

FULL APPLICATION FOR THE ERECTION OF 43 DWELLINGS WITH ASSOCIATED CAR PARKING, INFRASTRUCTURE, ASSOCIATED WORKS AND PUBLIC OPEN SPACE.

**DORCHESTER PHASE 6, HEYFORD PARK, CAMP
ROAD, UPPER HEYFORD**

ARBORICULTURAL IMPACT ASSESSMENT AND PROTECTION PLAN

ON BEHALF OF THE DORCHESTER GROUP

**BS5837:2012 'TREES IN RELATION TO DESIGN, DEMOLITION AND
CONSTRUCTION – RECOMMENDATIONS'**

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CONTENTS:

Page No:

1.	INTRODUCTION	1
2.	REPORT LIMITATIONS	2
3.	OTHER CONSIDERATIONS	3
4.	DESCRIPTION OF SITE AND TREES	5
5.	DESCRIPTION OF PROPOSED DEVELOPMENT	6
6.	ARBORICULTURAL IMPACT ASSESSMENT (AIA)	7
7.	TREE RETENTION/LOSS AND PROTECTION PLAN	10
8.	HEADS OF TERMS FOR AN ARBORICULTURAL METHOD STATEMENT	11
9.	SUMMARY	12

APPENDICES:

APPENDIX 1 – SITE PHASE PLAN

APPENDIX 2 – TREE SURVEY SCHEDULE

APPENDIX 3 – ARBORICULTURAL IMPACT ASSESSMENT SCHEDULE

APPENDIX 4 – TREE RETENTION/LOSS AND PROTECTION PLAN

REVISIONS:

Date	Rev	Description	Initials
16.11.15	A	First Issue	MGP
22.03.16	B	Revised AIA and TPP: changed layout	MR
09.05.16	C	Revised AIA schedule	MGP

1. INTRODUCTION

- 1.1 This Arboricultural Impact Assessment (AIA) Report has been prepared by Pegasus Group on behalf of Dorchester Group (“the Applicant”).
- 1.2 The AIA is in support of a full application for the erection of 43 dwellings at the Dorchester Phase 6 of the Heyford Park development (“the application site”) on land at the Former RAF Upper Heyford airbase, Upper Heyford, Oxfordshire.

APPENDIX 1 – SITE PHASE PLAN

- 1.3 The scope of the instruction was to assess the impact of Phase 6 proposals on the site’s arboricultural resource and to produce the following:
- Arboricultural Impact Assessment;
 - Tree Retention/Loss and Protection Plan; and
 - Heads of terms for an Arboricultural Method Statement.

2. REPORT LIMITATIONS

- 2.1 Trees are living organisms as well as self-supporting dynamic structures. Their physiological and structural condition can change rapidly in response to a wide range of biotic/abiotic factors. They have the potential to fail structurally, without prior manifestation of any reasonably observable symptoms. It is therefore not possible to categorically state that any tree is 'safe'.
- 2.2 This report is prepared for planning application purposes only and does not evaluate the degree of risk posed by trees.
- 2.3 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.
- 2.4 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. Any physical alterations to site conditions subsequent to the date of the site survey will have the potential to change/invalidate the findings and recommendations of this report.
- 2.5 The findings and recommendations of this report are limited to a period of 24 months from the date of this report.

3. OTHER CONSIDERATIONS

Statutory tree protection

- 3.1 Cherwell District Council have confirmed that the site is located within the Upper Heyford Conservation Area but that none of the trees on or adjacent to the site are currently protected by Tree Preservation Order (TPO).
- 3.2 It must therefore be noted that the trees >75mm DBH that are located within the Conservation Area are subject to statutory protection.
- 3.3 Notwithstanding specific exemptions and in general terms, a Conservation Area 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.
- 3.4 Penalties for contravention of a Conservation Area 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.
- 3.5 On many 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 licence from the Forestry Commission.
- 3.6 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

- 3.7 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 fall outside the remit of this report.
- 3.8 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.

