Tree Survey
&
Arboricultural Report

(Stage A)
Feasibility: survey and preliminary constraints

At

Barkway
Royston
Hertfordshire, SG8 8BP

Written By;
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Of

Ginger Landscape

95 Park Meadow
Old Hatfield
AL9 5HE

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1. Introduction

1.1. Instructions:

1.1.1. I have been instructed by Paul Highfield from Rockwell Homes, to conduct an Arboricultural survey to BS 5837: (2012), to inspect the significant trees (T1-T14, G1-G6) at Barkway, Royston, Hertforshire SG88BP, to provide an Arboricultural report (Stage A, Feasibility: surveys and preliminary constraints) on the condition of these trees.

1.1.2. The Impact Assessment (Stage C, Proposal: conception and design) and the Method Statement (Stage C, Technical design) do not form part of this document, they will be submitted in a separate document.

1.2. Qualifications and Experience:

1.2.1. I have based this report on my site observations and the provided information and I have come to conclusions in the light of my experience and technical knowledge.

1.2.2. My qualifications and details of my experience are shown in Appendix 1.

1.3. Documents and Information Provided:

1.3.1. The following documents have been received and relate to the same issues that this report is intended to cover:

- Topographical Survey (CAD) Dwg

1.4. Scope of This Report:

1.4.1. This report is only concerned with the trees listed as, (T1-T14, G1-G6) it includes an assessment based on the site visit and the documents provided, listed in 1.3 above.

1.4.2. Trees with a stem diameter of less than 75mm or 150mm in woodlands area have not been recorded as per guidance in BS5837:2012 or species considered to be shrub specimens.

1.4.3. This report is designed to support the planning application at the above site. Its purpose is to assist and inform the planning process according to guidelines laid out in BS 5837: (2012).

1.4.4. This report should not be seen as a substitute for a management plan or a full safety survey.

2. Site Information

2.1. Site Visit

2.1.1. A walk over visual survey of the site and its immediate surrounds was undertaken on 7th of June 2016. All my observations were from ground level without detailed investigations and I estimated all dimensions unless otherwise indicated. If specialist assessment methods are adopted they will be detailed where appropriate. The weather at the time of inspection was sunny.

2.2. Brief Site Description:

2.2.1. The site is located in Barkway. The existing field is proposed to be developed for housing.

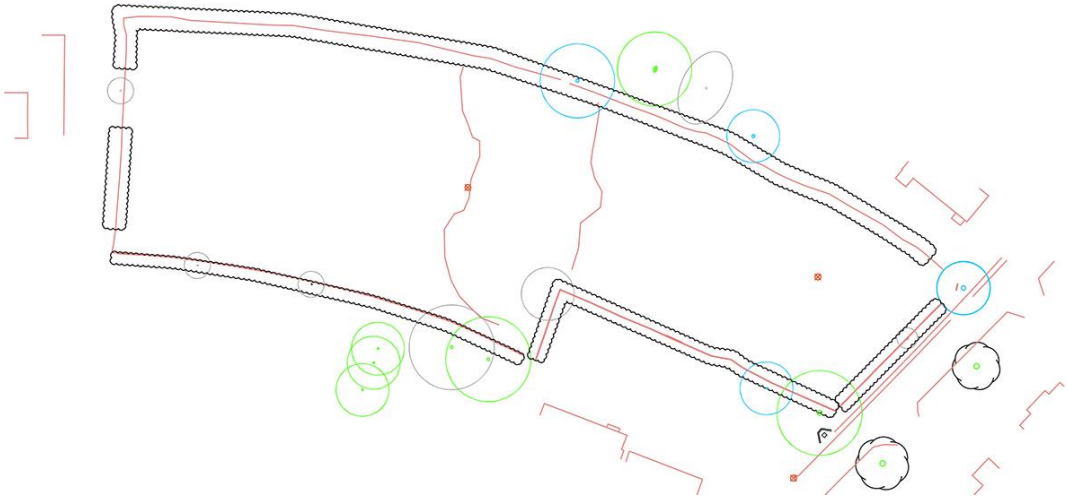

Figure 1: Extent of the survey

2.3. Site Use

2.3.1. The site is privately owned and can be accessed by the B1368.

2.4. Topography

2.4.1. The ground is mainly level with slight depression in the middle.

2.5. Amenity

The site is surrounded by hedgings and hedgerows mainly of Hawthorns. The large trees adjacent to the site are mostly high amenity.

