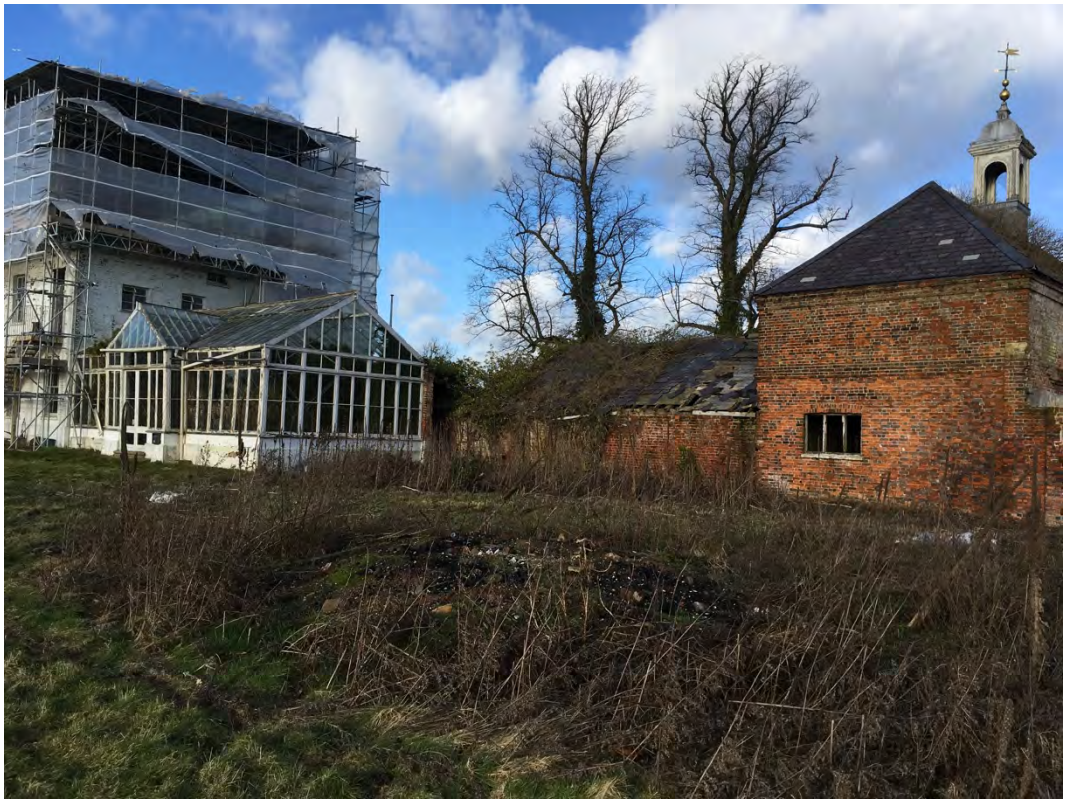
LandscapeCollective

Findings of the Arboricultural Assessment - Arboricultural Development Statement



Northaw House, Cuffley

On behalf of LW Developments Ltd

January 2018

Project Ref: LC/00195

Project Number:	LC/00195
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1.0 INTRODUCTION

1.1 Landscape Collective were instructed by LW Developments Ltd Limited to carry out a tree survey in accordance with BS: 5837:2012 on land at Northaw House, and hereafter referred to as 'the site'.

1.2 The scope of this assessment was to visit the site and to survey relevant trees/vegetation in accordance with BS5837:2012 *'Trees in relation to design, demolition and construction – recommendations.'* Landscape Collective have also been instructed to assess any potential arboricultural impacts to the arboricultural resource in light of the development proposals.

1.3 The following information is therefore contained within this report:

- Tree survey report
- Schedule of tree survey data
- Tree Survey Plan showing preliminary tree constraints

1.4 For the purposes of carrying out the assessment, Landscape Collective were provided with the following information:

- Topographical Survey – REF34602P-REV-A

The Site

1.5 The site is located to the west of the village of Northaw, Potters Bar, between the roads of Judges Hill and Coopers Lane. The site comprises several areas, including the listed building of Northaw House, with associated walled garden, coach house, and outbuildings. There is a main access route that winds through a large grassed area, with densely wooded areas and individual trees scattered throughout. The site is in a state of disrepair, with scaffolding enclosing Northaw House, with the walled garden and outbuildings having fallen into disrepair and dereliction over the years. In terms of trees and vegetation, the site has been actively managed in part with some areas of vegetation removal, with others being absent of management, with areas of dead, dying tree species located within wooded areas that require management. There are multiple large specimens scattered throughout the site, with areas of regeneration and colonising species.

1.6 Descriptions and accompanying photos will be provided under the 'Tree Survey Findings' section of the report.

Site Visit

1.7 Landscape Collective visited the site on 18th September 2017. Individuals present on site: David Paginton CMLI. Dip Arb L4. M.Arbor.A.

1.8 All trees were surveyed in accordance with BS: 5837:2012 (Appendix 6 – Methodology).

Planning Status

Statutory Tree Protection

1.9 The site is not located within a Conservation Area and it is understood that none of the trees are covered by a Tree Preservation Order. However, this should be double checked before undertaking any tree works by contacting Welwyn Hatfield Borough Council.

1.10 The following information is included for advisory purposes.

Tree Preservation Order

1.11 Notwithstanding specific exemptions and in general terms, a TPO prevents the cutting down, uprooting, topping, lopping, wilful damage or wilful destruction of trees or woodlands without the prior consent of the local planning authority.

1.12 Penalties for contravention of a TPO tend to reflect the extent of damage caused but can, in the event of a tree being destroyed, result in a fine of up to £25,000 if convicted in a Magistrates' Court, or an unlimited fine if the matter is determined by the Crown Court.

1.13 On many non-residential sites (excluding specific exemptions) there is also a statutory restriction relating to tree felling that relates to quantities of timber that can be removed within set time periods. In basic terms, it is an offence to remove more than 5 cubic metres of timber in any one calendar quarter without having first obtained a felling license from the Forestry Commission.

1.14 Any proposed tree works that are planned to be carried out on site must be carried out in accordance with the statutory controls outlined.

Statutory Wildlife Protection

1.15 Although preliminary visual checks from ground level of likely wildlife habitats are made at the time of surveying, detailed ecological assessments of wildlife habitats are not made by the arboriculturist and are not required/agreed as part of the pre-app.

1.16 Trees which contain holes, splits, cracks and cavities could potentially provide a habitat for bats in addition to birds and small mammals. It is recommended that in line with any accompanying specialist advice, any tree works should only be carried out following a detailed climbing inspection to the tree to ensure that protected species or their nests/roosts are not disturbed. If any are found, the project manager, site owner or consulting arboriculturist should be informed and appropriate action taken as recommended by a Statutory Nature Conservation organisation such as Natural England.

1.17 It is advised that tree/hedgerow works are carried out with the understanding that birds will generally nest in trees, hedges and shrubs between March and August. Ideally, operations should be avoided during this period. Any necessary work should only be carried out following a preliminary check of the vegetation.

1.18 For information, the Wildlife and Countryside Act 1981 (as amended), The Countryside and Rights of Way Act 2000 (as amended) and the Conservation of Habitat and Species Regulations 2010, form the basis of the statutory legislation for flora and fauna in Britain.

2.0 SUMMARY OF SURVEY FINDINGS

Existing Arboricultural Resource

2.1 In total 38 items were surveyed. Of the 38 surveyed items, there was a mixture of individual trees and tree groups. Species surveyed include Oak, Lime, Ash, Sycamore, Cheery, Willow, Yew, Chestnut, Elm, Holly, Cypress, Elder and Laurel. The site had been cleared of vegetation in parts over the past few years, as is clearly visible within the site photos.

Tree Survey Summary

2.2 A summary of the survey findings before development are shown below:

2.3 In total 38 items were surveyed. 18 surveyed items were considered to be moderate quality (Category B) with an anticipated useful life expectancy of in the region of 20+ years. 19 surveyed items were considered to be low quality (Category C) with an anticipated useful life expectancy of in the region of 10-20+ years. 1 item was considered to be unsuitable for retention with an anticipated useful life expectancy of less than 10 years.

