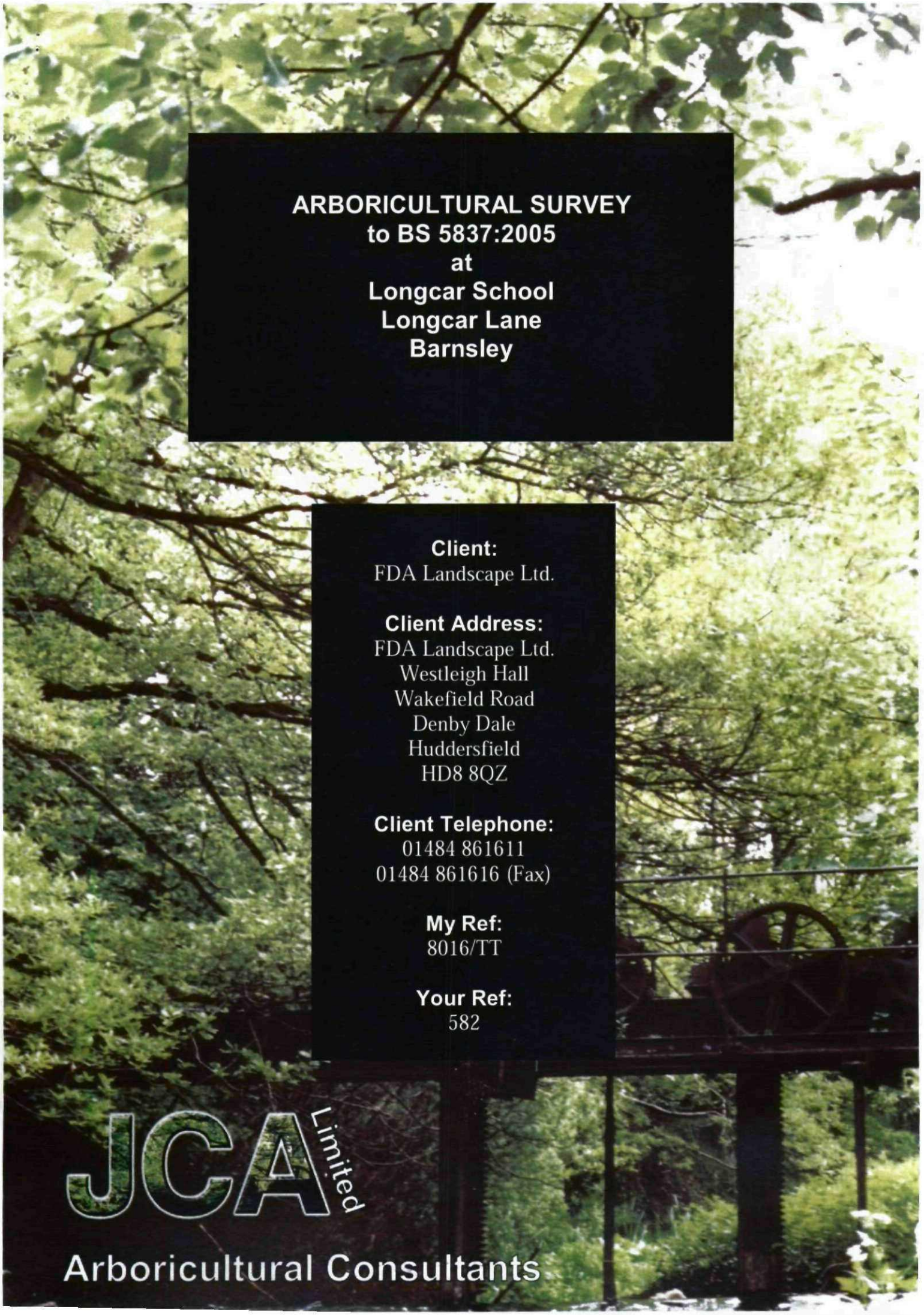


# ARBORICULTURAL SURVEY
# to BS 5837:2005
# at
# Longcar School
# Longcar Lane
# Barnsley

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# 1. Introduction

## 1.1 Purpose of the Report

1.1.1 A report is needed at the above location to give detailed, independent, arboricultural advice on the trees present, in the particular context of potential development.