3. Tree Inspection

3.1. Tree Observations:

3.1.1. I visually inspected the significant trees and recorded the information on the schedule included below; all dimensions given are approximate only.

3.1.2. Note to schedule

- Reference numbers shown on drawing 0152, L001
- Species are listed in Common name and in Latin
- Height describes the approximation of the height of the tree from ground level in metres.
- Stem diameter in millimetres at 1.5m above adjacent ground level.
- Branch spread describes the approximation in metres.
- Age is indicated as Young (Y), Semi mature (SM), Early mature (EM) Mature (MA) Over Mature (OM) Veteran (V)
- Physiological condition (good, fair, poor, dead)
- Structural condition (good, fair, poor, dead)
- General comments and comments on preliminary management recommendations
- Estimated remaining contribution in years (less than <10, >10, >20, >40,)
- Category refers to table 1, Cascade chart for tree quality assessment of BS 5837:2012 where A is the most desirable and C the least desirable, with U for removal

3.2. Schedule of trees

Tree Ref. no.	Species	Height M (m)	Stem dia. (mm)	RPA radius (mm)	Branch Spread (m)	Crown Clearance (m)	Age class	Physio-logical condition	Structural condition	Notes	Recommendations	Life Expectany	Category grading
T1	Fraxinus sp (Ash)	14	800*	9600	N 5 W 5 E 5 S 5	1.5	M	Fair	Fair	Form: single stem History: No clear view due to Ivy Defects: Large amount of dead wood Others: Covered in Ivy	No action Off site	>20	B1
T2	Acer Campestre (Field maple)	10	600*	7200	N 5 W5 E 5 S 5	-	M	Fair	Fair	Form: Single stem History: Defects: Leaning tree Others: Off site	No action Off site	>20	B1
T3	Acer Campestre (Field maple)	10	400*	4800	N2 W 3 E 3 S 5	2	M	Fair	Fair	Form: No clear view History: Defects: Growing under T4 Others: Off site	No action Off site	>10	C1
T4	Acer speudoplatanus (Sycamore)	14	400* X 4	15000	N 7 W7 E 7 S7	4	M	Good	Good	Form: Multi stems History: Defects: No clear view Others: Off site	No action Off site	>40	A1
T5	Fraxinus sp (Ash)	14	600*	7200	N 7 W 7 E 7 S 7	5	M	Fair	Fair	Form: single stem History: Defects: large branch wounds on trunk Others: Off site	No action Off site	>20	B1

Tree Ref. no.	Species	Height M (m)	Stem dia. (mm)	RPA radius (mm)	Branch Spread (m)	Crown Clearance (m)	Age class	Physio-logical condition	Structural condition	Notes	Recommendations	Life Expectany	Category grading
T6	Fraxinus sp (Ash)	6	150 200*	4200	N 2.5 W 2.5 E 2.5 S 2.5	-	Y	Good	Good	Form: multi stems History: no significant pruning Defects: no significant defect Others: Off site	No action Off site	>10	C1
T7	Fraxinus sp (Ash)	7	150 150*	3600	N 2.5 W 2.5 E 2.5 S 2.5	-	Y	Good	Good	Form: multi stems History: no significant pruning Defects: no significant defect Others: Off site	No action Off site	>10	C1
T8	Crataegus sp (Hawthorn)	7	300*	3600	N 3 W 3 E 3 S 3	-	M	Fair	Fair	Form: single stem History: no significant pruning. Defects: No clear view Others: Ivy present	No action Off site	>10	C1
T9	Fraxinus sp (Ash)	15	600*	7200	N 8 W8 E 8 S 8	-	M	Good	Good	Form: single stem History: Defects: No clear view Others: Ivy present	No action Off site	>40	A1
T10	Crataegus sp (Hawthorn)	7	400*	4800	N 8 W8 E 8 S 8	-	M	Fair	Fair	Form: single stem History: no significant pruning. Defects: Large amount of dead wood, growing under T9 Others: Ivy present	No action Off site	>10	C1

