

ARBO RIC ULTURAL REPORT

Wings Nursery, Lidsey Road,
Woodgate, Chichester PO20
3SU

Prepared by

Jonathan Rodwell NCH (Arb.)

October 2017



Beechdown ref: B/0173/17

Wings Nursery – tree survey/report – October 2017



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SUMMARY

- A survey was undertaken that identified and assessed the quality of 26 trees.
- An area for potential development beyond the root protection areas of retained trees was outlined.

1.0 INTRODUCTION

1.1 I have received instruction from Michael Bish B.A (Hons) Dip. Arch. R.I.B.A of ADM Architects to provide arboricultural consultancy services in relation to trees at Wings Nursery, Lidsey Road, Woodgate, Chichester PO20 3SU.

1.2 The purpose of the instruction was to:

- Undertake a ground level tree survey;
- assess the quality of the surveyed trees;
- advise on the potential developable area in relation to trees to inform planning feasibility studies and design options.

1.3 The survey was conducted and the report prepared with reference to the guidelines detailed in BS 5837:2012 “Trees in relation to design, demolition and construction – Recommendations” and according to good arboricultural practice.

1.4 Contents of the report are exclusively for the use of the client; liability does not extend to any third party without our written consent.

2.0 DOCUMENTS PROVIDED

2.1 Plans provided by ADM Architects.

1457-02	Site plan as existing	1:1250 @A4
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3.0 SURVEY FORMAT

3.1 Trees included in the survey were individuals or groups with a stem diameter, at 1.5m high, greater than 75mm. The trees were inspected from the ground only and no specialist decay detection was undertaken. Trees were assessed from within the site or from public areas.

- 3.2 Data was recorded on a handheld computer, the trees plotted via GPS and their positions marked on the 1:1000 @ A4 tree survey plan (Appendix 4).
- 3.3 A detailed tree survey sheet is shown at Appendix 1 with an explanation of the terms and categories covered as Appendix 2.
- 3.4 The extent of the survey was limited to collecting sufficient data to identify a potential developable area based around the material constraints posed by trees worthy of retention. It was not a detailed tree hazard or risk assessment and, unless specified, no guarantee, expressed or implied, can be given regarding the safety of the trees or their suitability for safe long term retention.

4.0 GRADING CATEGORIES

- 4.1 The quality of the surveyed trees was assessed and they were categorised to reflect the criteria recommended in Table 1 of BS 5837:2012 as detailed at Appendix 3.
- 4.2 The following is a breakdown of the number of trees in each BS category:

Category U	1 tree
Category A	4 trees
Category B	13 trees
Category C	8 trees

5.0 STATUTORY CONTROLS

- 5.1 Consultation with the Local Planning Authority confirmed that the surveyed trees are not within a Conservation Area nor are they subject to a Tree Preservation Order.
- 5.2 Under Part 1 of the Wildlife and Countryside Act (1981), with only a few exceptions, it is an offence to intentionally take, damage or destroy the nest of any wild bird while the nest is in use or being built. Bat species are protected under Section 39 of the 1994 Conservation (Natural Habitats etc.) Regulations (as amended), the 1981 Wildlife and Countryside Act (as amended) and the 2000 Countryside and Rights of Way Act. It is illegal to damage or destroy any bat roost, whether occupied or not, or disturb or harm a bat. Further specialist investigation may be required before undertaking any recommended works.

6.0 SITE DESCRIPTION

- 6.1 The land at Wings Nursery (Fig.1) consists of around 2.5 hectares of broadly level grounds. Glasshouses and an area of hard standing occupy the south-east corner of the site with the remaining area predominantly rough grassland with localised overgrown areas of nettles, brambles and thistles noted. Access to the site is via farm gates from Lidsey Road at the north-east and south-east corners with a third entrance immediately to the south of Wings. A 1.2m high stock-proof fence extends along the north, west and south boundaries with a post and rail fence along the southern section of the eastern boundary.