- 3.9 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.
- 3.10 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.

4. DESCRIPTION OF SITE AND TREES

- 4.1 The site is located to the south of Camp Road, at the south-eastern corner of the former airbase, Oxfordshire.
- Post Code OX25 5TX
 - Grid reference: SP 51374 25513
- 4.2 The site area at the time of survey consisted of numerous semi-derelict buildings with associated roadways and areas of hardstanding of the former airbase. Currently much of the former buildings and areas of hardstanding have been demolished in accordance with due planning process.
- 4.3 The distribution of trees and groups within the site follow the original footprint of the airbase prior to demolition works. Typical trees and groups occupy former road side verges and parcels of greenspace in and around former buildings.
- 4.4 Species within the site are comprised of cypress, maple, cherry, chestnut and whitebeam.

APPENDIX 2 – TREE SURVEY SCHEDULE

5. DESCRIPTION OF PROPOSED DEVELOPMENT

Background and Pre-application discussions

- 5.1 The submitted layout reflects collaboration and pre-application discussion with Cherwell District Council. This process of design review has led to the identification and retention two of the most significant trees within the site and incorporation of their mature forms into greenspace within the design.

Proposals

- 5.2 The proposed development comprises the erection of 43 dwellings with associated car parking, infrastructure, associated works and public open space.

6. ARBORICULTURAL IMPACT ASSESSMENT (AIA)

- 6.1 With reference to BS5837:2012 '*Trees in relation to design, demolition and construction*', this AIA evaluates the direct and indirect effects of the proposals on the site's arboricultural resource.
- 6.2 The AIA considers the effects of any tree loss required to implement the illustrative design as well as any potentially damaging activities proposed in the vicinity of retained trees.
- 6.3 With reference to BS5837:2012, the AIA includes a tree retention/removal plan. This is incorporated into the Tree Protection Plan (Section 8) and illustrates the anticipated extent of tree removals that will be required in order to enable the construction of the development proposals.
- 6.1 An AIA schedule is attached that relates to the trees that are located in proximity to the proposals.

APPENDIX 3 – ARBORICULTURAL IMPACT ASSESSMENT SCHEDULE

- 6.2 The AIA schedule is an interpretation by an arboriculturist of the proposals in relation to the existing arboricultural constraints on site. The schedule provides a tree-by-tree/group-by-group assessment of the level of potential impacts of the proposals. This assessment is cross referenced against tree/group qualities in order to provide consistent evaluations of the degree of significance of the anticipated arboricultural impacts.
- 6.3 The AIA schedule subsequently sets out any preventative measures and other mitigation proposals to reduce, insofar as possible, the level of arboricultural impact and its corresponding significance. This 'adjusted' significance – which is an approximation – may be considered either in terms of an individual survey item, for example in the context of the use of tree protection barriers, or (where mitigation planting is concerned) in the wider context of the site's overall arboricultural resource.

6.4 Analysis of the AIA schedule relating to the development area is set out in table form below:

	Tree removal required	A	B	C	U	Total
Groups	Remove	0	2	0	0	2
Trees	Remove	0	3	2	0	5
	Retain	1	1	0	0	2
Total		1	6	2	0	9

6.5 With reference to 6.4 it can be seen that out of an overall total of 9 survey items:

- Two Category B groups will be removed
- Two trees (one Category A, 1 Category B) will be retained
- Five trees (three Category B and two Category C) will be removed.

6.6 A further summary of tree retention and loss is set out in the table below:

	A	B	C	U	Total
Remove	0	5	2	0	7
Retain	1	1	0	0	2
Total	1	6	2	0	9

6.7 With reference to 6.6 it can be seen that:

- The best quality survey item shall be retained along with moderate quality tree; although
- A significant proportion of survey items must be removed. These consist of five moderate quality items and two low quality items.