## 1.2 Terms of Reference

1.2.1 I am instructed by FDA Landscape Ltd., Huddersfield, to visit the site and prepare my findings in a report.

1.2.2 For this purpose I have been supplied with a topographical survey.

## 1.3 Scope of the Report

1.3.1 This report is compiled in accordance with *BS 5837:2005 Trees in relation to construction.* The specific design of any proposed development is not generally taken into account at this stage.

1.3.2 Preliminary recommendations are given with a view to safety and the long-term management of a sustainable tree cover.

1.3.3 All trees within the site boundary with a stem diameter above 75mm are included.

1.3.4 Where applicable smaller trees and significant shrub masses are included.

1.3.5 Where applicable trees outside the site boundary, but close enough to be affected by development, are included.

## 1.4 Survey details

1.4.1 The survey took place during the month of May 2007.

1.4.2 The survey was conducted by Toby Thwaites BSc (Hons) HND (Arboriculture).

1.4.3 Inspection was made at ground level. Further investigation, such as climbed inspections or decay detection surveys, may be recommended where appropriate.

1.4.4 Measurements were obtained using clinometers, specialist tapes or electronic distometers. Where this was not possible measurements were estimated.

1.4.5 No digging or drilling was carried out on this occasion.

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# 2. Site Description

## 2.1 Land Use

2.1.1 The site can be divided into three main sections. The first, and largest area, is a school and its associated grounds and buildings. The second area, which borders the school to the east, appears derelict and contains several garages. The third area, which also borders the school to the east, is fenced off and unused. This appears to have once been a children's play area.

## 2.2 Topography

2.2.1 The site slopes gradually from the south down towards the northern boundary.

## 2.3 Treescape

2.3.1 The trees on site collectively have a moderate impact on the surrounding area.

2.3.2 Surrounding the site is a residential area containing street trees and occasional garden specimens.

## 2.4 Amenity Value

2.4.1 The trees on site collectively provide a moderate amenity to the surrounding area. However, it should be observed that only a few trees are worthy of individual note.

## 2.5 Age Class Mix

2.5.1 The majority of the surveyed trees fall within the age range of semi-mature to early mature. The site contained only a few mature trees.

## 2.6 Species Diversity

2.6.1 The species diversity is good with Common Ash, Manna Ash, Birch, Blackthorn, Cherry, Hawthorn, Hollies, Horse Chestnut, Lime, Plum, Swedish Whitebeam, Common Whitebeam, Rowan, Silver Maple, Sycamore and Zelkova identified.

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# 3. Explanation of Tree Descriptions

## 3.1 Measurements

3.1.1 *HEIGHT* of the tree is measured from the stem base. Where the ground has a significant slope the higher ground is selected.

3.1.2 *CROWN HEIGHT* is an indication of the average height at which the main crown begins

3.1.3 *STEM DIAMETER* is measured at 1.5 metres above (higher) ground level. Where the tree is multi-stemmed at this point; the diameter is measured close to ground level, just above the root buttress.

3.1.4 *CROWN SPREAD* is measured from the centre of the stem base to the tips of the branches in all four cardinal points.

## 3.2 Evaluations

3.2.1 *AGE CLASS* of the tree is described as young, semi-mature, early-mature, mature, or over-mature.

3.2.2 *PHYSIOLOGICAL CONDITION* is classed as good, fair, poor, or dead. This is an indication of the health of the tree and takes into account vigour, presence of disease and dieback.

3.2.3 *STRUCTURAL CONDITION* is classed as good, fair or poor. This is an indication of the structural integrity of the tree and takes into account significant wounds, decay and quality of branch junctions.

3.2.4 *LIFE EXPECTANCY* is classed as; less than 10 years (<10). 10-20 years, 20-40 years, or more than 40 years (40+). This is an indication of the number of years before removal of the tree is likely to be required.