Fig. 1

- 6.2 The wider landscape is semi-rural with individual trees or small groups as roadside planting, in domestic settings and hedgerows.
- 6.3 The site geology is London Clay Formation clay, silt and sand sedimentary bedrock while the superficial geology is described by the National Soils Resources Institute as a loamy soil with a naturally high

groundwater. No detailed analysis of the soil structure, composition or pH was undertaken and details from this report should not be used for calculating foundation depth. Foundation depth should be determined by the architect or a structural engineer and with reference to NHBC Chapter 4.2 – Building near trees.

7.0 TREE SURVEY

7.1 Surveyed trees consisted of 13 within the site and 13 beyond the site perimeter. Leyland cypress hedges, marked as Group 1 and 2 on the survey plan, within the grounds of Wings were recorded and are detailed below. Trees and hedgerows too small to be recorded or beyond influence of the site included a small group of coppiced field maple, elder and grey willow between T20 and T21 and a hedgerow of ivy-covered field maple, hawthorn, blackthorn and elder in the grounds of Stockham and Stockham House to the south.

- ✧ Group 1 (category C) – Leyland cypress hedge; height 8m; 4m-5m wide; average stem ø 150mm.
- ✧ Group 2 (category C) – Leyland cypress hedge; height 4-5m; 4m-5m wide; average stem ø 200mm.

8.0 TREE APPRAISAL

8.1 Individual tree details and comments are listed in the appended BS 5837 survey schedule. Details of the trees that I consider require further explanation or comment are noted below.

- ✧ T1 to T11 (mixed category U, B and C) – trees recorded included oak, ash, hawthorn and coppiced hazel amongst a mixed species native hedgerow of 4m-6m tall coppiced hazel, hawthorn, field maple and elder on both sides of the ditch. Maintenance of the mixed hedgerow has lapsed with partially collapsed trees identified and low branches extending across the grass verge towards the pavement.
- ✧ T16 to T24 (mixed category A, B and C) – a linear group of well-spaced mature oak, two Lombardy poplar and one small coppiced goat willow. One dead tree to the north of T18 was noted but the trees are beyond the western boundary so their management is the responsibility of others.
- ✧ T21 (category B) – a mature English oak with veteran characteristics. Extensive heartwood decay was identified but failure of the tree represents a low risk at present. The tree is prominent within the site and careful pruning may allow its long-term retention as a relatively low risk tree with good habitat potential.

9.0 COMMENT

- 9.1 The majority of the prominent trees surveyed are beyond the perimeter of Wings Nursery and are the responsibility of others. The greater proportion of surveyed trees within the site were grouped in the hedgerow along the northern section of the eastern boundary. The trees were a mixture of low to medium quality and some defects were noted but with careful management they could be retained and along with the mixed species hedgerow provide screening between Lidsey Road and the site.

10.0 DESIGN LAYOUT AND DEVELOPMENT POTENTIAL

- 10.1 The root protection area (RPA) calculations have been produced using the information gathered from the tree survey and section 4.6.1 of BS 5837:2012. This indicates the RPA in m² and the minimum required all round radial distances for rooting zone protection and allows a view to be taken as to whether the trees can be retained safely without undue damage to their root systems. The calculations are detailed in the appended survey schedule and the initial dimensions marked on the 1:1000 @ A4 root protection area and shade plan (Appendix 5).
- 10.2 No excavation, changes in soil level, construction or routing of service runs should take place within the RPAs of retained trees; ideally a 2m working margin should be maintained between the RPAs and any proposed development to allow room for construction activity.
- 10.3 Consideration should be given to the effects that the current tree size, future growth potential, shade levels and leaf and fruit nuisance may have on the development proposal. Shading, restricted views and potential tree size may all increase pressure for future tree removal; building design that aligns windows parallel or tangentially to retained trees can reduce potential conflicts.
- 10.4 Tree height and crown spread measurements are detailed in the appended tree survey; the crown spread of the trees is indicated on the tree survey plan and the shadow pattern through the main part of the day is shown on the RPA and shade plan.
- 10.5 Appendix 6 shows the nominal combined RPAs of category A, B and C trees and indicates an area beyond them which could be developed based on the removal of just category U trees.
- 10.6 As a starting point this report identifies a potential area for development based around the constraints posed by all category A, B and C trees, however; a design that impacts upon category B and C