Assessment of arboricultural impacts in the context of anticipated new Green Infrastructure planting

6.8 Due to the extent of arboricultural impacts associated with the proposals, extensive new tree planting is recommended to be carried out in mitigation. Much of the tree planting shall fall within private gardens and it is anticipated that over time these trees shall mature to provide a net gain of canopy cover within the site.

6.9 Recommended locations for new tree planting are shown on the Tree Protection Plan.

6.10 Replacement tree species have not been specified at this stage because it is expected that adequate provision for the planting of new trees can be achieved by

means of a suitably worded planning condition and collaborative working with the Cherwell Arboricultural Officer.

- 6.11 With reference to the AIA schedule, the overall estimated adjusted significance (ie in the context of new Green Infrastructure planting) of the proposals is summarised in table form below:

Adjusted significance of effect	Total
Minor	3
Moderate	6
Total	9

- 6.12 With reference to the above table and definitions of significance of effect which are set out alongside the AIA Schedule, it can be seen that the arboricultural impacts of the proposed development are considered to be:

- 33% 'minor' (no obvious impact on public visual amenity)
- 67% 'moderate' (tree removals that can be mitigated in the medium term 20-40 years).

- 6.13 Overall, it is therefore reasonable to conclude that when considered 'in the round' the proposals are generally acceptable from an arboricultural perspective for the following key reasons:

- The best quality component of the site's arboricultural resource can be retained.
- New Green Infrastructure tree planting is likely to function over time to mitigate impacts

- 6.14 Tree protection barriers and load distributing no-dig surfacing can be used to protect the retained trees during the construction process.

7. TREE RETENTION/LOSS AND PROTECTION PLAN

7.1 The Tree Protection Plan is attached.

APPENDIX 4 – TREE RETENTION/LOSS AND PROTECTION PLAN

7.2 In accordance with BS5837:2012 the TPP is superimposed onto the proposed site layout plan and based on the topographical survey. Any hard surfacing and structures within the RPAs of trees to be retained are shown on the TPP. In addition, where relevant, the TPP shows the following information, accompanied by descriptive text as required:

- Precise locations of protective barriers (forming Construction Exclusion Zones in relation to RPAs of retained trees)
- Other protection measures necessary e.g. cellular load distributing surfacing.

7.3 The tree protection measures shown demonstrate the feasibility of the proposed development in relation to retained trees.

8. HEADS OF TERMS FOR AN ARBORICULTURAL METHOD STATEMENT

- 8.1 BS5837:2012 (Figure 1) recommends that detailed/technical design of tree protection and arboricultural methodologies should be resolved and finalised following on from the approval of the feasibility of a scheme by the relevant regulatory body.
- 8.2 Annex B and Table B.1 of BS5837:2012, an informative, advises that arboricultural method statement heads of terms are a sufficient level of information in order to deliver tree-related information into the planning system. The table also advises that a detailed arboricultural method statement might reasonably be required as a 'reserved matter' or planning condition.
- 8.3 In relation to the above site, it is anticipated that arboricultural working methods are likely to be quite straightforward. A draft, 'heads of terms' is set out below:
- Project arboriculturist – schedule of monitoring and supervision;
 - pre commencement site meeting;
 - tree removals;
 - erection of tree protection barriers;
 - main construction phase;
 - removal of tree protection barriers; and
 - final landscaping.