Tree Ref. no.	Species	Height M (m)	Stem dia. (mm)	RPA radius (mm)	Branch Spread (m)	Crown Clearance (m)	Age class	Physio-logical condition	Structural condition	Notes	Recommendations	Life Expectany	Category grading
T11	Crataegus sp (Hawthorn)	9	200 200 200*	7200	N3 W 3 E 3 S3	-	M	Fair	Fair	Form: multi stems History: Defects: No clear view Others: Off site	No action Off site	>10	C1
T12	Aesculus Hippocastanum (Horse chestnut)	6	250 250*	6000	N 2 W 2 E 2 S 2	-	Y	Fair	Fair	Form: multi stems History: Self seeded Defects: Leaning tree Others: Off site	No action Off site	>10	C1
T13	Ailanthus altissima (Tree of heaven)	14	700*	8400	N 8 W 8 E 8 S 8	5	M	Good	Good	Form: Single stem History: Ivy severed at base Defects: low dead branches Others: Off site	No action Off site	>40	A1
T14	Acer platanoides (Norway maple)	10	250*	3000	N 5 W5 E 5 S5	-	EM	Good	Good	Form: Single stem History: Defects: Leaning, No clear view Others: Off site	No action Off site	>20	B1
G1	(Conifer)	15	400*	4800	N 5 W 5 E 5 S 5	-	M	Fair	Fair	Form: single stem History: Defects: No clear view Others: Off site	No action Off site	>40	A1

Tree Ref. no.	Species	Height M (m)	Stem dia. (mm)	RPA radius (mm)	Branch Spread (m)	Crown Clearance (m)	Age class	Physio-logical condition	Structural condition	Notes	Recommendations	Life Expectany	Category grading
G2	Hedgerow Crataegus sp (Hawthorn)	6	-	-	Varies	-	M	Fair	Fair	Form: varies History: no significant pruning Defects: varies Others: off site	No action Off site	>20	B2
G3	Hedgerow Crataegus sp (Hawthorn) Ilex aquifolium (Holly) Prunus domestica (Plum)	7	-	-	Varies	-	M	Fair	Fair	Form: varies History: no significant pruning Defects: varies Others: off site	No action Off site	>10	C2
G4	Hedge Crataegus sp (Hawthorn)	3	-	-	N 1 W 1 E 1 S 1	-	M	Fair	Fair	Form: - History: maintenance pruning. Defects: varies Others: off site	No action Off site	>10	C2
G5	Hedgerow Crataegus sp (Hawthorn)	6	-	-	Varies	-	M	Fair	Fair	Form: varies History: no significant pruning Defects: No clear view Others: Ivy present	No action Off site	>20	B2
G6	Hedgerow Crataegus sp (Hawthorn)	6	-	-	Varies	-	M	Fair	Fair	Form: varies History: no significant pruning. Defects: varies Others: Ivy present	No action Off site	>10	C1

*Approximate
? Tree species to be confirmed when in leaf

3.3. Summary of our findings and recommendations

3.3.1. The following items are my recommendations in relation to the above facts and opinions. These recommendations are made for management purposes only and are made independently from the development proposals.

- Work must be in accordance with BS 3998:2010
- All work should be done taking account of the Health and Safety at Work Act :1974
- All works must have consent from the local planning department.

3.3.2. Trees to be removed for safety

- None

3.3.3. Trees to be removed for other reasons

- None

3.3.4. Trees to monitor

- None

3.3.5. Trees to have work done for reasons such as crown reshaping, crown reduction, dead wood removal, stubs removal etc…

- None

3.3.6. Trees to be cleared from Ivy

- None

3.3.7. Trees with no actions recommended

- All trees are located off site and required no action

3.3.8. Trees to be re-examine with specialist equipment

- None

3.4. Tree Protection

- The site is not located in a conservation area and no trees are protected by a TPO.

Trees that have Tree Preservation Orders (TPOs) or that fall within a Conservation Area are protected by legislation that makes it an offence to carry out work on those trees without permission from the council.

A TPO application form should be completed to seek consent for felling or pruning a tree on the adjacent site.

Development Control Form

- Application for tree works: works to trees subject to a tree preservation order (TPO) and/or notification of proposed works to trees in a conservation area. Town and Country Planning Act 1990

We strongly advise that checks are made prior to any tree work is done as fines exist for carrying unauthorised works on protected trees.

3.5. Relevant references

BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations
BS 3998:2010 British Standard Recommendations for Tree

Should you have any queries about this report please do not hesitate to contact me.

