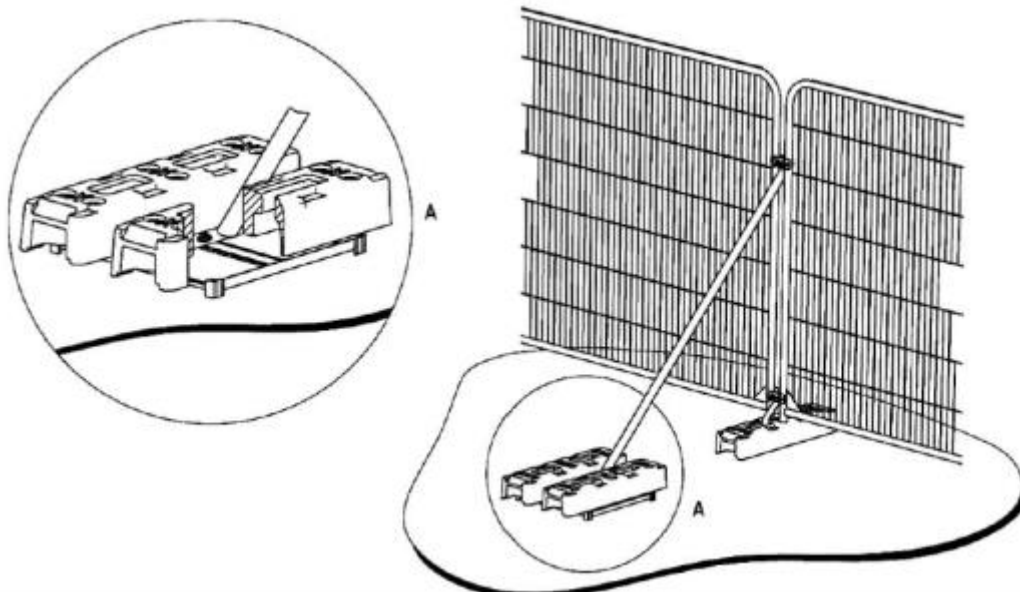
5.4 The retained trees within the garden curtilage of 30 Long Lane are to be offered suitable and sufficient temporary tree protection measures to create sterile Construction Exclusion Zones to the front and rear garden of the property.

5.5 The location of the temporary tree protection fencing for the trees T5 – T9 in the front garden aspect shall be installed in accordance with the root protection areas. The location of T2, prevents the root protection area being protected. The proposed location of the temporary tree protection fencing being represented in the section 6 Tree Protection Plan.

5.6 Prior to any construction activity being undertaken the temporary tree protection fencing is to be installed in accordance with the requirements of this 30 Long Lane Arboricultural Impact Assessment Tree Protection Method Statement.

5.7 It is recommended the tree protection fencing to be installed should be Heras type fencing in accordance with that as detailed in British Standard 5837:2012. Heras fencing is a method of temporary fencing intended for use on construction sites. It consists of individual panels approximately 3.5 metres wide and 2 metres high. Each panel consists of metal mesh contained in a metal tubing frame. The feet slot into concrete or synthetic blocks. They are light weight easy to install by hand and clip together by the means of a nut and bolt clasp connecting the metal frames.

Tree Protection Fencing.



"A" represents supporting struts, if required.

5.8 British Standard 5837:2012 section, 6.2.1.5 states the following:

It should be confirmed by the project arboriculturist that the barriers and ground protection have been correctly set out on site, prior to the commencement of any other operations.

5.9 To ensure compliance with 6.2.1.5. It is recommended that an Arboricultural Watching Brief be commissioned to ensure the temporary tree protection fencing has been installed in accordance with the requirements of this 30 Long Lane Arboricultural Impact Assessment Tree Protection Method Statement.

5.10 The temporary tree protection fencing should include signage at regular intervals stating the reason for the tree protection fence and that it should not be moved or disturbed. For Example, "CONSTRUCTION EXCLUSION ZONE – NO ACCESS".

5.11 Of particular relevance to the mature Beech. In the event excavation works establish the presence of roots an assessment of the roots shall be undertaken. Those less than 25mm diameter can be cleanly cut to allow construction activities to continue. Any roots greater than 25mm diameter shall be assessed on an individual basis with advice sought from Cumbria Tree Surveys.

5.12 The parking of plant, machinery, equipment, vehicles and the storage of materials and waste should only be undertaken within the Construction Zone and existing hard standing areas within 30 Long Lane.

5.13 Under NO circumstances should any grass areas beyond the construction zone be disturbed or used for the parking of plant, machinery, equipment, vehicles, the storage of materials, waste and disposal of washings.