2.4 The site has been absent of managed for many years, in which time vegetation has colonised and areas have become overgrown, been recently cleared, or become inaccessible. The area to the south of thewalled garden has become largely inaccessible and comprises regenerating hawthorn, ash and sycamore, none of which are large or remarkable examples of their species. The area needs active management.

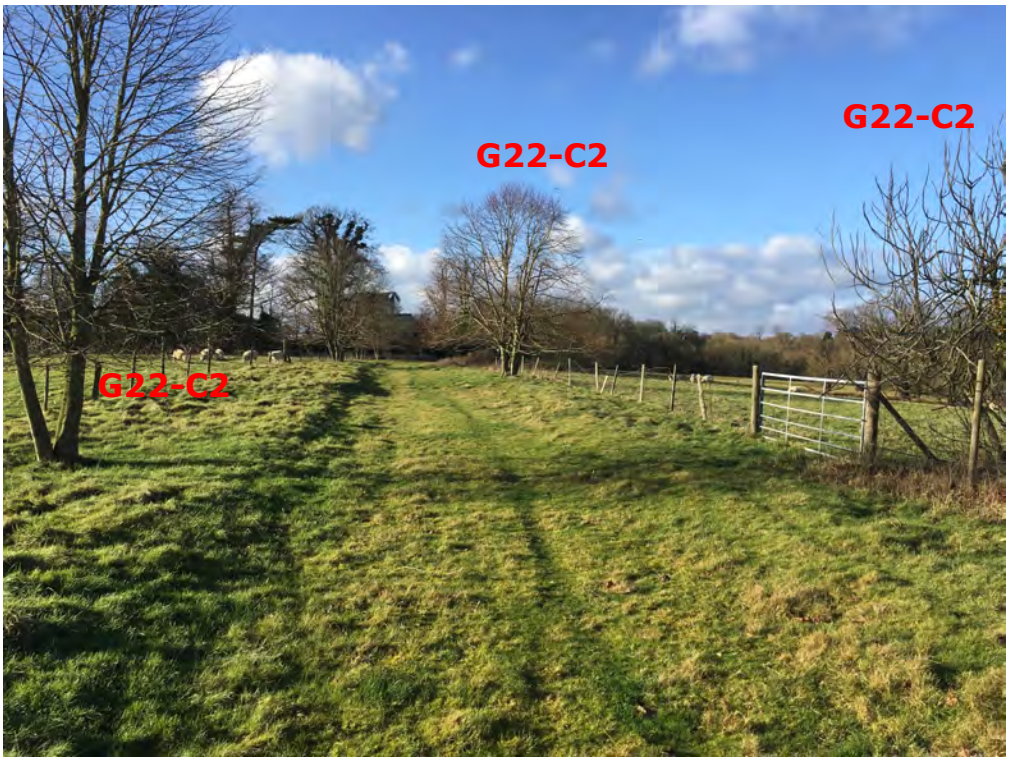
2.5 There is an area (G34-C2) of trees and vegetation between the walled garden and the access road, which again requires management. The ground is littered with glass bottles, is generally absent in places of understorey, with laural scattered throughout. Many of the trees are poor qualitiy individually, with areas of garden refuse, and dead or in decline trees.

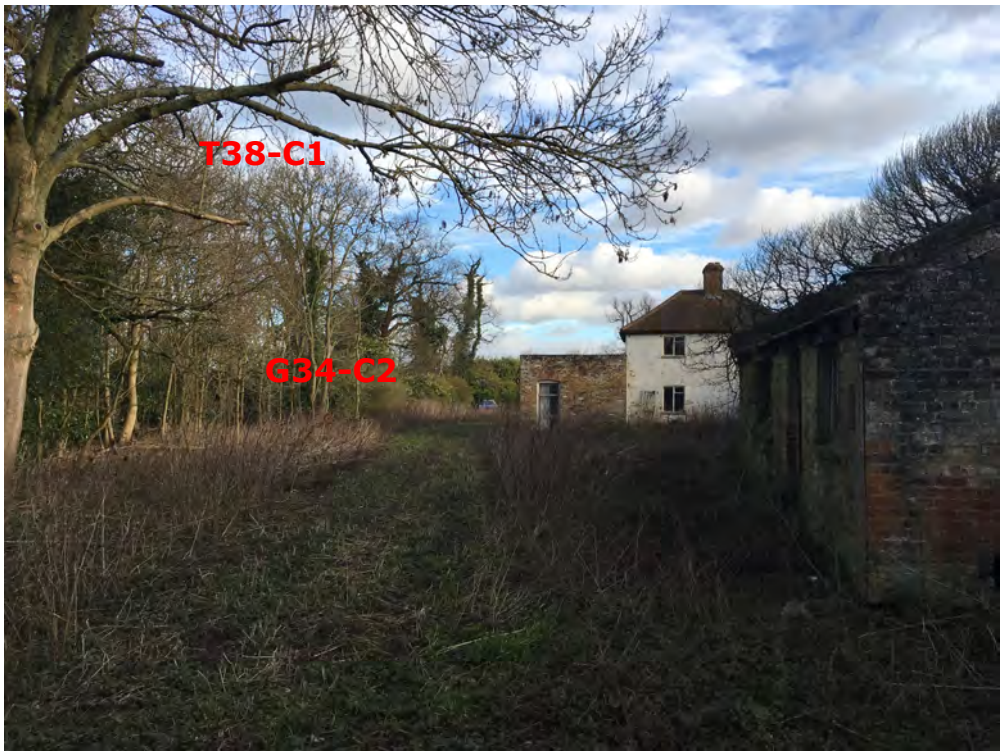
2.6 To the north, and aligning the access road, is another area (G35-B2) of trees which comprises larger better quality trees with holly and laurel

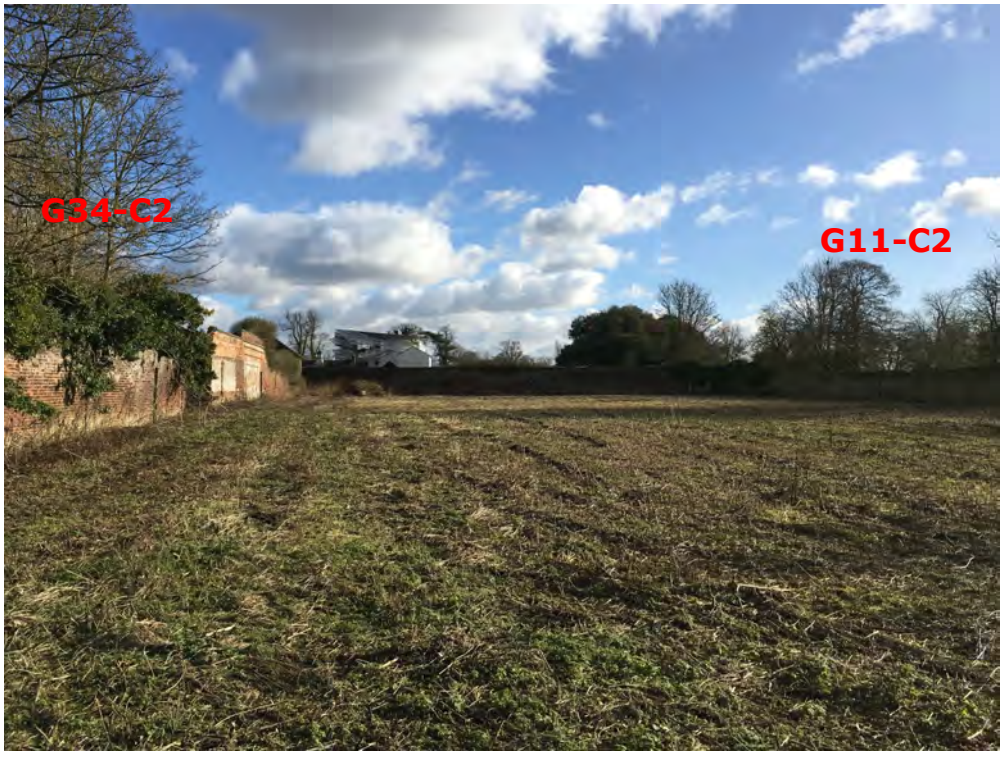
throughout. Parts are inaccessible, and there are multiple poor quality trees. Again, the area requires active management.