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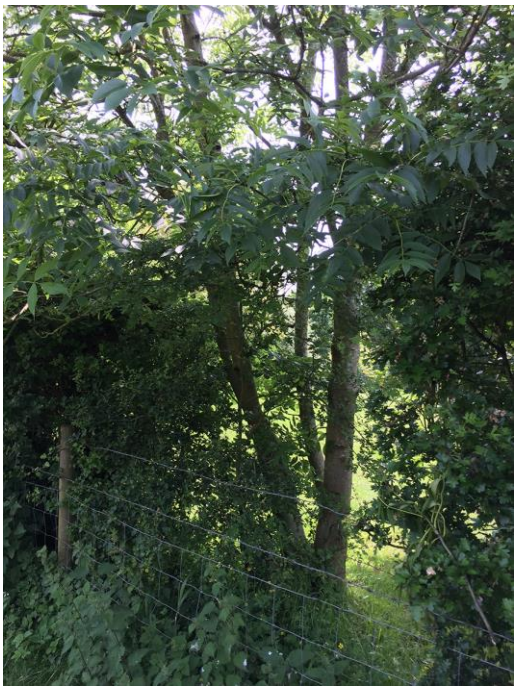
4. Arboricultural Impact Assessment (STAGE C, Proposal: conception and design) Not Included, separate document

5. Method Statement (STAGE C - Technical design**)** Not included, separate document

6. Photographs



T5 Ash showing the large wound



T6 Young Ash



T8 Hawthorn



T9 Ash & T10 Hawthorn



T13 Tree of Heaven



T14 Norway Maple



G1-Conifer & G4 young Hawthorn hedge



G2- Mature Hawthorn hedgerow



G2 - Hedgero

7. Appendix

Appendix 1; Brief qualifications and experience of Sylvie Gabbey

After qualifying in Horticulture, I worked (1981-1989) for the city of Montreal, landscaping public gardens, supervising a team of gardeners, pruning trees and shrubs, grafting young trees, watering and maintaining flower beds.

After moving to UK I worked (1992-1993) as a plant technician maintaining interior arrangement and offering advice on plants installations.

After qualifying in Landscape Architecture I worked (1995-2008) for a firm of Architects within the landscape division designing external spaces, preparing drawing and specification packages for tender and construction site involvement.

With over twenty year of experiences in horticulture, arboriculture and landscape architecture I now work as a freelance offering a wide range of landscape services including tree survey and report writing.

Experience:

2009-	Freelance Landscape Services
1995-2008	Landscape Architect
1992-1993	Plant Technicians
1980-1989	Gardener (head of team)

Qualifications:

1981 Horticulture
1995 Degree in Landscape Architecture
2000 Diploma in Landscape Architecture
2003 Qualifying examination part 4 - Member of the Landscape Institute (Landscape Design Division)
2009 ABC Cert Arboriculture, Level 2 (theory)

BA (Hons), Dip La (Hons), Certificate in Horticulture (Quebec, Canada)
ABC Cert Arboriculture , Level 2 Theory

Appendix 2; Notes on some tree protection issues.

Town & Country Planning Act 1990 (as amended 2008);

Your attention is drawn to part VIII of the above Act, sections of this Act are used to apply and enforce TPO's as well as control works carried out on specimens subject to a TPO. As a tree owner before giving instructions to a third party to carry out tree works or carrying out such works yourself you must first ensure that the specimen requiring work is not covered by an order. If a TPO is in force then the prior written permission of the Local Planning Authority enforcing the order must be gained.

If a breach of the TPO is proven the planning compensation act 1991 may be used to enforce penalties, currently the maximum penalty upon conviction is £20,000 as well as costs (including any necessary remedial works). In serious circumstances cases may be committed for trial to the Crown Court and on conviction be liable to an unlimited fine.

Conservation areas;

The law relating to conservation areas is in part II of the Planning (Listed Buildings and Conservation Areas) Act 1990. Conservation areas are areas of special architectural or historical interest the character or appearance of which it is desirable to preserve or enhance. They are designated by the LPAs.

Trees in conservation areas that are already protected by a TPO are subject to the normal TPO controls. However in addition the Town and Country Planning Act 1990 makes particular provision for trees in conservation areas which are not the subject of TPO's. Under section 211, any person proposing to cut down or carry out work on a tree in a conservation area is required to give the LPA 6 weeks notice of their intention to do so Known as a Section 211 notice.

The inclusion of the inspected site within a conservation area will be investigated in the same manner as a TPO by the inspector, and will have been indicated within the general site information of this report. No section 211 notice will be submitted as part of this report however separate arrangements can be made to do so upon request.

Deeds & Covenants;

On occasions contained within the legal documentation of property ownership certain controls are put in force they may for example require the retention of tree cover of a certain variety within the boundary of a property for perpetuity, likewise they may prohibit the planting of certain varieties. It is the responsibility of any party wishing to carry out works to ensure that they are not in breach of such controls.

On occasion, usually with leasehold properties ownership and responsibility for maintenance are retained by the lessor (usually the owner of the deeds) responsibility for checking this information is as above.