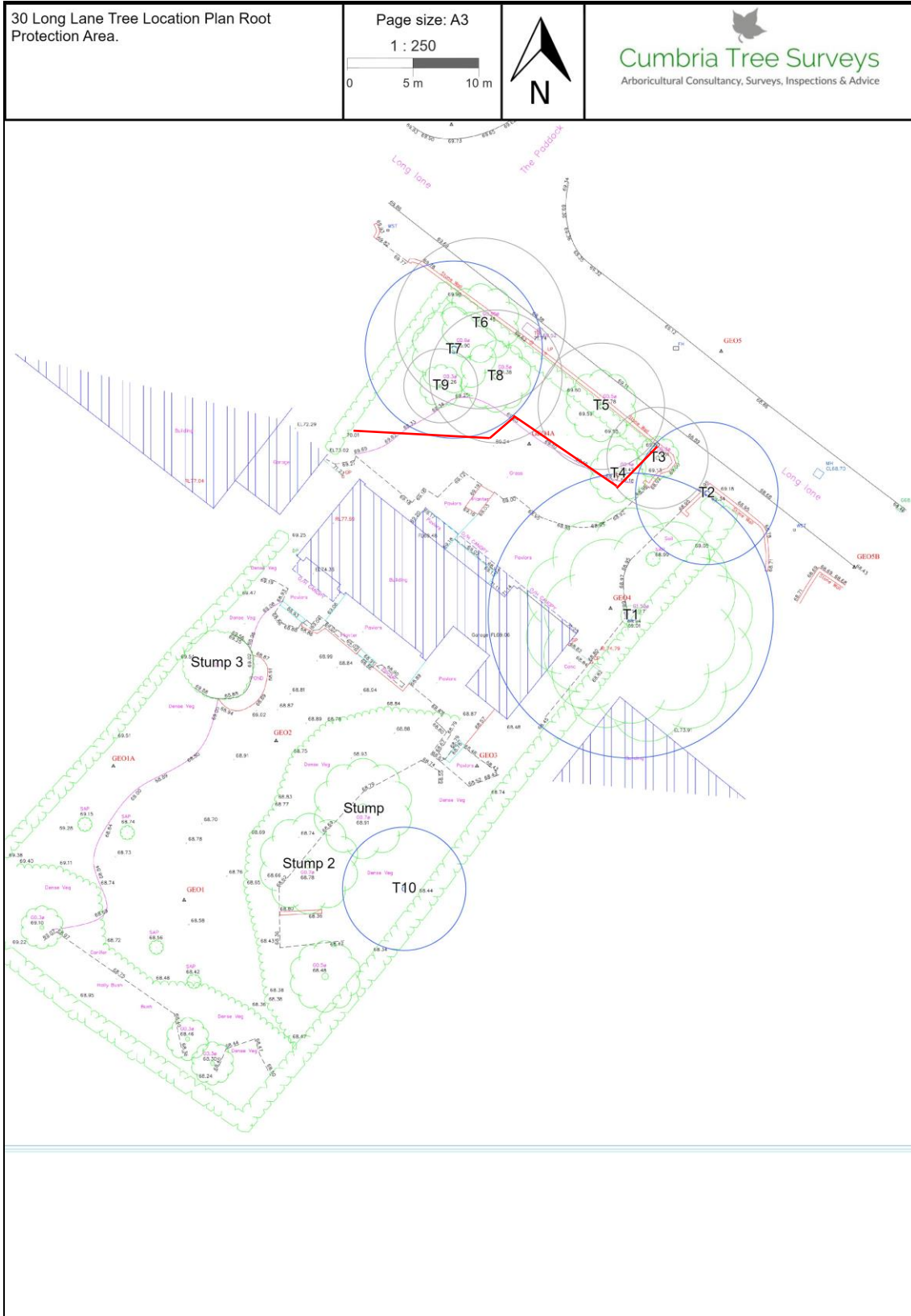
5.14 The temporary tree protection fencing is to remain in situ for the duration of construction. Only on completion of the development are these protection methods to be removed.

5.15 Failure to adhere to the correct sequence, manner and timing of operations detailed within this 30 Long Lane Arboricultural Method Statement may result in damage to trees, and as a consequence breach planning consent. Retained trees are protected by planning law and damage or tree removal may result in a stop notice or prosecution.



6.0 Tree Protection Plan

6.1 The retained trees represented and colour coded in accordance with the British Standard retention category and represented by the root protection area. The recommended location of the temporary tree protection fencing in red.



7.0 Arboricultural Impact Assessment Recommendations

7.1 Following the site visit, assessment and investigation the following recommendations and those as listed in the Arboricultural Survey Data Table are proposed.

7.2 The recommended arboricultural work, often referred to as tree surgery, should only be undertaken by a trained, competent fully insured Arboricultural Contractor. Ideally holding a recognised health and safety accreditation. The contractor should be familiar with implementing the standards as required by the British Standard 3998:2010, Tree work - Recommendations.