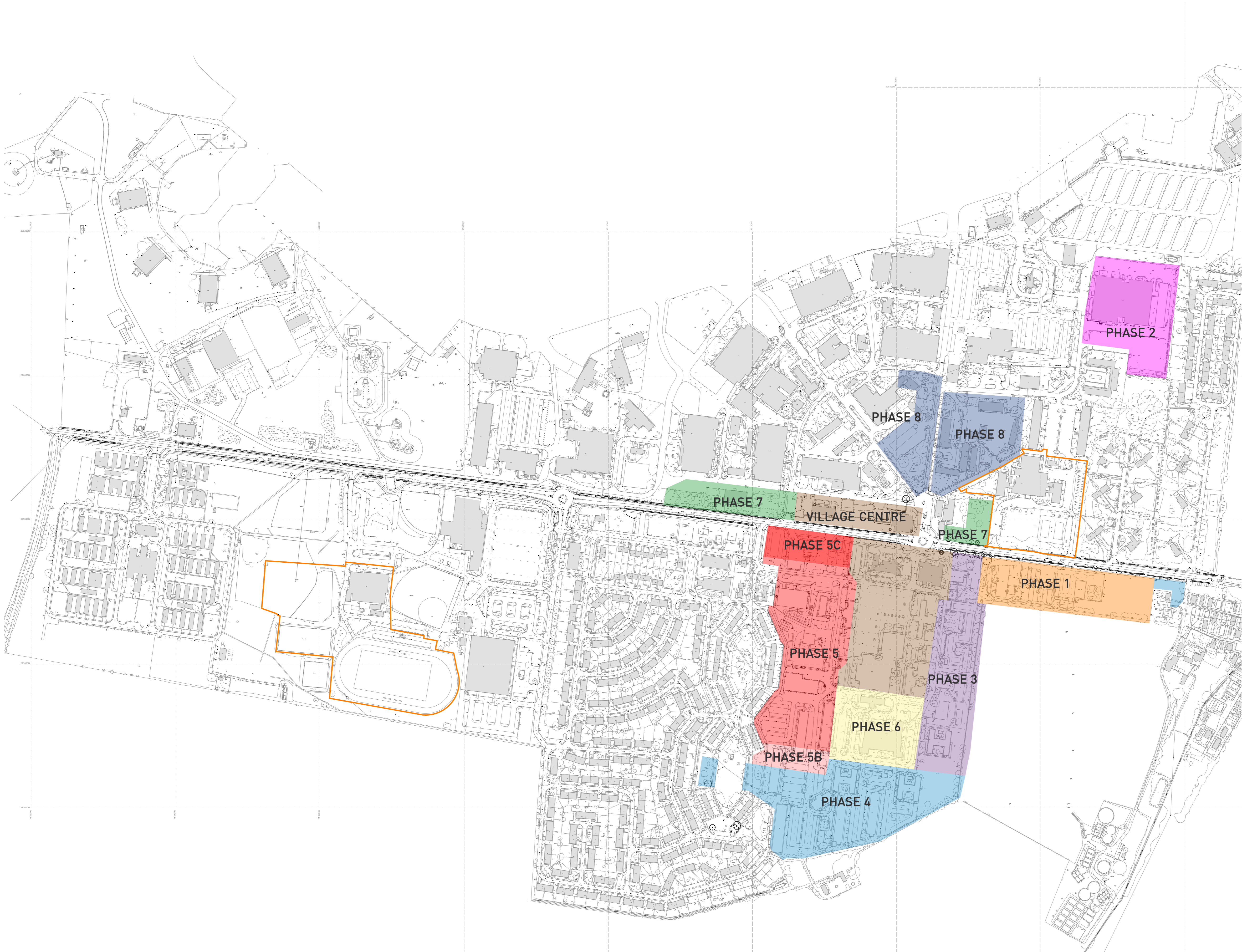
9. SUMMARY

- 9.1 The site is located to the south of Camp Road, between Phase 5 and Phase 3 land areas.
- 9.2 The site area at the time of survey consisted of numerous semi-derelict buildings with associated roadways and areas of hardstanding of the former airbase. Currently many of the former buildings and areas of hardstanding have been demolished in accordance with due planning process.
- 9.3 In total nine trees/groups are considered relevant to the Phase 6 site area. Two trees/groups within, or directly adjacent to, the site red line area are considered to be of low quality that is Category 'C' trees with anticipated useful life expectancies of at least 10+ years. In addition, a further six trees/groups were assessed as being of moderate quality (Category B); that is with an anticipated remaining life expectancy of at least 20+ years. One item was assessed as being of high quality with an anticipated useful life expectancy of over 40 years. No survey item was assessed to be unsuitable for retention due to its condition (Category U).
- 9.4 Proposals will lead to the loss of five moderate quality and two low quality trees. Two surveyed items will be retained and protected during development construction using temporary tree protection fencing to BS.5837:2012.
- 9.5 As agreed during pre-application discussions with the LPA's arboriculturist the loss of the trees/groups will be off-set through extensive new tree planting as part of landscape proposals within the site's interior. It is considered that this will lead to a net benefit from an arboricultural perspective in terms of species number and diversity in the long term.

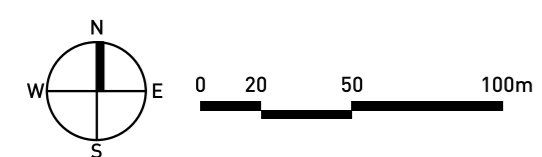
APPENDIX 1

SITE PHASE PLAN

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KEY	
	PHASE 1 (1.54Ha)
	PHASE 2 (1.68Ha)
	PHASE 3 (1.96Ha)
	PHASE 4 (2.82Ha)
	PHASE 5 (2.56Ha)
	PHASE 5B (0.32Ha)
	PHASE 5C (0.52Ha)
	PHASE 6 (1.22Ha)
	PHASE 7 (0.96Ha)
	PHASE 8 (2.19Ha)
	VILLAGE CENTRE (3.25Ha)
	FREE SCHOOL SITES