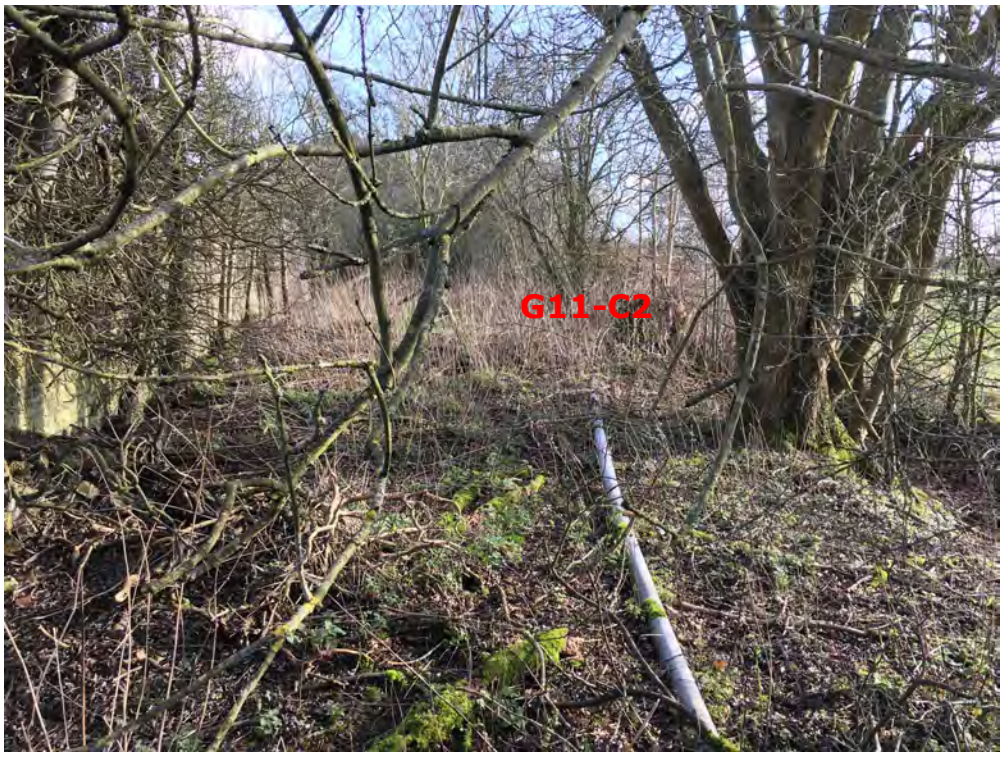
2.7 In large areas of vegetation, practicalities of surveying every tree wasn't deemed appropriate due to the scale and nature of these areas. Therefore, the larger species have been recorded and shown on the plan in addition to group information for the component group. Trees have had their diameters measured, been given a quality categorisation, with the RPA shown, and any relevant notes regarding their structural or physiological condition.

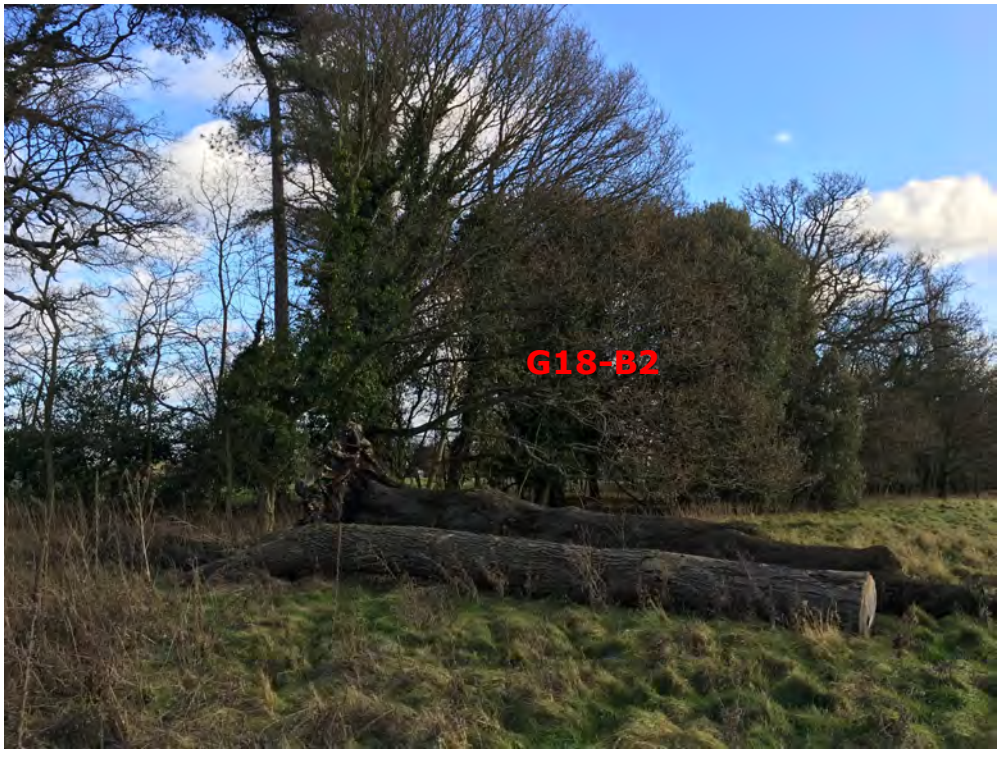
2.8 Selected photographs of the site are shown below:




