

James Blake Associates Ltd

Arboricultural Method Statement

Haverhill Relief Road

On behalf of

Persimmon Homes Suffolk

2nd March 2018

JBA 17/364 AR01 Rev C

Over 30 Years of Service, Value and Innovation

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Project	Haverhill Relief Road
Report	Arboricultural Method Statement
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Date	2 nd March 2018
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1 SUMMARY

- 1.1 This Arboricultural Method Statement (AMS) has been commissioned by Persimmon Homes Suffolk to ensure retained trees and vegetation are adequately protected during the enabling, demolition and construction activities and to satisfy the requirements of planning condition A4 of planning application SE/09/1283.
- 1.2 This report has been prepared in accordance with British Standard 5837: Trees in relation to design, demolition and construction Recommendations (2012) and The National Joint Utilities Group (NJUG) Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees Volume 4 Issue 2 (2007). These documents provide best practice advice, assessment and guidance to ensure the protection of trees and significant vegetation on development sites.
- 1.3 In order to successfully work in close proximity to trees, the methods described within this document should only be carried out in conjunction with the direct appointment of a qualified arboricultural consultant. Failure to implement the approved tree protection measures and procedures could lead to enforcement action, the destabilisation of trees and/or the ultimate death of the trees.

Definitions

- 1.4 Construction Exclusion Zone (CEZ) a fenced off area based upon the root protection area that is prohibited for the duration of a project (unless subject to supervised works)
- 1.5 Root Protection Area (RPA) a layout design tool indicating the minimum area around a tree containing sufficient roots to maintain a trees viability.
- 1.6 Supervised works demolition or construction works that require specific arboricultural advice and supervision to prevent damage from occurring.



Scope

- 1.7 This method statement addresses the following;
 - Tree removals
 - Tree protection specifications and requirements
 - Supervision requirements
 - Construction methodologies
 - Landscaping works

2 LIMITATIONS

- 2.1 Trees are dynamic, living organisms whose health and condition can change quickly. Any changes to a tree, or to trees and the land surrounding it, may affect the tree's condition and/or stability. If any such changes occur further examination would be required and may affect the validity of this report.
- 2.2 The survey is not intended to be a detailed tree hazard assessment. Where significant faults that pose an immediate risk to persons or property are observed recommendations will be made; however the lack of any management recommendations within the survey schedule does not infer that a detailed health and safety assessment has been made and it is recommended that a formal management and inspection plan is considered.
- 2.3 The contents of this report are copyright of James Blake Associates and may not be copied without the author's permission. James Blake Associates' Terms and Conditions apply to this report and all associated works in conjunction with this project.



3 GENERAL TREE PROTECTION MEASURES

- 3.1 No fires will be permitted within 20m of the crown of any tree.
- 3.2 No alterations in soil levels other than those already agreed will occur within the Construction Exclusion Zone (CEZ) without prior agreement from the appointed arboricultural consultant.
- 3.3 No materials, vehicles, plant or personnel will be permitted into the CEZ at any time without prior consent from the arboricultural consultant.
- 3.4 Any liquid materials spilled on site will be immediately cleared up and removed from the site. If liquid fuel or cement products are spilled within 2m of the tree protection zone, the contractor will report the incident to the arboricultural consultant immediately.
- 3.5 The contractor will report any damage to trees or shrubs, whether caused by construction activities or from any other cause, to the arboricultural consultant immediately.



4 TREE WORKS

- 4.1 A list of all approved and recommended tree removals can be found in the Tree Work schedule at Appendix 1 and are shown on the tree protection plans JBA 17/364 TPP01 - TPP07 at Appendix 2.
- 4.2 Only tree works specified within this document or that have consent from the Local Planning Authority will be carried out. Any uncertainty regarding tree surgery or removal works will require confirmation from the appointed arboricultural consultant and local authority tree officer.
- 4.3 All tree works will be carried out in accordance with the recommendations made within the current BS3998 (2010).

Wildlife and habitat legislation

- 4.4 All tree work will be carried out in accordance with the Wildlife and Countryside Act 1981 (as amended) and the Habitat Regulations 2010. Any works carried out should work in conjunction with the construction and environmental management plan in regards to timing. Where site clearance or tree works are required a suitably qualified ecologist should undertake the necessary surveys prior to works commencing.
- 4.5 These regulations make it an offence to;
 - intentionally or deliberately kill, injure or capture protected species;
 - deliberately disturb protected species;
 - damage, destroy or obstruct access to a structure used for shelter or protection by a protected species;
 - take, damage, disturb or destroy the nest of any wild bird while it is in use or being built;
 - take or destroy the egg of any wild bird; or
 - damage, destroy or obstruct access to bat roosts whether or not bats are using roosts at the time.
- 4.6 Prior to the commencement of works the tree surgery contractor has a legal duty to ensure no protected species or habitats are present. If any species or habitats are discovered then works will cease and a suitably qualified ecologist will be employed to carry out more detailed surveys and to provide advice.