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## 3.3 Retention Categories

3.3.1 *RETENTION CATEGORY* values for the trees are as follows:

3.3.2 ***A (marked green on the plan) = retention most desirable***
These trees are of high quality and value with a good life expectancy. They may be further sub-divided as follows:

- Ai) Particularly good examples; perhaps rare or unusual species, or forming an essential part of arboricultural features e.g. avenues;
- Aii) Groups of trees having a significant landscape impact or with excellent screening properties, or those softening the effect of existing structures;
- Aiii) Those having significant conservation or historical value e.g. veteran trees.

3.3.3 ***B (marked in blue on the plan) = retention desirable***
These trees are of moderate quality and value with a significant life expectancy. They may be further sub-divided as follows:

- Bi) Trees that might be included in the high category but because of their numbers or slightly impaired condition, are downgraded in favour of the better individuals;
- Bii) Groups of trees forming distinct landscape features, thereby attracting a higher collective rating than they might as individuals;
- Biii) Trees with clearly identifiable conservation or other cultural benefits.

3.3.4 ***C (marked in grey on the plan) = trees which could be retained***
These trees are of low quality and value with in adequate condition to remain until new planting could be established. They may be further sub-divided as follows:

- Ci) Trees not qualifying in higher categories;
- Cii) Groups of trees which do not form a distinct landscape feature;
- Ciii) Trees with very limited conservation or other cultural benefits.

3.3.5 ***R (marked in red on the plan) = trees for removal***
These trees are in such a condition that any existing value would be lost within 10 years. This may be due to any of the following:

- i) Failure is likely due to serious, irredeemable, structural defects;
- ii) Removal of other category R trees will render them exposed and unstable;
- iii) They are in serious, overall decline or are dead;
- iv) They are of low quality and suppressing adjacent trees of better quality;
- v) Diseases are present which may affect the health of adjacent trees.

These trees should be removed or treated in such a way as to make them safe where they have high ecological value, such as in a woodland setting.

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## 4. Status of the Trees

4.1 Checks have been made with Barnsley Metropolitan Borough Council

We are informed that there is a Tree Preservation Order in force on this site. Barnsley Metropolitan Borough Council TPO No 13/2008.

Before any work is organised, all the necessary steps to get the permission of the Local Planning Authority should be taken.

***No work should be done to any trees until this permission has been granted.***

4.2 Due to the large potential penalties for illegally carrying out work to protected trees, JCA recommend that a further check is carried out prior to any works being undertaken. We are able to arrange this and to organise and supervise professional contractors.

## 5. Tree Descriptions and Recommendations

5.1 Full details of all individual trees surveyed are recorded in the tables at Appendix 1. Please refer also to the attached plan at Appendix 5 and Section 3, for a full explanation of the tables and plan.

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## 6. Discussion

6.1 The tree survey revealed a total of 51 trees or groups of trees. Of these, 8 trees were identified as retention category 'B', 40 trees/groups as retention category 'C' and 3 trees as retention category 'R'. No retention category 'A' trees were identified on this occasion.

6.2 The retention category 'B' trees (T18, T23, T24, T27, T43, T46, T48 and T49) are generally considered to be structural planting of reasonable form and condition with a moderate life expectancy. These trees are desirable and where possible they should be retained.

6.3 The retention category 'C' trees/groups of trees are generally not considered to be structurally important having poorer form, condition or stature or with a lower life expectancy. Whilst retention is acceptable and preferable, individually these trees/groups may be seen as removable should they impede upon the proposed development.

6.4 Three trees, T28, T37 and T39, were identified as retention category 'R' (trees to be removed). These trees have no long term future on the site, are already in decline or considered to be potentially hazardous.

- T28 is a Lime in severe decline and almost dead. As it is located on the boundary, adjacent to a footpath and road, I feel it would be prudent to remove this tree immediately.

- T37 is a Holly that is three-stemmed from its base. The central stem was dead and decay was also observed at the base of a second stem. This tree has no long term future. I recommend that this tree be removed during the development phase.