T38-C1
G34-C2


G34-C2
G11-C2


G11-C2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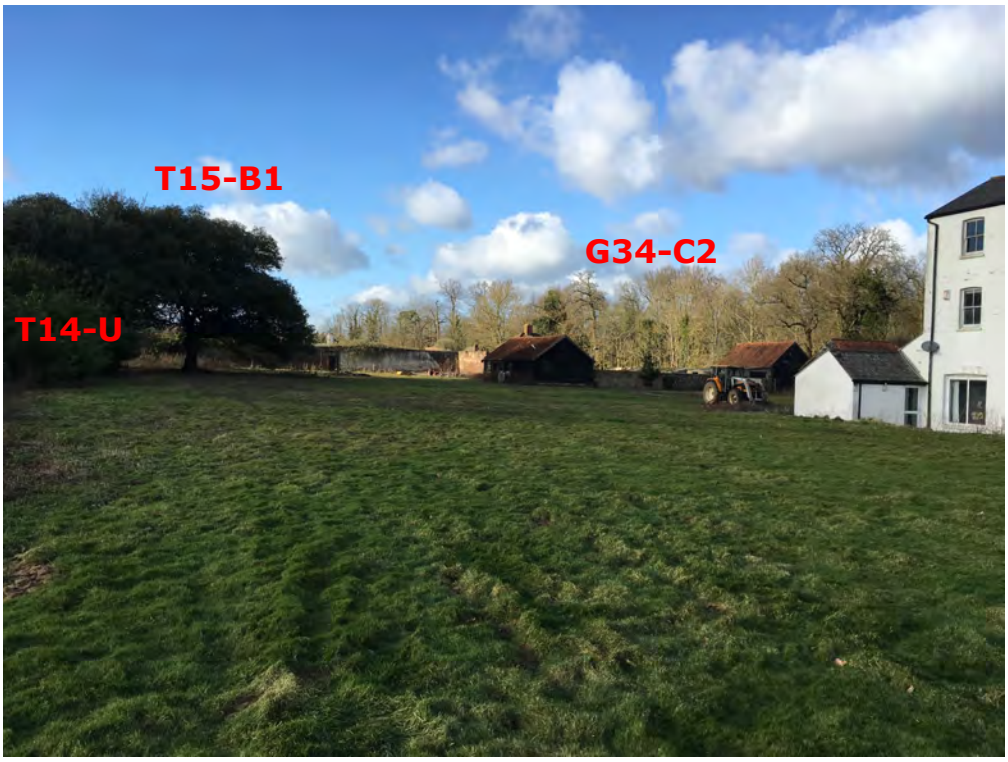
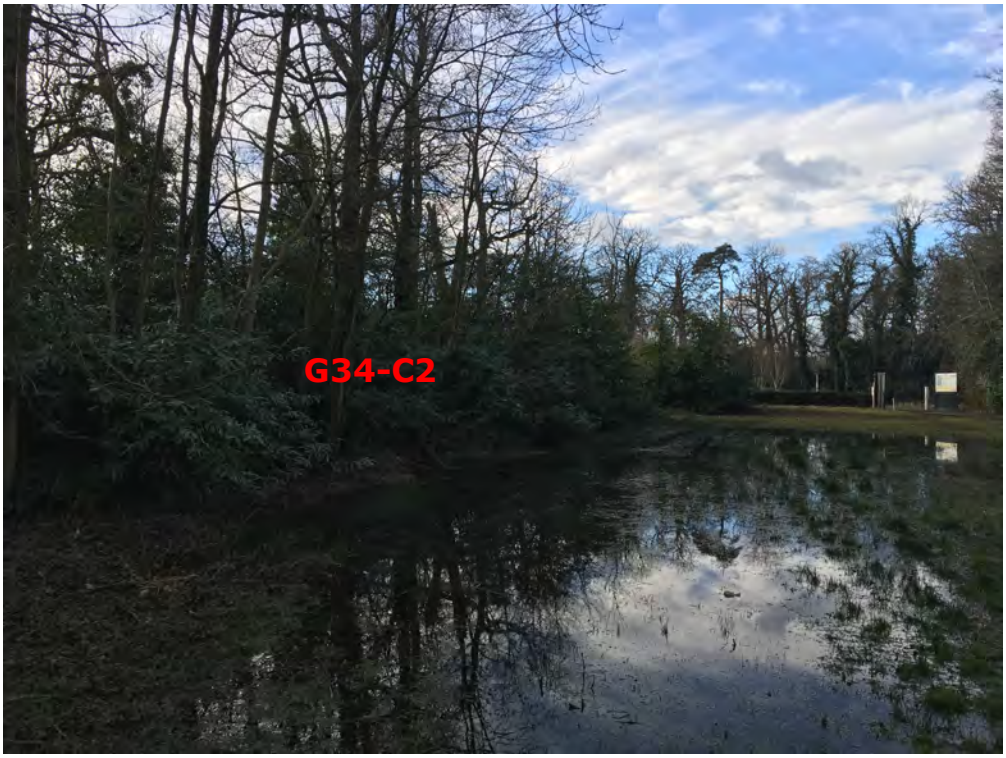
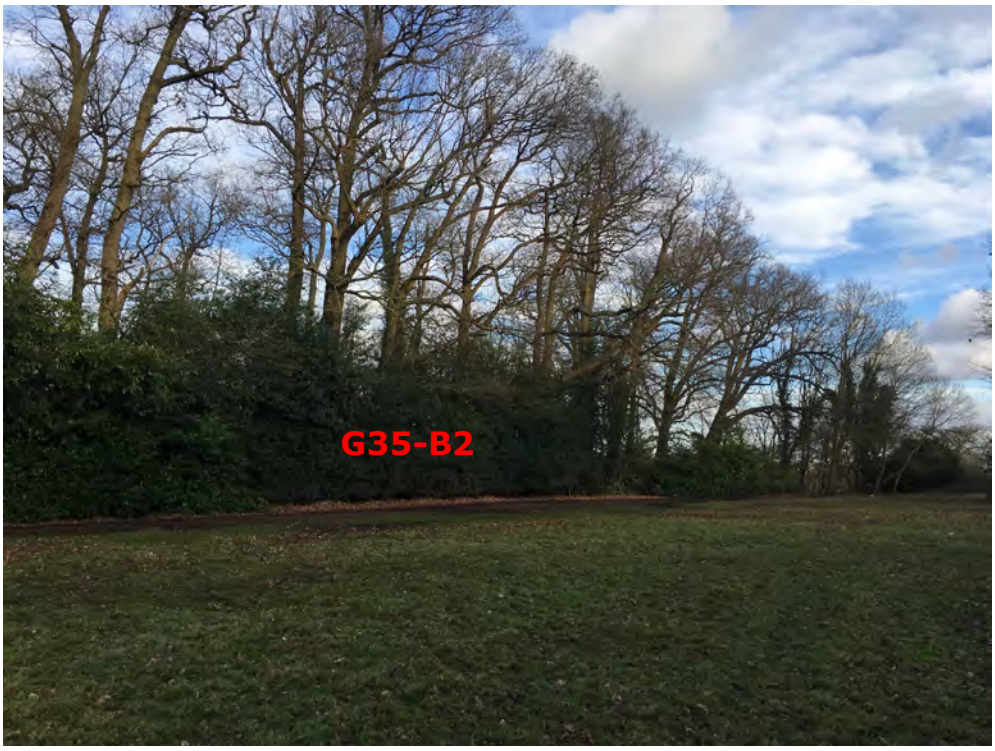
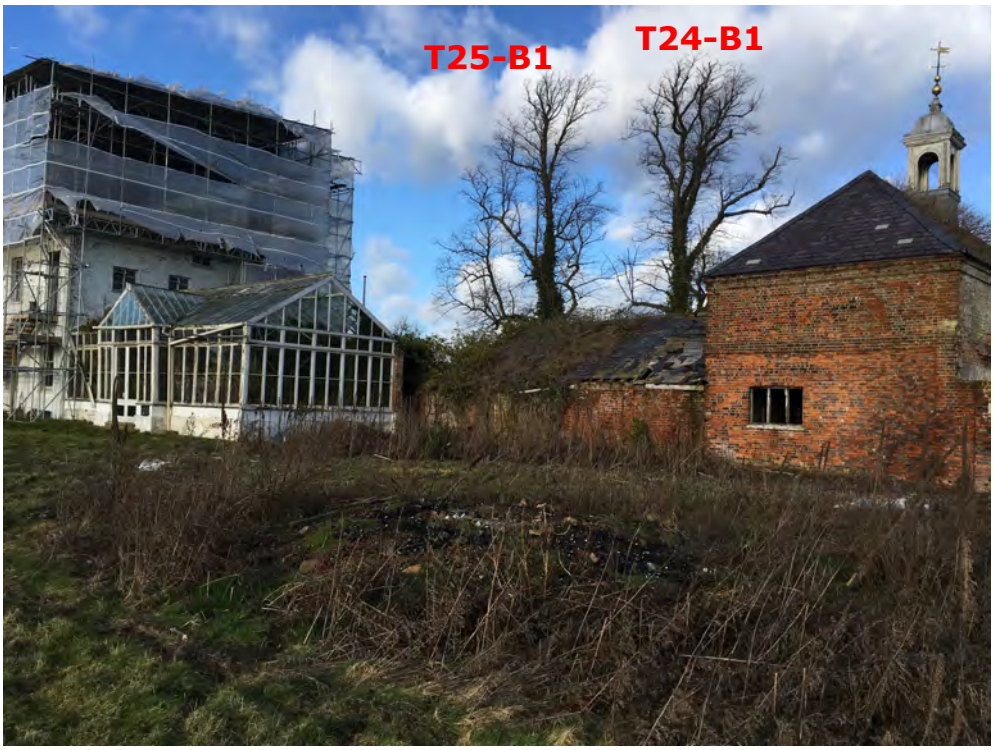

T15-B1
G34-C2
T14-U


G34-C2


G35-B2


T25-B1
T24-B1

3.0 PRELIMINARY TREE CONSTRAINTS

3.1 In accordance with BS5837:2012, below ground constraints, or root protection areas (RPAs), for the surveyed items have been plotted onto the tree survey plan for the site. These are represented as a circle centred on the base of each tree stem with a radius of 12 times stem diameter measured at 1.5m above ground level.

3.2 With reference to BS5837:2012, a root protection area (RPA) is defined as a 'layout design tool indicating 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 should be treated as a priority' (BS:5837:2012 p.4 para. 3.7). The default position, when considering design layout in relation to RPAs, should be that structures are located outside the RPAs of trees to be retained.

3.3 BS5837:2012 states (p.11 para. 4.6.2) that, 'Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced'. The BS goes on to state that 'Modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution'. Any deviation from the original circular plot should consider:

- morphology and disposition of roots;
- topography and drainage;
- soil type and structure; and
- the likely tolerance of the tree to root disturbance or damage, based on factors such as species, age, condition and past management (BS: 5837:2012 p 11, para 4.6.3).