5 TREE PROTECTION

Protective fencing specification

- 5.1 Protective fencing will be installed prior to any enabling works, demolition or construction activity commences.
- 5.2 The position of protective fencing is shown on drawings JBA 17/364 TPP01 TPP07 at Appendix 2.
- 5.3 Protective fencing will be constructed of weld mesh panels securely fixed to a static framework fit for the purpose of excluding construction traffic (Figure 2). This fencing should be utilised across the site and alternative fencing (Figure 3) placed only where it is not possible to meet this specification.
- 5.4 All weather signage will be securely fixed to panels at regular intervals stating the purpose of the fencing and contact details of the arboricultural consultant. A suggested sign can be found at Appendix 3 and may be copied for use on site.
- 5.5 Upon completion of tree protection, the site manager will invite the arboricultural consultant to inspect and sign off the specification and position of all tree protection.
- 5.6 Once installed, protective fencing will remain in position for the duration of the project or until it requires removal to a specified alternative position to allow for works.



6 SUPERVISION REQUIREMENTS

- 6.1 The arboricultural consultant will be available for ongoing advice and design input to ensure works close to trees is avoided or correctly specified.
- 6.2 Any works that could impact upon retained trees will be supervised and monitored by the arboricultural consultant. It is suggested that as a minimum supervision visits will occur as follows;
 - Pre-commencement site meeting with project manager to discuss tree protection, tree works and programme.
 - Meeting with tree contractor to specify and agree on works
 - Meeting with protective fencing contractor prior to installation of fencing.
 - Site visit once tree protective fencing has been installed to ensure the panels are in the correct positions.
 - Site visit if at any point the tree protective requires moving or is adjusted.



7 CONSTRUCTION

Manual excavation within RPAs

- 7.1 All works within Root Protection Areas (RPAs) will be carried out under the direct supervision of the appointed arboricultural consultant (JBA).
- 7.2 No site personnel will enter these areas until a representative from JBA is present.
- 7.3 If required a section of protective fencing will be temporarily removed to provide access to the required area.
- 7.4 Where necessary, the appointed arboricultural consultant will specify the location of temporary ground protection and the level of protection required.
- 7.5 Excavations will be carried out manually using appropriate hand tools OR using an air lance to expose tree roots.
- 7.6 No machinery will be permitted into the working area unless agreed by the arboricultural consultant.
- 7.7 All excavated spoil will be manually removed from the area or placed on temporary ground protection to be used for back filling upon completion.
- 7.8 All roots in excess of 25mm in diameter and all clumps of fibrous roots greater than 25mm in diameter will be retained and wrapped in dry hessian during the works to prevent desiccation.
- 7.9 Roots less than 25mm may be pruned by the arboricultural consultant where deemed essential to complete works.
- 7.10 Root pruning will only be carried out by the arboricultural consultant, using sharp, sterile tools suitable to the size of the root to be cut. Where possible roots will be pruned cleanly back to a side branch.
- 7.11 Where concrete is to be used (such as for fence posts) the excavated hole will be sleeved using 2mm PVC sheeting to prevent concrete leaching into the surrounding soil.
- 7.12 Prior to backfilling any hessian wrapping will be removed from retained roots.
- 7.13 The roots will then be surrounded with topsoil, sharp sand (builders' sand will not be used due to its high salt content) or other loose inert granular fill, before soil or other medium is replaced. This material should be uncontaminated and free from injurious objects.



- 7.14 Temporary ground protection will be removed in a backwards direction away from the tree so as always to be positioned on protection and not on unprotected ground.
- 7.15 Once the work area is cleared of ground protection the recently backfilled spoil will be watered and the removed section of protective fencing reinstalled.