trees shown on the plan may be acceptable if selected trees are not worthy of retention. An arboricultural review of the site layout, along with an impact assessment, may mitigate justifiable tree removal or advise on technical solutions that allows tree retention and development to progress successfully.

11.0 CONCLUSIONS

- ✧ A tree survey was undertaken, the quality of 26 trees and two hedges was assessed, they were categorised to reflect the criteria recommended in BS 5837:2012 and an area for potential development was identified beyond the root protection area of category A, B and C trees.
- ✧ Site layout should consider that no excavation, changes in soil level, construction or routing of service runs should take place within the RPAs of retained trees and that ideally a 2m working margin should be maintained between the RPAs and any proposed development to allow room for construction activity.
- ✧ Building design should consider current and future growth potential of the trees particularly in relation to light levels to principle rooms and seasonal nuisance i.e. leaf fall.
- ✧ An arboricultural impact assessment, method statement and tree protection plan in support of the final design may be required to accompany any planning application.

12.0 DETAILS

- 12.1 Date of survey - 20.09.2017
- 12.2 Present at site visit - Jonathan Rodwell NCH (Arb.)
- 12.3 Date of report - 04.10.2017

References

BSI British Standards (2012) BS 5837:2012 Trees in relation to demolition and construction – Recommendations, Fourth (Present) Edition. BSI

Jonathan Rodwell NCH (Arb.)
Beechdown Arboriculture Ltd

4th October 2017

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BS5837:2012 Tree Survey

Beechdown Arboriculture Ltd

Client: ADM
Project: Wings Nursery
Survey Date: 20/09/2017
Surveyor: Jonathan Rodwell

Club Cottage, Top Road
Slindon
Arundel
West Sussex
BN18 0RP
Phone: 01243 814740

Tree and Tag No Species		Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations			Cat ERC	
			No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment				
T1															
Common Oak <i>Quercus robur</i>		15	2	1173 (Eq)	N	6	3	M	A: 622.4 R: 14.07	Fair	C: Poor S: Fair B: Fair	Evidence of historic crown reduction; major deadwood in crown; bark wounds and exposed tissue noted.	C.1.2.3		
					E	5	3						20 to 40 yrs		
					S	7	2								
					W	7	2.5								
T2															
Common Oak <i>Quercus robur</i>		11	1	560	N	4	0.5	M	A: 141.9 R: 6.72	Poor	C: Poor S: Ivy B: Poor		C.2.3		
					E	5	2						>40 yrs		
					S	4	3								
					W	3	1								
T3															
Leyland Cypress <i>X Cupressocyparis leylandii</i>		5	1	480	N	0	0	M	A: 104.2 R: 5.75	Decline	C: Poor S: Poor B: Poor	Stump of a felled tree with some low, live branches retained.	U.2		
					E	5	2						<10 yrs		
					S	4	1								
					W	1	1								
T4															
Common Ash <i>Fraxinus excelsior</i>		12	2	347 (Eq)	N	3	5	SM	A: 54.4 R: 4.16	Good	C: Fair S: Ivy B: Fair		B.2		
					E	1	2						>40 yrs		
					S	4	6								
					W	5	3								
Age Classifications:		N	Newly planted	EM	Early Mature			Condition:		C	Crown	Stems:		Ø	Diameter
		Y	Young	M	Mature					S	Stem			(Eq)	Equivalent stem diameter using BS5837:2012 definition
		SM	Semi-mature	OM	Over Mature					B	Basal area				