3.4 Root systems can be damaged in several ways as follows:

- Severance of a root will destroy all parts of the root beyond that point. The larger the root severed, the greater the impact on the tree. If roots are damaged close to the trunk, the anchorage and stability of the tree can be affected;

- The root bark protects the root from decay and is also essential for further root growth. If damage to the bark extends around the whole circumference, the root beyond that point will be killed;
- Soil compaction, which may occur from storage of material or passage of heavy equipment over the root area, can restrict and even prevent gaseous diffusion through the soil, and thereby asphyxiate the roots. The roots must have oxygen for survival, growth and effective functioning;
- Lowering the soil level will strip out the mass of roots near the surface;
- Raising soil levels will have the same effect as soil compaction;
- Incorrect selection and application of herbicide; and
- Spillage of oils or other harmful materials.

3.5 Above ground constraints posed by trees describe the capacity for trees to have an overbearing or dominating effect on new developments. Typical above ground constraints include a number or combination of inconveniences including shading, branch spread, movement of trees during strong winds and so on. If not adequately considered, above ground constraints can lead to repeated requests to fell or heavily prune retained and protected trees.

3.6 The colour-coded categorisation of tree quality is also shown on the tree survey plan.

4.0 NEXT STAGE

Arboricultural Impact Assessment (AIA) – Stage 2

4.1 Once a design is in place, an arboricultural impact assessment will be required to assess the impacts of the proposals on the existing arboricultural resource. The AIA will identify which survey items are to be removed due to existing structural and physiological condition, that are to be removed due to the development proposals, and which survey items will be retained.

Arboricultural method Statement (AMS) – Stage 3

4.2 Once the design is finalised and before construction takes place, an arboricultural method statement should be compiled detailing the location and nature of protection measures, including protection barriers, signage and ground protection (temporary and permanent). All site operative must be made aware of the nature of the protection set out in the AMS and should remain in place throughout construction.

5.0 SUMMARY

5.1 The site as a whole is in need of active management. There are areas of trees that have colonised and become overgrown coupled with areas of partial vegetation clearance. The site is generally well treed in what is a mature landscape setting.

5.2 In total 38 items were surveyed. 18 surveyed items were considered to be moderate quality, 19 were considered to be low quality, with 1 item considered to be unsuitable for retention.

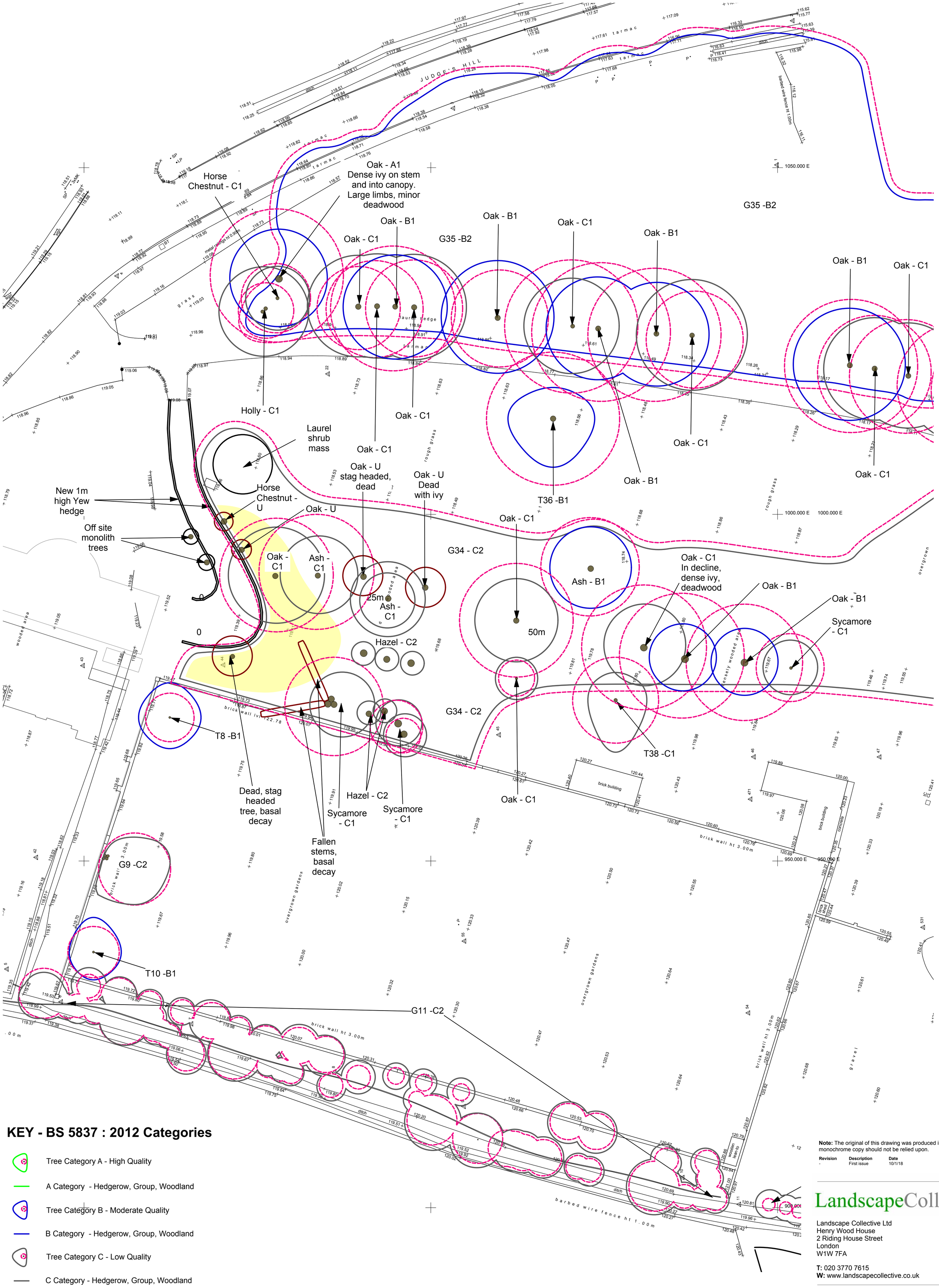
5.3 Any future development proposals on the site should be designed with a view to the preliminary tree constraints that are illustrated on the Tree Survey Plan. The Project Arboriculturist should provide input to the on-going review of layout and landscape drawings.