8 LANDSCAPING

- 8.1 Prior to works commencing the appointed arboriculturist will meet with the landscape contractor to discuss and agree the appropriate methodology to be used.
- 8.2 The Landscape contractor will provide a detailed method statement for the arboriculturist's approval before works start. This method statement will detail the following;
 - Tree Protection
 - Cultivation within RPAs
 - Planting methodology
 - Soil levels
 - Machinery and tools
 - Delivery of materials
 - Ground protection requirements
 - Hard landscape implementation

Principles of landscaping beneath trees

- 8.3 Landscaping beneath retained trees will be carried out by hand wherever possible, and will not involve the use of heavy machinery.
- 8.4 Soil levels will not be altered without prior approval from the appointed arboriculturist or planning authority.
- 8.5 Cultivation of areas beneath trees will be carried out manually only preparing the top 100mm of soil.
- 8.6 Where larger planting pits and greater depths are required these will be individually excavated retaining all roots greater than 25mm in diameter. Any retained roots will be wrapped in dry hessian until the pit is back filled.



APPENDIX 1: TREE SURVEY SCHEDULE



Tree Survey Schedule - Key

Life Stage	Description
NP	Newly planted
Y (Young)	An establishing tree that could be easily transplanted.
SM (Semi Mature)	An established tree still to reach its ultimate height and spread and with considerable growth potential.
EM (Early Mature)	A tree reaching its ultimate height and whose growth is slowing however it will still increase considerably in stem diameter and crown spread.
M (Mature)	A tree with limited potential for further significant increase in size although likely to have a considerable safe useful life expectancy.
OM (Over Mature)	A senescent or moribund tree with a limited useful life expectancy.
V (Veteran)	A tree older than typical for the species and or great ecological, cultural or aesthetic value.

Abbreviat ions	Description
Stem Ø (mm) at 1.5m	Diameter of stem in millimetres at 1.5m above ground level for single-stemmed trees or in accordance with Annex C of BS 5837 fo multi-stemmed trees or trees with low forks or irregular stems.
Stems	Numbers of stems or M/S = Multi-Stemmed.
Height of (FSB)	Height of First Significant Branch above ground level.
Crown Spread NSEW	Crown spread at the four points, North, South, East and West.
Condition	Condition of the tree observed at the time of surveying G = Good; F = Fair; P = Poor; D = dead
Condition	G = Good; F = Fair; P = Poor;
Est Remaining Contributio	Estimated Remaining Contribution in Years (<10, 10+, 20+, 40+)

BS Category	Description
A	High quality and value (non-fiscal) with at least 40 years remaining life expectancy.
В	Moderate quality and value with at least 20 years remaining life expectancy.
c	Low quality and value with at least 10 years remaining life expectancy, or young trees with a stem diameter below 150 mm.
U	Unsuitable for retention. The existing condition is such that the tree/ trees cannot be realistically retained as in the context of the current land use for longer than 10 years. Note, category U trees can have existing or potential conservation value which it might be desirable to preserve.
Radii Single Stem (m)	Root Protection Radius in metres based on stem diameter.
RPA	Root Protection Area. A layout design tool indicating the minimum area surrounding the tree that contains sufficient rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. Assessed according to the recommendations set out in clause 4.6 of BS 5837. It is calculated by multiplying the radius squared by 3.142. Clause 4.6.2 of BS 5837 states that the RPA may be changed in shape, taking into account local site factors, species tolerance, condition and root morphology.

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Contributio n (Years)

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Chairman: James Blake BA (Hons) Dip LA (Hons) CMLI

Company Secretary: Louise Blake BSc PGCE

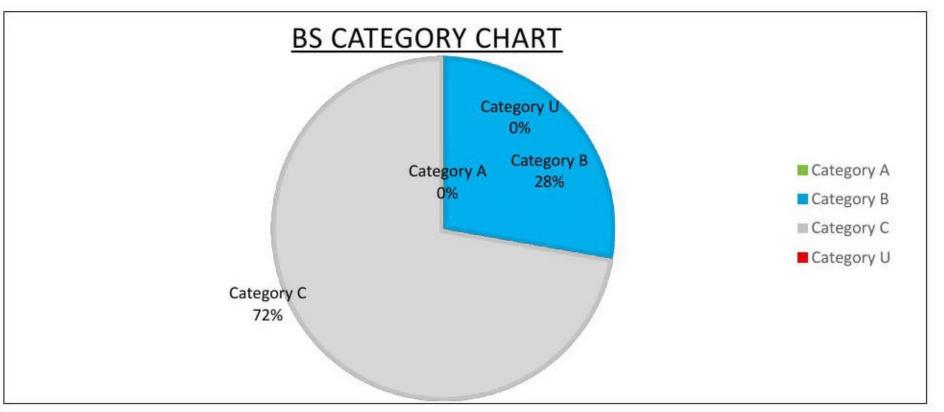
Directors: Elzbieta Zebrowska MSc Eng LArch MScEnvSc CMLI: John Wainwright: BA (Hons) Dip LA CMLI