Tree and Tag No Species		Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations			Cat ERC	
			No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment				
T5															
A Group	7	10	253	(Eq)	N	3	0.5	A: 29	Fair	C: Fair				C.2	
- -					E	5	0.5	R: 3.03		S: Fair	Multi-stemmed group of coppiced hazel and hawthorn.			>40 yrs	
					S	4	0.5			B: Fair					
					W	3	0.5								
T6															
Common Hawthorn	8	10	253	(Eq)	N	4	0.5	M	A: 29	Good	C: Fair			C.2	
<i>Crataegus monogyna</i>					E	2	0.5		R: 3.03		S: Fair			20 to 40 yrs	
					S	1	0.5				B: Fair				
					W	4	0.5								
T7															
Common Ash	10	1	320		N	2	4	SM	A: 46.3	Fair	C: Fair			C.2	
<i>Fraxinus excelsior</i>					E	6	4		R: 3.83		S: Fair			20 to 40 yrs	
					S	2	6				B: Fair				
					W	1	6								
T8															
Common Hazel	8	10	221	(Eq)	N	3	0.5	M	A: 22.2	Fair	C: Fair			C.2	
<i>Corylus avellana</i>					E	4	0.5		R: 2.65		S: Fair			>40 yrs	
					S	2	0.5				B: Fair				
					W	1	0.5								
T9															
Common Hawthorn	5	10	253	(Eq)	N	2	0.5	M	A: 29	Fair	C: Poor			C.2	
<i>Crataegus monogyna</i>					E	7	0.5		R: 3.03		S: Poor			20 to 40 yrs	
					S	1	0.5				B: Fair				
					W	1	0.5								
T10															
Common Hawthorn	6	3	474	(Eq)	N	4	0.5	Veteran	A: 101.6	Fair	C: Fair			B.1.2.3	
<i>Crataegus monogyna</i>					E	4	0.5			R: 5.68		S: Ivy			>40 yrs
					S	6	0.5					B: Fair			
					W	5	0.5								
Age Classifications: N Newly planted EM Early Mature Condition: C Crown Stems: Ø Diameter															
	Y	Young		M	Mature			S	Stem			(Eq)	Equivalent stem diameter using BS5837:2012 definition		
	SM	Semi-mature		OM	Over Mature			B	Basal area						

Tree and Tag No Species		Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC	
			No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment			
T11														
Common Ash <i>Fraxinus excelsior</i>		13	1	330	N E S W	4 4 3 4	6	M A: 49.3 R: 3.96	Fair	C: Fair S: Fair B: Fair			B.1.2 >40 yrs	
T12												Estimated Measurements		
Common Oak <i>Quercus robur</i>		10	1	250	N E S W	3 3 3 3	1	Y A: 28.3 R: 3	Good	C: Good S: Fair B:			B.1 >40 yrs	
T13														
Common Oak <i>Quercus robur</i>		8	1	250	N E S W	3 4 4 3	1	Y A: 28.3 R: 3	Good	C: Good S: Good B: Good			B.1 >40 yrs	
T14												Estimated Measurements		
Common Ash <i>Fraxinus excelsior</i>		15	1	350	N E S W	5 6 6 5	4	M A: 55.4 R: 4.19	Fair	C: Fair S: Ivy B:			B.1 >40 yrs	
T15												Estimated Measurements		
Common Oak <i>Quercus robur</i>		13	1	650	N E S W	9 8 6 6	4	M A: 191.2 R: 7.8	Good	C: Good S: Ivy B:	A 17m tall eucalyptus to the north of the oak in grounds of Wings was noted; I was unable to estimate any measurements apart from the height.		A.1 >40 yrs	
T16												Estimated Measurements		
Field Maple <i>Acer campestre</i>		9	1	380	N E S	6 5 6	4	M A: 65.3 R: 4.55	Good	C: Fair S: Ivy B:			B.1.3 >40 yrs	
Age Classifications:		N	Newly planted	EM	Early Mature		Condition:		C	Crown	Stems:		Ø	Diameter
		Y	Young	M	Mature				S	Stem			(Eq)	Equivalent stem diameter using BS5837:2012 definition
		SM	Semi-mature	OM	Over Mature				B	Basal area				