APPENDIX 1 – TREE SURVEY SCHEDULE

Ref no.	Species	Ht. (m)	Est.	Crown Spread (m)											Stem		Life stage	Structural Condition and Notes	Management Recommendations	Physiological Condition	ULE	Category Grading	RPA radius	RPA area
				N	Est.	S	Est.	E	Est.	W	Est.	Ht. 1st Br. (m)	Est.	1st Br. Direction	Ht. Can. (m)	Stem Count	Stem dia. (mm)								
G1	Willow	15.0	-	As shown								N/A			0.5	2	424	M	Brambles at base, in garden area between existing buildings. Previously managed, re growth evident. Typical of age and species.	Remove brambles from base.	Fair	10+	C2	5.1	81
G2	Laurel	4.0	-	As shown								N/A			0.5	1	75	M	Large group of laurel stands, typical of age and species.	None at time of survey.	Fair	10+	C2	0.9	3
T3	Lime (Common)	18.0	-	4.0	-	3	-	7	-	6.0	-	N/A			0.5	1	800	M	Epicormic growth from base of stem, previously ugly crown reduced, minor deadwood. Dead limb in centre canopy.	Remove growth	Fair	20+	C1	9.6	290
T4	Lime (Common)	19.5	-	2.5	-	6	-	7	-	3.0	-	4.0	-	North west	3.0	1	810	M	Lean to south, growth from base. Dense ivy on stem and into canopy. Looks to have been previously crown reduced.	Sever and remove ivy and re inspect.	Fair	20+	C1	9.7	297
T5	Yew (Common)	13.0	-	6.0	-	6	-	6	-	6.0	-	N/A			0.5	1	680	M	Surrounded by laurel, good shape. Beneath adjacent chestnut tree.	None at time of survey.	Good	20+	B1	8.2	209
T6	Chestnut (Horse)	15.0	-	7.0	-	7	-	7	-	7.0	-	3.5	-	South	2.0	1	1280	M	Fungal bracket at base of stem to north west. Dense ivy on stem and into canopy. Metal rail embedded in tree at 7m south west. Multiple large pruning wounds and decay entry points. Moderate deadwood.	Sever and remove ivy. Detailed inspection required to check extent of decay.	Poor	10+	C1	15.4	741
G7	Laurel, ash,	4-17	-	As shown								N/A			0.5	1	400	M	Area of ash trees and laurel bushes in grassed area. Typical of age and species.	None at time of survey.	Fair	20+	C2	4.8	72
T8	Sycamore	11.0	-	5.0	-	4.5	-	4.5	-	4.5	-	N/A			0.5	1	290	M	3m south of wall, typical of age and species. Good shape. Slight lean to south.	None at time of survey.	Good	20+	B1	3.5	38
G9	Cherry	6.0	-	As shown								N/A			0.0	3	433	M	Growing from base of wall. Multiple stems growing across ground, group shape. Poor form.	Remove carefully.	Poor	10+	C1	5.2	85
T10	Sycamore	13.0	-	5.0	-	4.0	-	4.0	-	3.5	-	N/A			0.5	1	310	M	3m south of wall, typical of age and species. Good shape. Slight lean to south.	None at time of survey.	Good	20+	B1	3.7	43
G11	Sycamore, ash, hawthorn, ivy, holly	8.0	-	As shown								N/A			0.5	1	100	M	Dense trees and shrubs, impassible. Ivy and bramble throughout.	Impassable for most part. Needs active management.	Fair	20+	C2	1.2	5
G12	Hawthorn, holly, privet	6.0	-	As shown								N/A			0.5	1	75	M	Line of small hawthorn stands aligning edge of ditch. Typical of age and species.	None at time of survey.	Fair	20+	C2	0.9	3
T13	Sycamore	17.5	-	6.0	-	6.0	-	6.0	-	6.0	-	N/A			2.0	5+	962	M	11 stems, multiple potentially weak forks, dense stem unions, cavity observed. Good shape, edge of ditch.	None at time of survey.	Fair	20+	B1	11.5	419
T14	Oak (Holm)	13.0	-	7.0	-	8.0	-	8.0	-	8.0	-	N/A			3.0	1	1500	OM	Tree house and ladder nailed into stem and canopy branch unions. Major deadwood, extensive decay at base of stem and limb unions. Extensive cracking. Tree breaking down heartwood for nutrients.	Either fence off tree, or stop children playing in it on safety grounds. Detailed inspection, potential canopy reduction to reduce sail effect in weak stems. Consider fencing off or removal.	Poor	<10	U	18.0	1018
T15	Oak (Holm)	16.0	-	###	-	8.0	-	7.5	-	8.5	-	N/A			0.5	1	880	M	Large hole at base to west, extends up to at least 1m with internal decay. Moderate fallen deadwood, multiple abscised branches, potential hazard beam at 6m north-west. Large spreading, good shape. Suppressed to west.	Recommend detailed inspection of base. Remove hanging deadwood.	Fair	20+	B1	10.6	350
T16	Yew (Common)	9.0	-	3.0	-	3.0	-	3.0	-	3.0	-	N/A			0.5	1	290	M	Suppressed to west, growing under oak canopy.	None at time of survey.	Fair	10+	C1	3.5	38
G17	Laurel	7.0	-	As shown								N/A			0.5	1	100	M	Large group of laurel stands, typical of age and species.	None at time of survey.	Fair	10+	C2	1.2	5
G18	Pine, sycamore, Holme oak, lime, oak, hawthorn, ash,	15.0	-	As shown								N/A			1.0	1	650	M	Tree belt between fields. Individually poor but collective quality. Some small and some large stemmed species. Lacks management. Several fallen trees and deadwood. Most with ivy on stems.	Remove ivy from stems, re introduce management. Suggest removing dying and poorer species and replant.	Fair	20+	B2	7.8	191
T19	Oak (English)	25.0	-	8.5	-	11.0	-	11.0	-	8.0	-	N/A			1.0	1	1550	M	Very large spreading prominent tree at edge of tree group, hard to access. Dense ivy on stem and into canopy. Major fallen deadwood, limb loss and thinning canopy. Adventitious growth on stem indicates stress.	Sever and remove ivy. Remove deadwood. Suggest fence area off for safety reasons.	Fair	20+	B1	18.6	1087
G20	Holly, laurel, sycamore	8.0	-	As shown								N/A			0.5	1	250	M	Isolated small trees in fragmented line along dilapidated field fence. None remarkable examples of species. Poor.	Remove	Fair	20+	C2	3.0	28

T21	Ash (Common)	15.0	-	9.0	-	7.0	-	8.5	-	10.0	-	3.0	-	North west	1.0	1	560	M	Metal fencing close to base of stem. Moderate fallen deadwood. Typical of age and species.	None at time of survey.	Fair	20+	B1	6.7	142
G22	Sycamore	8.0	-	As shown								N/A			1.0	1	350	M	Group of sycamore either side of old access route. All multiple stems, several with crossing stems. Good shapes. Typical of age and species.	None at time of survey.	Fair	20+	C2	4.2	55
T23	Oak (English)	12.0	-	6.5	-	5.0	-	6.5	-	5.0	-	N/A			2.5	1	350	M	Located at edge of entrance area, suppressed to north. Other vegetation growing from base. Poor shape. Deadwood, limb loss, dense ivy on stem and in canopy. Exposed heartwood on branch over extending access. Unable to access base, diameter estimated.	Remove ivy and vegetation at base. Remove branch overhanging access.	Fair	20+	C1	4.2	55
T24	Lime (Common)	25.0	-	7.0	-	4.0	-	6.0	-	6.0	-	N/A			2.5	1	1000	M	Epicormic growth at base. Wall debris at base. Looks to have outgrown location adjacent previous wall alignment. Previously been crown reduced, dense ivy on stem. Unable to access base, diameter estimated.	Remove ivy and growth from base. Remove wall debris.	Fair	20+	B1	12.0	452
T25	Lime (Common)	24.0	-	5.5	-	7.0	-	5.0	-	8.0	-	N/A			1.0	1	1000	M	Growing adjacent brick wall. Half wall has collapsed as tree has outgrown its location. Dense ivy on stem and in canopy. Looks to have been previously crown reduced. Unable to access base, diameter estimated.	Remove ivy and growth from base. Remove wall debris.	Fair	20+	B1	12.0	452
G26	Holly, laurel	5.0	-	As shown								N/A			0.5	1	75	M	Holly and laurel bushes at base of old wall and adjacent trees. Poor examples of species, poor group.	Remove	Fair	10+	C2	0.9	3
G27	Oak, sycamore	14.0	-	4.0	-	4.0	-	4.0	-	5.0	-	N/A			0.5	1	873	M	Oak suppressed to east, minor deadwood on lower laterals, adventitious growth indicates stress.	None at time of survey.	Fair	20+	C2	10.5	345
G28	Ash, oak	14.0	-	4.0	-	5.0	-	4.0	-	3.0	-	N/A			1.0	1	460	M	Large ash with small oak to east. Oak stunted form and suppressed. Ash typical of age and species.	Remove oak tree.	Fair	20+	B2	5.5	96
T29	Oak (English)	9.0	-	3.5	-	3.5	-	2.0	-	3.5	-	N/A			3.0	1	400	M	Small multi stem, dense clown, located within shrub mass.	Remove shrub mass and re plant with native hedge.	Fair	20+	B1	4.8	72
T30	Sycamore	11.5	-	4.0	-	5.5	-	2.5	-	4.0	-	N/A			1.0	5+	730	M	Multi stem as part of previous hedge, potential weak fork unions, crossing branches. Good shape.	None at time of survey.	Fair	20+	B2	8.8	241
T31	Oak (English)	9.5	-	3.0	-	5.0	-	5.0	-	4.0	-	1.5	-	South east	0.5	1	390	M	Good shape, dense crown, typical of age and species.	None at time of survey.	Good	20+	B1	4.7	69
T32	Ash (Common)	16.0	-	4.0	-	4.5	-	3.0	-	2.0	-	2.0	-	South west	2.0	1	440	M	Suppressed to west by cherry tree. Minor deadwood, typical of age and species.	Remove shrub mass and re plant with native hedge.	Fair	20+	B1	5.3	88
T33	Cherry (Bird)	7.0	-	5.0	-	6.0	-	5.0	-	3.0	-	0.5	-	South	1.0	1	300	M	Typical of age and species. Shrub mass at base. Weak fork.	Remove shrub mass and re plant with native hedge.	Fair	20+	B1	3.6	41
G34	Cherry (Bird)	6.0	-	3.5	-	4.5	-	2.0	-	3.5	-	N/A			0.5	1	160	M	Within shrub mass, close together, regenerating cherry.	Remove shrub mass and re plant with native hedge.	Fair	20+	C2	1.9	12
G35	Yew, elder, cherry, cypress, oak, ash, sycamore, elm, holly	7-25	-	As shown								N/A			0.5	1	510	M	Group of varying sized trees aligning the existing access track. Laurel understory in places. Deadwood. 4m canopy height over access.	Needs active management.	Fair	20+	B2	6.1	118
T36	Chestnut (Horse)	17.0	-	4.5	-	7.0	-	6.0	-	6.5	-	N/A			1.0	1	800	M	Exposed heartwood on northern side, exposed roots. Adjacent flooded grass area. Minor deadwood. Exposed heartwood on southern side. Minor limb loss.	Remove shoots from lower stem.	Fair	20+	B1	9.6	290
G37	Oak, laurel, hazel, ash,	7-23	-	As shown								N/A			0.5	1	500	M	Individually poor quality, retain better specimens, laurel understory. Dead and in decline trees, Garden refuse to western edge.	Needs active management.	Fair	20+	C2	6.0	113
T38	Ash (Common)	17.0	-	4.0	-	7.5	-	4.5	-	7.5	-	4.0	-	South east	3.0	1	520	M	Open grown tree, deadwood in crown, pruning evident.	None at time of survey.	Fair	20+	C1	6.2	122