- T39 is a Birch that is twin-stemmed at 4 metres. The eastern stem is dead above the fork and is in need of removal. However, this will result in the tree having a severely unbalanced, leaning form. I therefore feel it would be prudent to remove this tree altogether and recommend that it be removed during the development phase.

6.5 Trees T6, T13, T14, T16, T22, T29, T31, T38, T40 and T47 were noted to have defects or poor form which may lead to their early demise or render them unsafe in the future. At present, these trees appear to be structurally sound and therefore their removal cannot yet be justified. I have made recommendations in Appendix 1 for these trees to be monitored in the future, to assess if their condition is still acceptable, and advise that they be re-surveyed on an annual basis.

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6.6 T45 and T50 were covered in Ivy. The Ivy may hide defects which were not evident at the time of the inspection. It is therefore advised that the Ivy be removed and that the trees be re-inspected.

6.7 Some of the surveyed trees had branch stubs, snapped branches or deadwood within their canopies. It is advised that those trees which are located close to, or which overhang any access routes or structures, both existing and proposed, be remedially pruned to remove the stubs, broken branches and deadwood from their crowns.

6.8 All trees which overhang public footpaths and public highways, both existing and proposed, will require future crown lifting work, in order to maintain clearance over vehicle and pedestrian ways.

JCA recommend that the following crown heights be maintained:

| | |
|---|---|
| Height for pedestrian access: | No less than 2.5m |
| Height for vehicular access: | No less then 4m for a minor road<br>No less than 6m for major roads or where buses will pass. |
| Distance from overhead cables: | No less than 2m |
| Distance from building or other structures: | No less than 2m |
| Distance from lamp post or signs: | Sufficient to not impede visibility for 2 years. |

6.9 All development work to be carried out within close proximity of the retained trees should be done so in a manner sympathetic to their needs. Failing to do so could seriously affect the health and condition of the trees and may even result in tree death.

6.10 In order to ensure the protection of the trees throughout the development, a detailed method statement is recommended. This method statement would detail tree root protection areas and the positions of protective fencing, service runs, site access and storage, specifications for special hard surfacing and a timetable of events relating to the procedures. Failure to adhere to such procedures will greatly reduce the life expectancy of the surveyed trees. A detailed Method Statement is frequently required by the local authority before planning permission is granted.

6.11 Protective fencing, in accordance with BS 5837:2005 should be erected around all the trees which are to be retained on site. The fencing will ensure that the trees remain healthy during and after the development process.

6.12 Root Protection Areas (RPAs) have been plotted around each tree and is generally represented by a circle with the tree located at the centre (see the attached plan at Appendix 5). The radius of each circle is determined on the measurement derived from calculations in BS 5837: 2005.

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6.13 The RPAs represent the likely rooting zone of a tree, which should not be disturbed. The development should ideally be designed in order to avoid the RPA's of those trees that are to be retained. Where possible the proposed positions of new structures such as buildings, driveways, car parking spaces and paths should be outside the RPAs of those trees which are to be retained.

6.14 It should be noted due to the presence existing features such as roads, buildings and retaining walls, the shape of some RPA's on the site plan have been changed from a circle to give a more realistic representation of rooting patterns.

6.15 The site slopes gradually from the south down towards the northern boundary. If the land levels need to be altered before any construction can begin, then it is important not to significantly change the ground levels within the RPA of any retained tree, without prior agreement.

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## 7. Conclusion

7.1 The retention category 'B' trees should be retained where possible.

7.2 Most of the retention category 'C' trees could be individually removed without causing significant harm to the treescape.

7.3 Crown heights should be maintained over all access routes and structures (both existing and proposed).

7.4 All deadwood should be removed from over the access routes and structures, (both existing and proposed).

7.5 Three trees are recommended for removal due to arboricultural reasons. Further trees may need to be removed in order to facilitate the proposed development scheme.

7.6 The proposed development will provide an opportunity to improve the overall condition of the tree population within the site. This could be achieved through implementing a tree planting scheme. New planting would also help compensate the loss of any tree which is removed in order to facilitate the proposed development.

7.7 Careful protective fencing in line with the recommendations of this report will ensure that the trees retained will remain healthy during and after the development phase.