Standards of work;

Work recommended within this report is in accordance with British standard 3998 "tree work". This should be considered as a basic minimum standard and any parties carry out arboricultural operations should be able to demonstrate their commitment to that standard.

Appendix 3; Understanding BS 5837:2012

Stage 1: Survey and Report

This identifies the existing trees and gives each a retention category. The categories are allocated independently of development proposal.

Tree Categories

Category A: Identify in light green colour
Trees of high quality and value in such condition as to be able to make a significant contribution (a minimum of 40 years is suggested)
Usually mature trees or younger tree with exceptional form. Trees that are particularly a good example of their species, especially rare or unusual.
Retention of these trees is strongly encouraged.

Category B: Identify in mid blue colour
Trees of moderate quality and value in such condition as to make a significant contribution (a minimum of 20 years is suggested)
Trees that could be included in the high category but are downgraded because of impaired condition (remediable defects)
Retention of these is desirable thought the removal of occasional specimens may be acceptable.

Category C: Identify in grey colour
Trees of Low quality and value in adequate condition to remain until new planting can be established (a minimum of 10 years is suggested)
The removal of these trees should generally be seen as acceptable in order to facilitate development.

Category U: Identify in red colour
Trees are in such condition that any existing value would be lost within 10 years and should be removed for reasons of sound arboricultural management.
These trees should be removed if the development is to proceed.

Tree Constraint Plan (TCP)

The TCP indicates the location, crown spread, retention category and root protection area (RPA) of each tree. The drawing informs where development may proceed without causing damage to trees.

Stage 2: Arboricultural Impact Study

This report identifies and evaluates the impact that the proposed development may have on existing trees.

Stage 3: Arboricultural Method Statement

This report indicates the necessary methodology required to protect trees from potential damage during the development process.

Appendix 4; Glossary of Abbreviations & Terms.

Arboriculturalist: a person skilled in the science of the care and maintenance of trees they should carry the appropriate liability/ insurance and be preferably be a member of a professional body of tree specialists (the current leading national body is the "Arboricultural association").

Aspect: The general out look of the site.

BGS: British Geological Survey.

Butt: the lowest part of the trunk where it adjoins the surrounding ground.

C.O.D.I.T: Compartmentalisation of decay in trees, the natural means used by a tree to prevent the spread of decay.

Cavity: a hollow in a wooden part of the tree.

Coupe/Compartment/Copse: a defined area within a woodland or forest.

Covenant: an agreement to maintain or carry out present commitments often contained within the deeds of a property.

Crotch: the junction of two branches.

Crown: The section of the tree which contains leaf/bud covered branches.

D.F.C: distance from construction.

DBH: diameter at breast height, The measurement is taken at 1.5 meters above ground level.

Decay/Rot: the breaking down of the normal structure of the wood, usually leading to the structural weakening of the tree.

Deed: a law contract.

Desiccation: any significant reduction in soil moisture content by evaporation or extraction by trees, shrubs, etc.

Diameter: a straight line passing through the centre of a geometrical shape.

Dog Leg: an unusual growth form where a branch suddenly changes direction. Caused by many different factors but may weaken the integrity of the affected limb

Epicormic Growth: literal meaning 'upon stem' forming from adventitious buds. Such branching is often founded on a poor attachment.

Heave: upward ground movement and the corresponding movement of effected foundations.

Illite: one of the three common clay minerals.

Inclinometer: a device using geometry to measure the height of objects.

Increment: a small sample of wood removed for analysis with a boring device.

Kaolinite: one of the three common clay minerals.

L.P.A.: the local planning authority (part of local council).

Montmorillonite: one of the three common clay minerals.

Parasitic: an organism, which will attack its host, usually to the disadvantage of the host.

Pollarding: a method of tree management in which the entire crown is removed at regular periods.

Scaffold: the branch structure in the crown that supports the smaller branches and gives shape to the tree.

Silt: a soil made up of particles with diameters of size intermediate between clay (less than 0.002 mm) and sand (greater than 0.06 mm).

Subsidence: downward ground movement and the corresponding movement of affected foundations.

*Suckers: y*oung adventitious shoots growing from the base of the tree or directly from the trunk and main branches.

Target: any item either static or transient that would be hit in the event of any part of the tree failing.

TPO: Tree preservation order.

Trunk: the main supporting portion of the tree, usually bare of twigs and leafs.

Appendix 5; Tree Constraint Plan L001 (Reduced copy, NTS)