APPENDIX 2 – TREE SURVEY PLAN



KEY - BS 5837 : 2012 Categories

- Tree Category A - High Quality
- A Category - Hedgerow, Group, Woodland
- Tree Category B - Moderate Quality
- B Category - Hedgerow, Group, Woodland
- Tree Category C - Low Quality
- C Category - Hedgerow, Group, Woodland
- Tree Category U - Unsuitable for Retention
- Root Protection Area to BS:5837:2012
- Shrub Mass / Offsite Tree
- Area of garden refuse

N

0 50m

Note: The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

Revision	Description	Date
-	First issue	10/1/18

LandscapeCollective

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Client:
LW Developments Limited

Project:
Northaw House

Description:
Tree Survey and Constraints Plan Sheet 1 of 4

Status:
For Planning

Scale:	Drawn I Checked	Date:
1:250 @A1	**DP SW**	**10/01/2018**

Job Number:	Drawing Number:	Revision:
LC/00195	**01**	**-**

G35 -B2

G35 -B2

Oak - B1

Oak - C1

Oak - C1

Oak - C1
Moderate deadwood

Oak - C1
Ivy on stem, poor form, lean to south-east

Oak - C1
In decline. Lighting strike with exposed heartwood along entire stem. Lean to east, limb loss, deadwood, recommend remove or monolith as part of active management.

Ash - U
Weak fork with exudate. Poor.

Sycamore C1

Ash -C1

Oak - C1

Oak - C1

Oak - C1

Oak - C1
In decline, dense ivy, deadwood

Oak - B1

Oak - B1

Sycamore - C1

G34 - C2

G7 -C2

T5 -B1

T3 -C1

G34 -C2

T31 -B1

Shrub mass - hawthorn, 2m high

T32 -B1

T6 -C1

T4 -C1

G2 -C2

G1 -C2

T15 -B1

G12 -C2

T13 -B1

T16 -C1

T14 -U

G17 -C2

NORTHAW HOUSE

KEY - BS 5837 : 2012 Categories

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- B Category - Hedgerow, Group, Woodland
- Tree Category C - Low Quality
- C Category - Hedgerow, Group, Woodland
- Tree Category U - Unsuitable for Retention
- Root Protection Area to BS:5837:2012
- Shrub Mass / Offsite Tree

N

0 50m

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Project:
Northaw House

Description:
Tree Survey and Constraints Plan Sheet 2 of 4

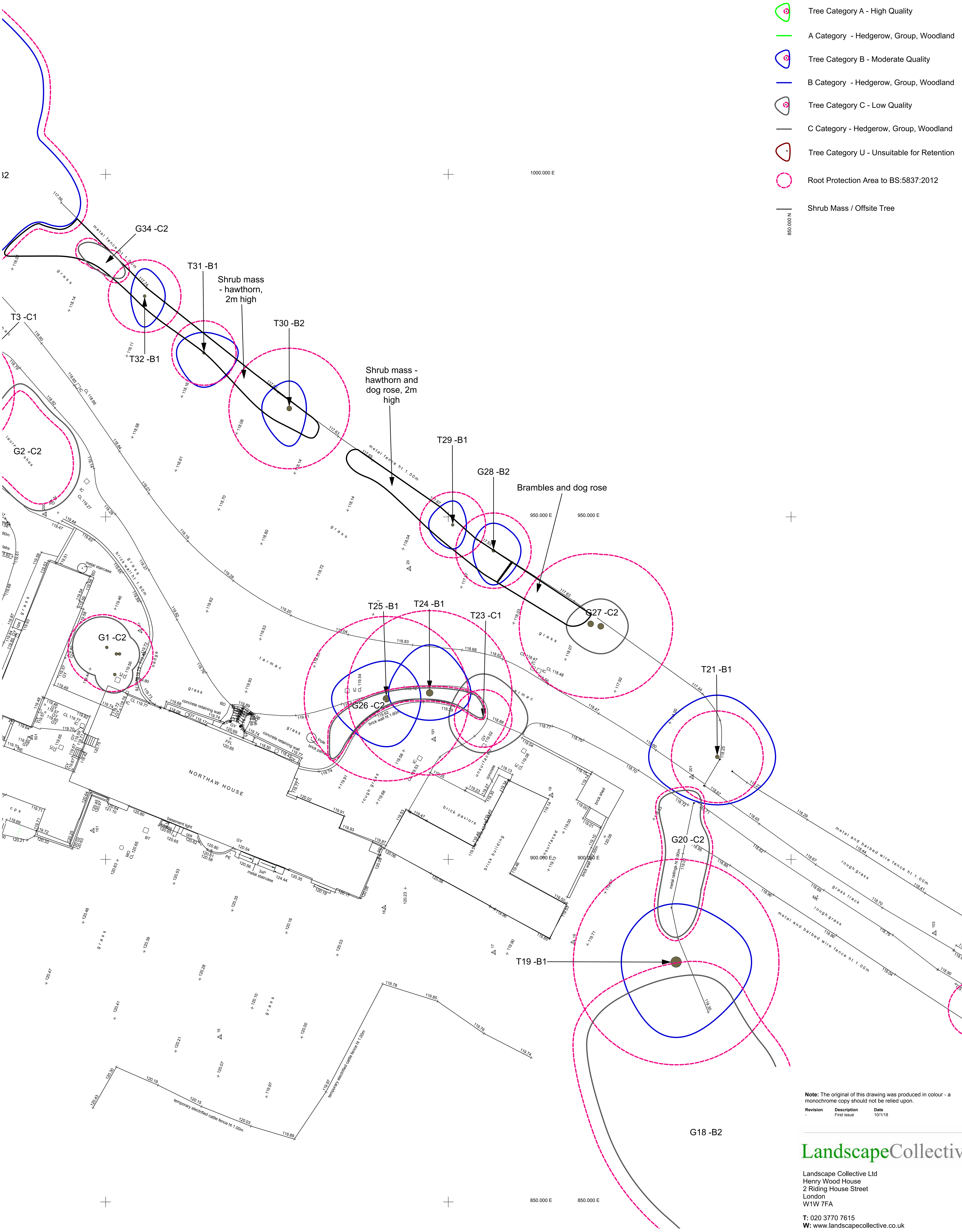
Status:
For Planning

Scale:	Drawn I Checked	Date:
1:250 @A1	**DP SW**	**10/01/2018**

Job Number:	Drawing Number:	Revision:
LC/00195	**01**	**-**

KEY - BS 5837 : 2012 Categories

- Tree Category A - High Quality
- A Category - Hedgerow, Group, Woodland
- Tree Category B - Moderate Quality
- B Category - Hedgerow, Group, Woodland
- Tree Category C - Low Quality
- C Category - Hedgerow, Group, Woodland
- Tree Category U - Unsuitable for Retention
- Root Protection Area to BS:5837:2012
- Shrub Mass / Offsite Tree



N

0 50m

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Tree Survey and Constraints Plan Sheet 3 of 4

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1:250 @A1	**DP**	**SW**	**10/01/2018**

Job Number:	Drawing Number:	Revision:
LC/00195	**01**	**-**

Brambles and dog rose

T19 -B1

T21 -B1

G27 -C2

G20 -C2

G22 -C2

G18 -B2

Off site garden shrubs

Off site chestnut. DBH 800mm. Height 11m.