7.8 I recommend the preparation of a detailed method statement once the final layout and measurements are agreed in principle. The method statement would make provisions for site inspections by an arboriculturist throughout the development phase to ensure that correct procedures are followed.

7.9 It is advisable to have trees inspected by an arboricultural consultant regularly. In this instance it is recommended that these inspections are made every year.

7.10 Upon instruction, JCA Limited will produce a Method Statement, a tree planting scheme, organise and supervise tree works, and if necessary undertake climbed, aerial inspections and carry out decay detection analysis.

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# Appendix 1: Tree Descriptions and Recommendations

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| Ref No. | Age & Species & *Latin Name* | Height (m) | Crown Height (m) | Stem Diameter (cm) | Crown Spread N / W / E / S | Observations | Recommendations | Physio-logical Condition & Structural Condition | Amenity Value | Life Expectancy (yrs) | Retention Category |
|---|---|---|---|---|---|---|---|---|---|---|---|
| T1 | Semi-Mature Variegated Holly *Ilex aquifolium* | 5.5 | 1.5 | 18 | N 2 / W 2 / E 2.5 / S 2.5 | Single-stemmed and vertical with a well developed crown. Multiple pruning wounds due to crown lifting works. Small bark wounds at base – probably caused by a grass strimmer. | No action at present. | GOOD / GOOD | MOD | 40+ | C |
| T2 | Semi-Mature Plum *Prunus sp.* | 6 | 1.5 | 19 | N 2.5 / W 3 / E 3 / S 4 | Single-stemmed and vertical with a well developed crown. Occasional pruning wounds due to crown lifting works, (some healing slowly). Amongst shrubs. Small bark wounds with minor decay. No major visible defects. | No action at present. | GOOD / FAIR | LOW | 40+ | C |
| T3 | *Semi-Mature* Swedish Whitebeam *Sorbus intermedia* | 6.5 | 2 | 22 (at 1m) | N 2 / W 2 / E 1.5 / S 1.5 | Multi-stemmed at 1.5m with a slightly unbalanced crown. No evidence of significant pruning. No major visible defects. Amongst shrubs. | No action at present. | GOOD / GOOD | LOW | 40+ | C |
| T4 | Semi-Mature Plum *Prunus sp.* | 8.5 | 1.5 | 26 | N 3.5 / W 3.5 / E 2 / S 3 | Single-stemmed with a slight lean and a well developed crown. Occasional pruning wounds due to crown lifting works. No major visible defects. Amongst shrubs. | No action at present. | GOOD / GOOD | MOD | 40+ | C |
| T5 | Semi-Mature Cherry *Prunus sp.* | 8 | 2 | 29 | N 3 / W 2.5 / E 3 / S 3 | At the bottom of a banking. Single-stemmed with a slight lean and a well developed crown. Multiple pruning wounds and branch stubs. No major visible defects. | Remedial prune. | GOOD / GOOD | MOD | 40+ | C |
| T6 | Semi-Mature Cherry *Prunus sp.* | 6.5 | 2 | 25 | N 3 / W 2.5 / E 3 / S 2.5 | At the bottom of a banking. Single-stemmed and vertical with a reasonably well developed crown. Occasional pruning wounds due to crown lifting works. Central leader snapped off at 4m. | Monitor the *future health* and condition. | FAIR / FAIR | MOD | 20-40 | C |
| T7 | Early-Mature Cherry *Prunus sp.* | 9 | 4 | 36 | N 5.5 (est.) / W 2 / E 4 / S 3 | At the bottom of a banking. Single-stemmed and vertical with an unbalanced crown. Multiple pruning wounds and branch stubs due to crown lifting works. Crown overhangs a residential garden beyond the northern boundary. | Re-shape the *crown and* remedial prune. | FAIR / FAIR | MOD | 20-40 | C |
| G8 | Young-Semi-Mature Mixed Vegetation | To 6 | 0+ | To 12 | See Plan | A dense belt of overgrown vegetation growing along the northern boundary. Species include Hawthorn, Elder, Laurel, Cotoneaster, Cherry and numerous mixed shrubs. Collectively the vegetation provides a good screen and offers some security. | Bring back into maintenance. | GOOD / GOOD | MOD | 40+ | C |
| T9 | Semi-Mature Cherry *Prunus sp.* | 8 | 1.5 | 22 | N 3 / W 2 / E 2 / S 0.5 | *Growing amongst G8.* Single-stemmed and vertical with a well developed crown. Branch stubs. No major visible defects. | Remedial prune. | GOOD / GOOD | MOD | 40+ | C |
| T10 | Semi-Mature Cherry *Prunus sp.* | 8 | 1.5 | 27 | N 4 / W 4 / E 3.5 / S 4 | Growing amongst G8. Multi-stemmed at 2m with a well developed crown. No evidence of *significant pruning. No major visible defects.* | No action at present. | GOOD / GOOD | MOD | 40+ | C |