HEYFORD PARK - DORCHESTER PHASING PLAN



APPENDIX 2

TREE SURVEY SCHEDULE

Date 13.3.14. 1, 4, 8 April 2014

Site: Upper Heyford

Surveyor: MR

Client:

Dorchester Living

Job no:

D.0341

Number	Species	Height	Estimate	Stem dia	Estimate	Spread						Crown clearance height				Life stage	General observations	Structural condition	Physiological condition	ULE	Quality grading	RPA radius	RPA area			
						N	Estimate	S	Estimate	E	Estimate	W	Estimate	1st branch	Estimate									1st branch direction	Canopy	Estimate
T252	Birch (Silver)	10	-	400	-	5	-	5	-	6	-	5	-	2.5	-	North west	1	-	M	Remove lower branches and raise canopy to 2.5m. Bark damage noted.	Medium	High	20+	B2	4.8	72.4
G275	Chestnut (Horse)	12	-	500	-	Ason plan						N/A	-	N/A	1	-	M	All stood in brick retaining edge. Remove deadwood and ivy. Clean through, raise canopy to 2m. Most northern tree suffering from bleeding canker. Weak fork with included bark. Potential for cupboard door fracture. Remove.	Medium	Medium	20+	B2	6.0	113.1		
T280	Hornbeam	12	-	380	-	5	-	5	-	5	-	5	-	2	-	North west	0.5	-	M	Minor broken branches to north.	High	High	40+	B1	4.6	65.3
T297	Maple (Norway)	12	-	600	-	6	-	6	-	7	-	7	-	N/A	-	N/A	1	-	M	Forks at 2m. Raise canopy to 2m. Minor deadwood. Cable through canopy. Good tree. Kerb and Tarmac to east.	High	High	40+	A1	7.2	162.9
T298	Cherry (Wild)	10	-	600	-	7	-	6	-	6	-	6	-	N/A	-	N/A	0	-	M	Crown thin recommended. Recommend aerial inspection. Clematis growing into canopy. Needs cleaning through.	Low	Medium	10+	C1	7.2	162.9
G303	Cypress	15	-	450	-	Ason plan						N/A	-	N/A	2.5	-	M	2 trees. Kerb and road to south. Close to building. Good shape.	High	High	20+	B2	5.4	91.6		
T304	Cypress	15	-	450	-	5	-	3	-	4	-	5	-	N/A	-	N/A	2.5	-	M	Kerb and road to south. Slight lean to north.	Medium	High	20+	B1	5.4	91.6
T306	Whitebeam	8	-	541	-	5	-	4	-	4	-	4	-	2	-	East	2	-	M	Multiple cavities 1.8m north east. Poor forking structure.	Medium	High	10+	C1	6.5	132.3
T307	Whitebeam	9	-	600	-	5	-	5	-	6	-	6	-	N/A	-	N/A	2	-	M	Forks at 2m. Minor deadwood. Good tree.	High	High	20+	B1	7.2	162.9

