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## APPENDIX

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Findings of Arboricultural Survey  
(CPM2172/10a 11/04 JB/SH)

## 1.0 INTRODUCTION AND METHODOLOGY

- 1.1 CPM Environmental Planning and Design Ltd (CPM) has been instructed by Gallagher Estates Ltd & London and Metropolitan to undertake a survey of the trees associated with land adjacent to Gavray Drive, Bicester, Oxfordshire.
- 1.2 The objective of CPM's work is to assess the condition and relative merit of the tree stock with regard to the proposed development of the site, which is allocated in the emerging Cherwell Local Plan 2011.
- 1.3 The survey was carried out on Thursday 6<sup>th</sup> May, in overcast weather conditions. CPM's arboriculturalist is an Affiliate of the Arboricultural Association and a Chartered Landscape Architect. Survey methodology followed the recommendations set out in BS 5837: 1991 (Trees in Relation to Construction) which involves collecting information about:
- (i) Species;
  - (ii) Age Class;
  - (iii) Health;
  - (iv) Estimated Height;
  - (iv) Girth<sup>1</sup>;
  - (vi) Notes about miscellaneous features/notes of interest.
- 1.4 In addition, each individual tree or tree group was attributed one of four quality classes, reflecting the trees overall arboricultural and amenity value in relation to development interests. BS 5837 defines the quality class parameters as follows:
- Quality Class A:* Trees of excellent form and health which contribute significantly to the character of the site and should influence development layout options. Retention is most desirable (Coloured green on plans).
- Quality Class B:* Trees of high value, but of poorer form than Grade A trees and/or suppressed by other trees. Retention is strongly advisable wherever possible. (Coloured blue on plans).
- Quality Class C:* Trees of poor health and/or form. Retention is an option but not essential. Removal may be advantageous to other better specimens nearby. (Coloured brown on plans).
- Quality Class D:* Trees of poor health and/or form. Removal may be advantageous to other better specimens nearby or essential due to the trees potentially dangerous nature in relation to adjacent roads or buildings. (Coloured red on plans).
- 1.5 Findings for the 48 individual trees and 18 groups of trees surveyed are summarised on Figure CPM2172/10a folded into the rear of this report, and within the table contained as Appendix 2. Appendix 1 also contains notes about the criteria measured during the survey.

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<sup>1</sup> Information about the girth of trees is conventionally expressed by measuring the diameter at 1.5m above ground level – called 'diameter at breast height (dbh)'.

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- 1.6 All trees have been visually inspected from ground level with no climbing, boring or core sampling undertaken. The comments made, particularly in Appendix 2 are based on observable factors present at the time of inspection. All measurements are metric and approximate.
- 1.7 Where management action or tree surgery is recommended in Appendix 2, this is based on maximising the trees safe life expectancy, given its current situation.
- 1.8 As well as providing data about individual trees, Section 2 of this report reviews the character and health of the tree stock overall, and Section 3 summarises the report findings and makes recommendations for future management.

**Limitations**

- 1.9 Due to the changing nature of trees and other site circumstances, this report and any recommendations made are limited to a 5-year period. Any alteration to the site and any development proposals could change the current circumstances and may invalidate this report and any recommendations made.
- 1.10 Trees are dynamic structures that can never be guaranteed 100% safe; even those in good condition can suffer damage under average conditions. Regular inspections can help to identify potential problems before they become acute.
- 1.11 A lack of recommended work does not imply that a tree is safe and likewise it should not be implied that a tree will be made safe following the completion of any recommended work.

## 2.0 FINDINGS OF ARBORICULTURAL APPRAISAL

### General Description of Site and Tree Stock

- 2.1 The survey and area of proposed development is located to the east of Bicester, to the west of the land to the north of the Langford Village residential area. The site currently consists of grassland and scrub, with vegetated bounded boundaries to the east and south, mature trees and hedgerows, and a central vegetated river corridor.
- 2.2 Species Composition: The trees themselves are dominated by Oak and Ash, and the findings of the survey reflect the fact that the site consists largely of neglected agricultural land with typical maturing internal field boundaries. 7 dominant species were recorded in all, in the following proportions:

2.3

Species	% Of Individual Trees And Groups of Trees
Oak	24%
Willow	17%
Ash	14%
Hawthorn / Blackthorn	14%
Elder	11%
Field Maple	11%
Elm	9%

Health: A detailed assessment of tree health is best obtained in the summer months through a combination of ground level examination, climbing and/or core sampling, where necessary, to determine trends in growth rates. Such work fell outside the scope of this arboricultural appraisal. Instead, the CPM survey involved ground level examination of only the external features of the trees.