950.000 E

900.000 E

850.000 E

N

0

50m

KEY - BS 5837 : 2012 Categories

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Job Number:	Drawing Number:	Revision:
LC/00195	**01**	**-**

APPENDIX 3 – METHODOLOGY

1.1 The tree survey was carried out with reference to the methodology set out in BS5837:2012 *'Trees in relation to design, demolition and construction – Recommendations'.* Trees were not tagged.

1.2 Trees were surveyed individually or as groups where it was considered that they had grown together to form cohesive arboricultural features either aerodynamically (trees that provide companion shelter), visually (e.g. avenues or screens) or culturally (including for biodiversity). However, where it was considered that there was an arboricultural need to differentiate between attributes trees within groups/woodlands were also surveyed as individuals

1.3 Tree survey findings are recorded in the tree survey schedule.

1.4 Within the tree survey schedule, each surveyed tree (T), hedgerow (H), group (G), woodland (W) on or adjacent to the site is given a reference number which refers to its position on the tree survey plan.

1.5 Also shown on the tree survey plan are quality grading and preliminary tree constraints: root protection areas.

1.6 *Tree species*: listed by common name.

1.7 *Heights:* measured in metres. They are recorded to the nearest half metre for dimensions up to 10m and to the nearest whole metre for dimensions over 10m.

1.8 *Trunk diameters:* measured in millimetres and are rounded to the nearest 10mm. Single stemmed tree diameters are measured at 1.5m above ground level or, where a fork or swelling makes this impractical, at the narrowest point beneath. Diameters of multi-stemmed trees are calculated as '*combined stem diameters'* according to specific guidance set out within BS5837:2012 (p.10, para 4.6.1 a and b).

1.9 *Crown spreads:* taken at the four cardinal points to derive an accurate representation of the tree crown. They are recorded up to the nearest half metre for dimensions up to 10m and to up the nearest whole metre for dimensions over 10m. For trees assessed as groups or woodland, an

estimated mean radial crown spread in metres is taken for trees at the 80 percentile size.

1.10 *Crown clearance:* expressed both as existing height above ground level of first significant branch along with its direction of growth (e.g. 2.5m-N), and also in terms of the overall canopy. Measurements are recorded to the nearest half metre for dimensions up to 10m and to the nearest whole metre for dimensions over 10m.

1.11 *Estimates:* where any other measurement has had to be estimated, due to inaccessibility for example, this is indicated by a "#" suffix to the measurement as shown in the tree survey schedule.

1.12 Life stage:

- Y – young (stake dependent);
- SM - Semi-Mature (still capable of being transplanted without preparation, up to 30cm girth and not yet sexually mature);
- EM – Early Mature (not yet having reached 75% of expected mature size);
- M – Mature (anything else up to normal life expectancy for the species);
- OM – Over Mature (anything beyond mature and in natural decline); and
- V – Veteran (any tree displaying characteristics described by Natural England).

1.13 *Management Recommendations:* recorded in relation to a tree's structural and/or physiological condition (e.g. the presence of any decay and physical defect) and /or any preliminary management recommendations that may be appropriate. This is NOT intended to comprise a specification for tree work; further advice should be sought prior to implementation. Trees

assessed as being in apparently immediately hazardous condition will be notified to the client separately as soon as practical.

1.14 *Physiological condition:*

- Good (Generally in healthy condition. No indications of impaired physiological function and in optimum condition for age and species);
- Fair (Condition satisfactory though below mean species performance, with indicators of reduced vitality. Some intervention may be required);
- Poor (Tree in decline/retrenching, with significantly impaired physiological function for age and species); and
- Dead (self-explanatory).

1.15 The above are informed by the following;

- Leaf size and colouration – unless otherwise state, leaf size and colouration is typical of the age and species; and
- Canopy density – unless otherwise stated, the canopy density of trees is typical of the age and species.

1.16 *Structural Condition & Notes:*

- Good (without any observable significant biomechanical structural weaknesses);
- Fair (with minor biomechanical structural flaws. Some remedial action may be required); and
- Poor (with significant biomechanical weaknesses requiring intervention particularly where risk management is required).

1.17 Notes on the apparent structural integrity of the tree are based upon visual tree assessment, including notes on form, taper, forking habit, storm damage, wood decaying fungi, pests and disease etc. plus other pertinent observations.

1.18 *Anticipated useful life expectancy (ULE)*: the length of time a tree is estimated to be able to make a safe useful contribution to local amenity is expressed in years as: <10, 10+, 20+, 40+.

1.19 *Category Grading:* individual trees, hedgerows, groups of trees, and woodlands are assessed in terms of quality and benefit within the context of proposed development and graded into one of four categories (U, A, B, and C) which are differentiated on the tree survey plan (Appendix 3) plan by the colours indicated below:

Category U (Red)

1.20 Unsuitable for retention. Trees in such a poor condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

Retention Implications to a site

1.21 Not a material consideration in the planning process but may have other benefits i.e. ecological benefits/importance.

Category A (Green)

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

Retention Implications to a site

1.23 Tree should be retained and amendments to a proposed scheme should be identified in preference to tree removal.

Category B (Blue)

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

Retention Implications to a site

1.25 Where possible amendments to a proposed scheme should be considered in preference to tree removal.

Category C (Grey)

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

Retention Implications to a site

1.27 The retention of trees may be advantageous in the short term, but they should not be seen as a constraint to development.

1.28 A, B and C trees have also been given a sub-category of 1, 2 or 3 which reflects their arboricultural, landscape or cultural and conservation values respectively. Each subcategory has an equal weight, for example an A1 tree has the same retention priority as an A3 tree.

1.29 Trees have been assigned 'U' or category grading A-C in accordance with the cascade chart given in BS: 5837:2012.

1.30 In addition to the category, the tree survey schedule also describes each tree's root protection area (RPA) in terms of radius (metres) and overall area (sq metres).

Limitations

1.31 This report has been undertaken in compliance with BS: 5837:2012 and is not intended to be a tree safety survey. This report is prepared for planning application purposes only and does not evaluate the degree of risk posed by trees. Any notes offered regarding structural integrity of trees are to be considered incidental. Our recommendations given for immediate intervention should be put in the hand of the owner/site manager as soon as reasonably practicable.

1.32 Trees are dynamic living organisms as well as self-supporting dynamic structures, capable of achieving considerable size and structural complexity. Their physiological and structural condition can change rapidly in response to a wide range of biotic/abiotic factors. They are exposed to and can become damaged by the elements and by human activity, and have co-evolved with decay causing organisms that can degrade and sometimes destroy their structural integrity. The laws and forces of nature dictate a natural failure rate even among trees that appear healthy and structurally sound. They therefore have the potential to fail structurally, without prior manifestation of any reasonably observable symptoms. By their very nature, therefore, it is not possible to categorically state that any tree is 'safe' or hazard free. Tree surveys and/ or tree inspections are inherently a snap shot in time of the structural and physiological conditions of the trees concerned.

1.33 It is beyond the scope of this report to comment in relation to structural damage – direct or indirect, existing or potential – that might be associated with vegetation growth, or vegetation-related soil subsidence or heave.

1.34 Unless otherwise stated, all such surveys/inspections are undertaken from ground level and no internal inspections or tests have been undertaken.

1.35 Any management recommendations set out within this report are of an advisory and preliminary nature only and relate to trees within the context of current site use.

1.36 The findings and recommendations of this report should be considered time-limited for planning purposes to a maximum of 24 months from the date of this report (absent revisions of BS5837, which render pre - existing data obsolete).