APPENDIX 3

ARBORICULTURAL IMPACT ASSESSMENT SCHEDULE

		Arboricultural Impact Assessment Significance Matrix					
		Level of Impact					
		High	Medium	Low	Slight	None	
		e.g. removal required to facilitate development. Excessive root severance. Excessive above ground pruning. Hedgerows: >50% loss of overall length.	e.g root damage, soil compaction or above ground impacts tree management works unacceptable in terms of BS3998:2010. Hedgerows: >25% loss of overall length.	e.g. minor fine root loss, installation of no dig surfacing, temporary ground protection. Moderate tree works within the parameters of BS3998:2010. Hedgerows: 5-10% loss of overall length.	e.g.very minor works within root protection areas for example the installation of lightweight fencing or soft landscaping. Hedgerows: <5% loss of overall length.	E.g. trees located at a significant distance from development and construction activities.	
BS5837:2012 Quality Assessment Category	A	Major	Major	Moderate	Minor	None	Significance of effect
	B	Major	Moderate	Minor	Insignificant	None	
	C	Moderate	Minor	Insignificant	Insignificant	None	
	U	Minor	Minor	Insignificant	Insignificant	None	
		Significance of effect					

Significance of effect - definitions	
Major	Removal/acute damage to structural integrity/vitality/appearance of a high quality arboricultural feature. Depending on circumstances, may result in the loss of all/greater majority of public visual amenity value. Mitigation planting unlikely to be effective except in the long term (40+ years).
Moderate	In the case of damage: unlikely to give rise to tree death but likely to noticeably reduce vitality and deterioration of appearance in the short and medium term, with corresponding reduction in public visual amenity value where relevant. Tree removals that can be effectively mitigated in the medium term (20-40 years). For example notable crown dieback, foliage discolouration, low leaf density, or tree management works unacceptable in terms of BS3998:2010.
Minor	Short-term damage with limited distribution that can be reasonably compensated for by new growth. Unlikely to result in observable symptoms of damage in relation to structural integrity/vitality/appearance. No obvious impact on public visual amenity. Tree removals that can be mitigated in the short-term (10-20 years)
Insignificant	Minimal damage in very small amounts. No obvious impact on public visual amenity.
None	No impact to above or below ground components of tree reasonably anticipated.