- 2.4 The health of the tree stock is summarised in the table below:

Condition	% Of Individual Trees And Groups Of Trees
Good	1%
Fair - Good	46%
Fair	42%
Fair - Poor	8%
Poor	3%

- 2.5 A number of specific health problems were noted during the survey, including:
- (i) Competition for Light and Space / Lack of Active Management: A number of the mature hedgerow trees are planted in close proximity to each other. Canopies are tightly bunched, and competition for light, nutrients and space is evident. In the absence of proper management, some of the trees are being suppressed by their more vigorous neighbours.
  - (ii) Age / Disease Related Decline: Several trees within the eastern land parcels of the site and numerous hedgerow Elm trees have died or appear to be in recession. The presence of deadwood material and general dieback in Oak and Ash does not necessarily mean that the trees have a poor life expectancy, as they can take many decades to die, and lifespans can be

extended by judicious pollarding or pruning. However, any emergent Elm will struggle to mature as 'Dutch Elm Disease' takes hold.

- 2.6 Age Class: The age structure of the tree stock is summarised in the following table:

Age Class	% Of Individual Trees And Groups Of Trees
Sapling	12%
Young	28%
Young - Mature	22%
Mature	38%

- 2.7 The bias towards young and mature suggests that the tree stock has generally good life expectancy, and will respond well to some active management.

- 2.8 Quality Class: The quality of the tree stock is summarised in the following table:

Quality Class	% Of Individual Trees And Groups Of Trees
A	9%
B	26%
C	64%
D	1%

- 2.9 This distribution reflects the moderate quality condition of the tree stock, although some of the mature Oak trees warrant a Quality Class A classification. The moderate quality of the trees is largely due to the maturity class of the hedgerow vegetation and the presence of so much dead Elm. Poor vigour, competition for light and space and overall quality could be improved over time through active management and a replanting strategy.

### **Planning Considerations**

- 2.10 Following contact with Cherwell District Council, CPM has confirmation that part of the site is covered by a Tree Preservation Order, reference: TPO No. 17 (dated 5<sup>th</sup> September 1990). The TPO includes a schedule of 29 individual trees and 4 groups of trees, all to the east of the river corridor (see Appendix 3).

**3.0 SUMMARY OF KEY ISSUES AND RECOMMENDATIONS FOR FUTURE MANAGEMENT**

**Recommendations and Issues arising from Survey Findings**

- 3.1 The findings of CPM's arboricultural survey reveal that the tree stock upon the site consists largely of young-mature to mature Oak and Ash species, of moderate to good quality. The most significant health problems relate to competition for light and space, need for active management and the presence of Dutch Elm Disease.

**Recommendations for the trees surveyed are summarised below:**

***New Tree Planting / Management Works***

- 3.2 CPM recommends that where tree stock cannot be retained, a programme of replacement tree planting should be formulated in conjunction with the overall site development plan. Native plant selection should be encouraged, from a local source where possible. The separate ecological appraisal makes further recommendations for new native planting and management strategies.
- 3.3 A number of trees require minor arboricultural work, including the removal of deadwood material and some selective pruning (30% selective thinning). Any deadwood material should be retained on site / stacked within the wildlife corridors for the benefits of the local ecology.

***Proposed Development / Trees in Relation to Construction***

- 3.4 The adequate protection of retained trees on development sites is of paramount importance if they are to be retained successfully. The protection measures specified below should be implemented prior to any development works commencing and must be maintained throughout the construction period.
- 3.5 The inevitable stress caused by development near to existing trees can, if provision for adequate protection is not made, severely damage the trees or even result in their death. Although the trees appear healthy during and on completion of the development, the full effects may not become apparent for up to five or more years.

**Tree Protection Strategy**

***Roots***

- 3.6 The roots of trees are the most susceptible part of the tree to damage. Temporary 1.5 metre chestnut pale and wire fencing on a scaffold framework will be erected around the trees and areas of planting to be retained. This is to exclude all vehicular and pedestrian traffic and prevent the storage of materials within the crown spread of the trees.
- 3.7 Lines of protective fencing should be agreed with the local planning authority prior to development commencing on site. It is also important to ensure that all proposed fencing be erected in accordance with BS 5837 : Trees in Relation to Construction (1991).
- 3.8 As roots can be damaged by the direct toxicity of some materials, care will be taken as to the nature of any materials stored near the protective fencing. All excavations shall be outside the protective fencing with the area within remaining totally undisturbed.
- 3.9 Protective fencing shall be erected prior to any materials or machinery being brought to the site and before construction proceeds. It shall be maintained intact

throughout the construction period. Notices shall be placed on each side of each fenced off area stating 'Protected Area – no storage or operations within fenced area'.