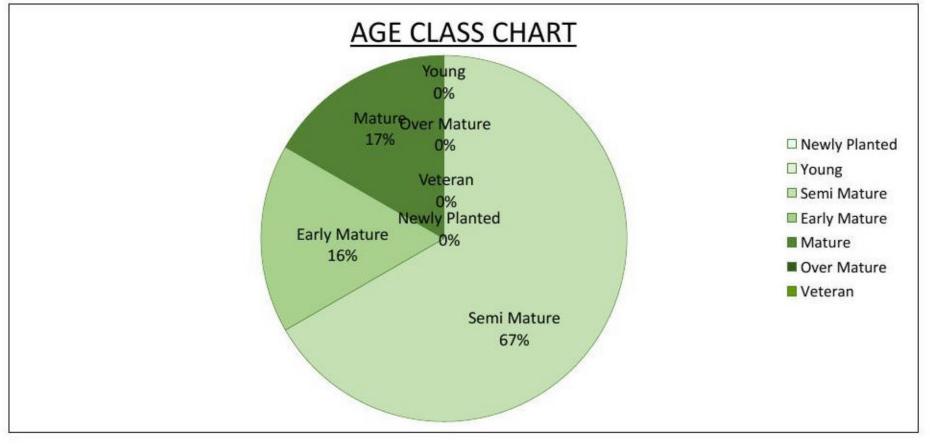
Associate Directors: Mary Power BSc MSc MCIEEM: Vivienne Jackson: Jenny Beck BA (Hons)



BS Category	Total
Category A	0
Category B	5
Category C	13
Category U	0

Age Class	Total
Newly Planted	0
Young	0
Semi Mature	12
Early Mature	3
Mature	3
Over Mature	0
Semi Mature Early Mature Mature	0
	18





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Tree Survey & Removals Schedule

Site name: Haverhill Relief Road **Client: Persimmon Homes Essex**

Job Number: 17-364

Survey Date: 14/12/2017 Surveyor: Adam Dayman

Tree	Tree Species	Tree Species Life S	Life Stage	Stem Ø (mm) at	Height (m)	Height of (FSB)		Crown	Spread		Condition	Comments	Tree Management Recommendations	Est Remaining	BS Cat	Radii	RPA (m)
No.			1.5m			N	E	s	w				Contribution (Years)		Single Stem (m)		
T1	Ash (Fraxinus excelsior).	М	805	13	1	6.5	6.5	6.5	6.5	Fair	Minor deadwood observed. Major deadwood observed. Branch tearout visible. Branch stubs. Crossing and rubbing branches. Multi stemmed from base. Low crown. Open even crown.former coppice stool, situated on eastern side of ditch, woodpecker holes in deadwood	Remove to accommodate the proposed layout	20+	81,82	9.7	293	
G2	Ash (Fraxinus excelsior). Field Maple (Acer campestre). Hawthorn (Crataegus monogyna). Alder (Alnus glutinosa). Blackthorn (Prunus spinosa). Dogwood (Cornus sanguinea).	SM	141	5	1	2	2	2	2	Fair	Unmaintained hedgerow. Dense bramble throughout. Field boundary hedgerow. Dense undergrowth at base. Intermittent hedgerow with gaps present throughout.	Remove section to accommodate the proposed layout	10+	C2	1.7	9	
G3	Ash (Fraxinus excelsior). English Oak (Quercus robur). Field Maple (Acer campestre). Goat Willow (Salix caprea). Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa). Dogwood (Cornus sanguinea). Guelder rose (Viburnum opulus)	SM	100	5	1	1	1	1	1	Fair	Typical crown form with no obvious major defects. Buffer group between site and surrounding area. Dense undergrowth. Dense bramble throughout. Linear tree group. Mixed native species group.	Remove to accommodate the proposed layout	20+	C2	1.2	5	
Н4	Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa).	EM	212	5	1	2	2	2	2	Good	Maintained hedgerow. Field boundary hedgerow. Dense undergrowth at base. Wild rose present, good habitat providing an ecological corridoor	Remove section to accommodate the proposed layout	20+	C2	2.5	20	
W5	Ash (Fraxinus excelsior). English Oak (Quercus robur). Field Maple (Acer campestre). Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa). English Elm (Ulmus procera). Hornbeam (Carpinus betulus).	SM	450	14	1	6	6	6	6	Good	Major deadwood observed. Branch socket cavities. Broken branches in crown. Good vitality and vigour. Buffer group between site and surrounding area. Interlocking crowns. Mixed native species group. Woodland block. Not identified on the topographical survey.		40+	B1,B2,B3	5.4	92	
G6	Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa).	SM	141	. 5	1	2	2	2	2	Fair	Unmaintained hedgerow. Dense bramble throughout. Field boundary hedgerow. Dense undergrowth at base. Intermittent hedgerow with gaps present throughout.	Remove section to accommodate the proposed layout	10+	C2	1.7	9	
Н7	Ash (Fraxinus excelsior). English Oak (Quercus robur). Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa). English Elm (Ulmus procera).	SM	150	6	2	3	3	3	3	Fair	Maintained hedgerow. Dense bramble throughout. Field boundary hedgerow. Dense undergrowth at base.		20+	C2	1.8	10	