Arboricultural Impact Schedule

Site: Heyford Park Phase 6

Ref:D.0341

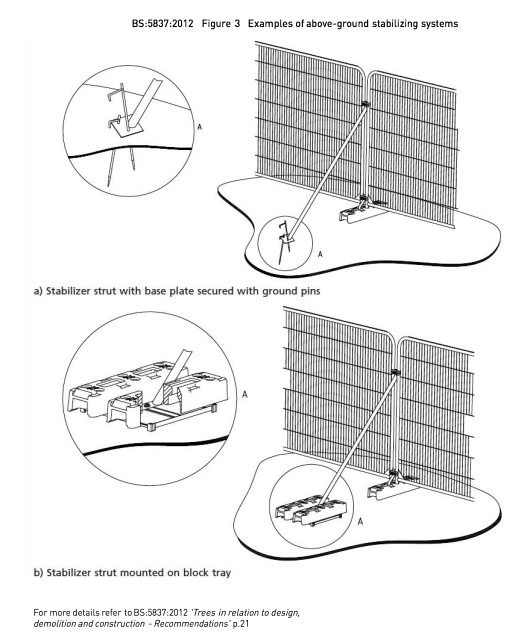
No	Species	Quality	Arboricultural effects (direct and indirect) of proposed design - description	Unadjusted scale of effect	Unadjusted significance of effect (scale effects x quality)	Recommended mitigation	Adjusted scale of effect following mitigation	Adjusted significance of effect (adj .scale effects x quality)	Tree removal required
T252	Birch (Silver)	B2	<ul style="list-style-type: none"> Remove as part of proposals 	High	Major	<ul style="list-style-type: none"> New tree planting as part of landscaping proposals 	Medium	Moderate	Remove
G275	Chestnut (Horse)	B2	<ul style="list-style-type: none"> Remove as part of proposals 	High	Major	<ul style="list-style-type: none"> New tree planting as part of landscaping proposals 	Medium	Moderate	Remove
T280	Hornbeam	B1	<ul style="list-style-type: none"> Remove as part of proposals 	High	Major	<ul style="list-style-type: none"> New tree planting as part of landscaping proposals 	Medium	Moderate	Remove
T297	Maple (Norway)	A1	<p>Retained as part of proposals. Potential direct above and below ground impacts associated with construction activities.</p>	Medium	Major	<ul style="list-style-type: none"> Installation of temporary tree protection fencing to BS.5837:2012 during main construction phase 	Low	Moderate	Retain
T298	Cherry (Wild)	C1	<ul style="list-style-type: none"> Remove as part of proposals 	High	Moderate	<ul style="list-style-type: none"> New tree planting as part of landscaping proposals 	Medium	Minor	Remove
G303	Cypress	B2	<ul style="list-style-type: none"> Remove as part of proposals 	High	Major	<ul style="list-style-type: none"> New tree planting as part of landscaping proposals 	Medium	Moderate	Remove
T304	Cypress	B1	<ul style="list-style-type: none"> Remove as part of proposals 	High	Major	<ul style="list-style-type: none"> New tree planting as part of landscaping proposals 	Medium	Moderate	Remove
T306	Whitebeam	C1	<ul style="list-style-type: none"> Remove as part of proposals 	High	Moderate	<ul style="list-style-type: none"> New tree planting as part of landscaping proposals 	Medium	Minor	Remove
T307	Whitebeam	B1	<p>Retained as part of proposals.</p> <ul style="list-style-type: none"> Potential direct above and below ground impacts associated with construction activities. Potential root damage associated with construction of footpath around tree 	Medium	Moderate	<ul style="list-style-type: none"> Installation of temporary tree protection fencing to BS.5837:2012 during main construction phase Construction of footpath using a 'no-dig' cellular containment system installed in accordance with an approved arboricultural method statement 	Low	Minor	Retain

APPENDIX 4

TREE RETENTION/LOSS AND PROTECTION 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
 - Tree / Hedgerow to be Removed
 - Tree Protection Barrier to BS 5837:2012
 - Load Distributing Cellular Confinement Surface-installed in accordance with an approved Arboricultural Method Statement (AMS)
 - Recommended Location for New Tree Planting



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

Revisions:
 First Issue - 15/10/2015 AD/TD
 A - (14/01/2016 AD) Revised layout
 0521-PH6-102 A Planning Layout-A2L
 B - (21/03/2016 AD) Revised layout
 0521-102 Planning Layout

Tree Retention / Loss & Protection Plan - Phase 6 Heyford Park

Client: Dorchester Group
 DRWG No: **D.0341_82** Sheet No: REV: **B**
 Drawn by: AD Approved by: MP
 Date: 21/03/2016
 Scale: 1:500 @ A2
Pegasus Environment