***Trunks, Stems & Branches***

- 3.10 Essentially the above ground parts of a tree, being more visible, are more easily protected. Fencing erected to protect the roots should in most cases provide sufficient protection for the above ground parts. Should it be necessary to prune the branches to accommodate development or construction, this shall be on the advice of an arboriculturalist and in accordance with the recommendations of BS 3998 (1989).

***Material Storage on Site***

- 3.11 No materials shall be stored in the protected areas.
- 3.12 No oil, diesel or solvents shall be stored any closer than 5 metres from the edge of the canopy of any trees.
- 3.13 No cement, concrete or other lime-based materials either loose or in bags shall be stored under the canopies of any trees.

***Vehicle & Pedestrian Traffic through Protected Areas***

- 3.14 No vehicle or pedestrian traffic shall be allowed through protected areas.

***Concrete / Mortar / Plaster Mixing on Site***

- 3.15 No mixing shall take place in protected areas or under the canopies of any trees.

***Telephone / Electric & Other Cables / Notice Boards***

- 3.16 None shall be fixed to any part of any tree.

***Fires***

- 3.17 None shall be allowed on site.

**APPENDIX 1      REFERENCES NOTES FOR INTERPRETING**

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**Recorded Factors**

- A1.1      Age Class: Trees are assigned to one of four age classes (young, early mature, mature, over mature) according to species.
- A1.2      Height and Crown Spread: All dimensions are given in metres and are approximate.
- A1.3      Girth: Approximate measurements of trunk girth taken at 1.5 metres above ground level (diameter at breast height or dbh).
- A1.4      Quality Class: Trees surveyed have been divided into quality classes as follows.
- A1.5      Quality Class A+ and A: Trees which should influence development layout options and whose retention is most desirable. These are the best trees on site. Specifically, this includes:
- (i)      Vigorous healthy trees, of good form, and in harmony with proposed space and structures;
  - (ii)     Healthy young trees of good form, potentially in harmony with proposed development;
  - (iii)    Trees screening or softening the effect of existing structures in the near vicinity, or of particular visual importance to the locality;
  - (iv)    Trees of particular historical, commemorative or other value, or good specimens of rare or unusual species.
- A1.6      Quality Class B: Trees of some value within the context of the site whose retention is desirable where feasible. Specifically this includes:
- (i)      Trees that might be included in the high category, but because of their numbers or slightly impaired condition, are downgraded in favour of the best individuals;
  - (ii)     Immature trees, with potential to develop into the high category.
- A1.7      Quality Class C: Trees whose location should not have a significant influence on development layout and whose retention is optional. This includes:
- (i)      Trees in adequate condition, or which can be retained with minimal tree surgery, but are not worthy for inclusion in the high or moderate categories;
  - (ii)     Immature trees, or trees of no particular merit.
- A1.8      Quality Class D: Trees requiring removal:
- (i)      Dead or structurally dangerous trees;
  - (ii)     Trees with a visibly insecure roothold which can reasonably be expected to be unsafe;

- (iii) Trees with significant fungal decay at base or on main bole likely to be affecting tree stability;
  - (iv) Trees with a cavity or cavities of significance to safety;
  - (v) Trees that will become dangerous after removal of other trees for the reasons given in items 1 to 4.
- A1.9 Notes about the condition of the tree and its relationship with its neighbours are provided. Note the following:
- (i) Root and butt decay pathogens and structural defects; Unless otherwise stated with each individual entry, there were no external signs that root and butt decay pathogens or structural defects were present at the time the inspection was undertaken;
  - (ii) Canopy density/leaf size/colouration; unless otherwise stated with each individual entry, the trees canopy density is typical of the species.

**APPENDIX 2 TREE SURVEY**

**APPENDIX 3 TREE PRESERVATION ORDER DETAILS**

(CPM2172/47a 11/04 JB/LS)

**FIGURE**      **Findings of Arboricultural Survey**  
(CPM2172/10a 11/04 JB/SH)