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
T17											Estimated Measurements	
Lombardy Poplar <i>Populus nigra 'Italica'</i>	29	1	600	N	2	6	M	A: 162.9 R: 7.2	Good	C: Fair S: Ivy B:		B.1 20 to 40 yrs
T18											Estimated Measurements	
Lombardy Poplar <i>Populus nigra 'Italica'</i>	29	1	500	N	2	5	M	A: 113.1 R: 6	Fair	C: Fair S: Ivy B:	Ivy-covered dead tree to north.	B.1 20 to 40 yrs
T19											Estimated Measurements	
Common Oak <i>Quercus robur</i>	18	1	650	N	5	2	M	A: 191.2 R: 7.8	Good	C: Good S: Ivy B:		B.1.3 >40 yrs
T20											Estimated Measurements	
Common Oak <i>Quercus robur</i>	17	3	877 (Eq)	N	9	3	M	A: 348.4 R: 10.53	Good	C: Fair S: Fair B:		A.1.2.3 >40 yrs
T21											Estimated Measurements	
Common Oak <i>Quercus robur</i>	16	1	1480	N	9	2	M	A: 707 R: 15	Fair	C: Fair S: Poor B: Poor	Extensive heartwood decay and multiple fungal fruiting bodies; potentially valuable habitat tree with veteran characteristics.	B.1.3 >40 yrs
T22											Estimated Measurements	
Common Oak <i>Quercus robur</i>	18	2	814 (Eq)	N	10	3	M	A: 299.7 R: 9.76	Good	C: Fair S: Fair B:		A.1.2.3 >40 yrs
Age Classifications: N Newly planted EM Early Mature Condition: C Crown Stems: Ø Diameter Y Young M Mature S Stem (Eq) Equivalent stem diameter using BS5837:2012 definition SM Semi-mature OM Over Mature B Basal area												

Tree and Tag No Species		Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
			No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
T23											Estimated Measurements		
Goat Willow		8	10	190 (Eq)	N	4	2	SM	A: 16.3	Good	C: Fair		C.1
Salix caprea					E	3	1		R: 2.27		S: Fair		20 to 40
					S	4	2				B: Fair		yrs
					W	4	2						
T24											Estimated Measurements		
Common Oak		9	1	550	N	7	4	M	A: 136.9	Good	C: Fair		B.1.2
Quercus robur					E	6	3		R: 6.6		S: Ivy		>40 yrs
					S	8	3				B:		
T25											Estimated Measurements		
Common Oak		19	1	700				M	A: 221.7	Good	C: Fair		A.1.2.3
Quercus robur					E	12	4		R: 8.4		S:		>40 yrs
					S	8	4				B:		
					W	9	2						
T26											Estimated Measurements		
Common Oak		17	1	500				M	A: 113.1	Good	C: Good		B.1.2
Quercus robur					E	6	5		R: 6		S: Ivy		>40 yrs
					S	7	6				B:		
					W	8	5						