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Tree	Tree Species	Life Stage	Stem Ø (mm) at	Height (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining	BS Cat	Radii	RPA (m)
No.			1.5m	3.8		N	E	s	w				Contribution (Years)		Single Stem (m)	
Т8	English Oak (Quercus robur).	м	800	14	5	6	6	6	6	Fair	Major deadwood observed. Branch tearout visible. Branch stubs. Dense undergrowth at base. Good vitality and vigour.		40+	81,82	9.6	290
Т9	English Oak (Quercus robur).	SM	550	8	5	4.5	4.5	4.5	4.5	Fair	Typical crown form with no obvious major defects. Minor deadwood observed. Branch stubs. Dense undergrowth at base.		20+	C2	6.6	137
н10	Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa).	EM	212	3	1	1.5	1.5	1.5	1.5	Good	Maintained hedgerow. Field boundary hedgerow. Dense undergrowth at base.	Remove section to accommodate the proposed layout	20+	C2	2.5	20
T11	English Oak (Quercus robur).	SM	380	7	3	4	4	4	4	Good	Typical crown form with no obvious major defects. Minor deadwood observed. Dense undergrowth at base. Good vitality and vigour.		20+	C1,C2	4.6	65
T12	English Oak (Quercus robur).	SM	520	7	3	4	4	4	4	Good	Typical crown form with no obvious major defects. Minor deadwood observed. Dense undergrowth at base. Good vitality and vigour.		20+	B1,B2	6.2	122
T13	Ash (Fraxinus excelsior).	SM	385	8	2.5	4	4	4	4	Fair	Minor deadwood observed. Co dominant from base. Dense undergrowth at base. Dense ivy on main stem.		10+	C2	4.6	67

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Tree	Tree Species	Life Stage	Stem Ø (mm) at	Height (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining	BS Cat	Radii	RPA (m)
No.			1.5m		110805250	N	E	s	w				Contribution (Years)	70000	Single Stem (m)	
H14	Goat Willow (Salix caprea). Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa).	SM	150	5	1	2	2	2	2	Fair	Unmaintained hedgerow. Dense bramble throughout. Field boundary hedgerow. Dense undergrowth at base. Intermittent hedgerow with gaps present throughout.	Remove section to accommodate the proposed layout	10+	C2	1.8	10
H15	Field Maple (Acer campestre). Hawthorn (Crataegus monogyna). Blackthorn (Prunus spinosa).	EM	212	3	1	1	1	1	1	Good	Maintained hedgerow. Dense bramble throughout. Field boundary hedgerow. Dense undergrowth at base.	Remove section to accommodate the proposed layout	20+	C2	2.5	20
T16	Ash (Fraxinus excelsior).	М	650	13	3	4.5	4.5	4.5	4.5	Good	Typical crown form with no obvious major defects. Minor deadwood observed. Good vitality and vigour.		20+	B1,B2	7.8	191
G17	Blackthorn (Prunus spinosa). English Elm (Ulmus procera).	SM	100	6	1	2.5	2.5	2.5	2.5	Fair	Self set group. Shrub clump.	Remove section to accommodate the proposed layout	10+	C2	1.2	5
G18	English Elm (Ulmus procera).	SM	200	7	3	3	3	3	3	Fair	Minor deadwood observed. Buffer group between site and surrounding area. Dense undergrowth. Dead elms observed. Dense bramble throughout. Interlocking crowns.	Remove section to accommodate the proposed layout. Also remove section to the north of main group G18.	10+	C2	2,4	18

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APPENDIX 2: JBA DRAWINGS



APPENDIX 3: PROTECTIVE FENCING SIGNAGE



TREE PROTECTION AREA KEEP OUT!

NO WORKS TO BE CARRIED OUT IN THIS AREA WITHOUT PRIOR
AGREEMENT OF THE LOCAL AUTHORITY OR APPOINTED
ARBORICULTURAL CONSULTANT

James

Blake Associates

Tel 01787 248216 www.jba-landmarc.com