7.3 Implementing the recommendations stated in this 30 Long Lane Arboricultural Impact Assessment Tree Protection Plan and Method Statement shall ensure the retained tree stock are offered the required tree protection methods necessary for the proposed development. Doing so shall ensure the proposed development does not result in any detrimental consequences for the retained tree stock.

8.0 Photographic Evidence

T1. Mature Beech with low crown over existing garage.



T2. Mature Sycamore. Location at entrance to 30 Long Lane.



T4. Mature Cherry with extensive basal decay.



T6 – T9. Situated in front garden aspect.



Signed: *Daniel Bold*

Date: 28th January 2024.

Daniel Bold M.Arbor.A., N.C. Arb., H.N.D. Arb., N.E.B.O.S.H. Gen Cert.
Cumbria Tree Surveys Arboricultural Consultancy.

Definitions

The following definitions are based on British Standard 3998:2010, Tree work - Recommendations, British Standard 5837:2012, Trees in relation to design, demolition and construction - Recommendations and Arboricultural terminology.

Tree Structure

Stem:	Main supporting body / truck of the tree and crown.
Scaffold Branch:	Main supporting branches for the crown and lead off the main stem.
Secondary Branch:	Branches that lead off the scaffold branches.
Tertiary Branches:	Those branches that lead off the secondary branches are usually small in diameter and contain the leaf cover.



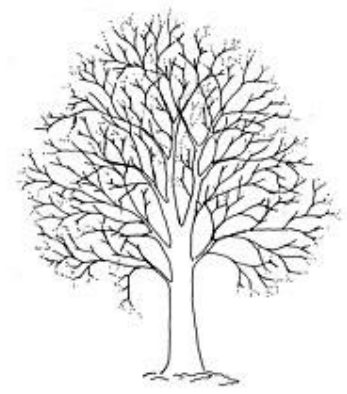
Crown Raising / Crown Lifting

Crown Raising / Crown Lifting is the removal of the lowest branches. Crown Raising is an effective method of increasing the height of the crown over a given target / hazard or obstacle. Crown Raising also enables light transmission to areas closer to the tree. At least two thirds of the total height of the tree should remain. Crown lifting should be specified with reference to a fixed point, e.g. "Crown Raise" to give 5.5 metres clearance above ground level'.



Crown Reduction

Crown Reduction is the reduction in height and / or spread of the crown. The final result should retain the main framework of the crown, and a significant proportion of the leaf bearing structure, leaving a similar, although smaller outline. Not all species are suitable for this treatment and crown reduction should not be confused with 'topping', an indiscriminate and harmful treatment



Crown Thinning

Crown Thinning is the removal of a portion of smaller / tertiary branches, usually at the outer crown, to produce a uniform density of foliage around an evenly spaced branch structure. It is usually confined to broad-leaved species. Crown thinning does not alter the overall size or shape of the tree. Material should be removed systematically throughout the tree, should not exceed the stated percentage and not more than 30% overall. Common reasons for crown thinning are to allow more light to pass through the tree, reduce wind resistance and reduce weight. It is rarely a once only operation particularly on species that are known to produce large amounts of epicormic growth.



Crown Balance

The method of pruning branches to develop an evenly distributed and weighted crown.

Crown Clean

The method of pruning those branches that are dead, dying, dangerous and deemed to be of poor-quality including crossing and rubbing branches.

Side Prune

Method of pruning branches on one side of a tree crown to achieve a clearance from an object / obstruction. Similar to Crown Raise.

Coppicing

Cutting trees close to ground level with the intention of encouraging regrowth of multiple shoots. This practice is species and age dependent.

Deadwood

The pruning of dead, dying branches from the crown of the tree. This may be for the entire crown or specific branches as specified in the Arboricultural Report.

Epicormic Growth

The growing of a previously dormant bud on the main stem or limb of a tree. Often as a result of defoliation or radical pruning.

Fell

The felling or dismantling in sections, of a tree to ground level.

Hedge Laying

The established practice of making and or establishing a hedge by correct cutting and pegging techniques. Stems are cut part way through, laid horizontally and pegged to hold them in position.

Pollarding

Quite a specific process that involves pruning a tree so as to encourage formation of numerous branches arising from the same height on a main stem or principal branches. Important. This process ought to be undertaken on a cyclical basis on trees that have not reached maturity.

Root Protection Area

The minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure is treated as a priority.

Windblow / Windblown

Complete failure of the tree due to a wind or storm event.

Bibliography

British Standard 5837:2012

Trees in relation to design, demolition and construction - Recommendations.

British Standard 3998:2010

Tree work – Recommendations.

National Tree Safety Group.

Common Sense Risk Management of Trees. Forestry Commission 2011.

Town and Country Planning Act 1990.