Appendix 2 – tree survey definition of terms

<u>Category</u>	<u>Definition</u>										
Tree ID/tag	Identification number and/or tree tag number.										
Species	Common and/or scientific name.										
Height	To the nearest 0.5m below 10m; to the nearest 1m above 10m.										
Ø/No. of stems	Stem diameter measured at 1.5m or equivalent with reference to Annex C of BS5837:2012.										
First branch	Height above ground level and direction of first significant branch.										
Crown spread	Measured at the cardinal points in metres.										
Canopy height/clearance	Crown clearance in metres above ground level at the cardinal points.										
RPA	Root protection area (m ²) and length of radial protection (m).										
Age class	<table> <tr> <td>Young</td><td>Less than approximately 10 years old.</td></tr> <tr> <td>Semi-mature</td><td>Less than 1/5 of typical life expectancy.</td></tr> <tr> <td>Mature</td><td>Between 1/5 and 5/5 of typical life expectancy.</td></tr> <tr> <td>Over-mature</td><td>Tree having reached its maximum life span and declining in health and size.</td></tr> <tr> <td>Veteran</td><td>A tree that is of interest biologically, aesthetically or culturally because of its age, size or condition.</td></tr> </table>	Young	Less than approximately 10 years old.	Semi-mature	Less than 1/5 of typical life expectancy.	Mature	Between 1/5 and 5/5 of typical life expectancy.	Over-mature	Tree having reached its maximum life span and declining in health and size.	Veteran	A tree that is of interest biologically, aesthetically or culturally because of its age, size or condition.
Young	Less than approximately 10 years old.										
Semi-mature	Less than 1/5 of typical life expectancy.										
Mature	Between 1/5 and 5/5 of typical life expectancy.										
Over-mature	Tree having reached its maximum life span and declining in health and size.										
Veteran	A tree that is of interest biologically, aesthetically or culturally because of its age, size or condition.										
Structural/physiological condition	General condition of tree crown, stem and basal area structure and form - assessed as: <table> <tr> <td>Good</td><td>Good form, structure and vitality; no apparent signs of decay, structural weakness, decline in health, pests or diseases.</td></tr> <tr> <td>Fair</td><td>Moderate form and structure.</td></tr> <tr> <td>Poor</td><td>Poor form or structure; significant decay, structural weakness or decline in vitality.</td></tr> </table>	Good	Good form, structure and vitality; no apparent signs of decay, structural weakness, decline in health, pests or diseases.	Fair	Moderate form and structure.	Poor	Poor form or structure; significant decay, structural weakness or decline in vitality.				
Good	Good form, structure and vitality; no apparent signs of decay, structural weakness, decline in health, pests or diseases.										
Fair	Moderate form and structure.										
Poor	Poor form or structure; significant decay, structural weakness or decline in vitality.										
BS 5837 category (Cat)	BS grading category described in detail at appendix 3.										
ERC	Estimated remaining contribution.										

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Wings Nursery – tree survey/report – October 2017

Trees unsuitable for retention

<u>Category</u>	<u>Definition</u>
Category 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 – shown in dark red on plans.

Trees to be considered for retention

<u>Category</u>	<u>Definition</u>
Category A	Trees of high quality with an estimated remaining life expectancy of at least 40 years – shown in light green on plans. <u>1 - Mainly arboricultural qualities</u> – trees that are good examples of the species, especially if rare or unusual; or those that are essential components of groups, formal or semi-formal arboricultural features. <u>2 - Mainly landscape qualities</u> – trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features. <u>3 - Mainly cultural values, including conservation</u> – trees, groups or woodlands of significant conservation, historical, commemorative or other value.
Category B	Trees of moderate quality with an estimated life expectancy of at least 20 years – shown in mid blue on plans <u>1 - Mainly arboricultural qualities</u> – trees that might be included in category A but are downgraded because of impaired condition (e.g. presence of significant but remediable defects) to the extent that they are unlikely to be suitable for retention beyond 40 years; or trees lacking the particular quality necessary for category A designation. <u>2 - Mainly landscape qualities</u> – trees present in numbers, usually growing as groups or woodlands, that attract a higher collective rating than they might as individuals; or groups of trees situated so as to make little visual contribution to the wider locality. <u>3 - Mainly cultural values, including conservation</u> – trees with material conservation or other cultural values.

Category C	Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter under 150mm - shown in grey on plans. <u>1 - Mainly arboricultural qualities</u> – unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories. <u>2 - Mainly landscape qualities</u> – 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 landscape benefits. <u>3 - Mainly cultural values, including conservation</u> – trees with no material conservation or other cultural values.
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