| Ref No. | Age & Species & *Latin Name* | *Height (m)* | Crown Height (m) | Stem Diameter (cm) | Crown Spread N / W / E / S | Observations | Recommendations | Physio-logical Condition & Structural Condition | Amenity Value | *Life Expectancy (yrs)* | Retention Category |
|---|---|---|---|---|---|---|---|---|---|---|---|
| T11 | Semi-mature Cherry *Prunus sp.* | 8 | 2 | 22 | N 4 / W 2.5 / E 4 / S 3 | Growing amongst G8. Multi-stemmed at 2m with a well developed crown. Some branch stubs. No major visible defects. | No action at present. | GOOD GOOD | MOD | 40+ | C |
| T12 | Semi-Mature Ash *Fraxinus excelsior* | 12 | 2 | 33 | N 3 / W 5 / E 2.5 / S 0.5 | Single-stemmed with a slight lean and an unbalanced crown. No evidence of significant pruning. Small stem wounds with minor decay. No major visible defects. | No action at present. | FAIR FAIR | MOD | 40+ | C |
| T13 | Semi-Mature Ash *Fraxinus excelsior* | 13 | 2 | 23 + 24 + 33 | N 1.5 / W 5 / E 4 / S 6.5 | Multi-stemmed from ground level with an unbalanced crown. No evidence of significant pruning. Sparse looking crown in places and minor deadwood. Small stem wounds. | Remedial prune then monitor in the future. | FAIR FAIR | MOD | 10-20 | C |
| T14 | Semi-Mature Sycamore *Acer pseudoplatanus* | 11 | 3 | 25 | N 2.5 / W 2 / E 3.5 / S 2.5 | Adjacent to a fence. Twin-stemmed at 2m with a well developed crown. Large suckers, epicormic shoots and Horse Chestnut Scale noted. Occasional pruning wounds due to crown lifting. Bark wound on eastern side. | Remove the epicormic shoots and suckers then monitor. | GOOD FAIR | MOD | 20-40 | C |
| G15 | Semi-Mature Sycamore *Acer pseudoplatanus* | 12 | 3 | 24 + 25 | N 3 / W 3 / E 4 / S 2.5 | Adjacent to a fence. Two trees growing on opposite sides of a fence. Both are single-stemmed and vertical with a joint crown. Occasional pruning wounds due to crown lifting. Horse Chestnut Scale and large epicormic shoots/suckers noted but no major visible defects. | Remove the epicormic shoots and suckers. | GOOD GOOD | MOD | 40+ | C |
| T16 | Semi-Mature Sycamore *Acer pseudoplatanus* | 11 | 2.5 | 15 + 16 | N 0 / W 2 / E 2 / S 2 | Adjacent to a fence. Twin-stemmed at ground level with an unbalanced crown. Tight union at base. Occasional pruning wounds due to crown lifting. Horse Chestnut Scale. Large wounds on eastern side of stem. | Monitor in the future. | FAIR FAIR | MOD | 10-20 | C |
| T17 | Semi-Mature Sycamore *Acer pseudoplatanus* | 11 | 2 | 26 | N 2 / W 3 / E 3 / S 4 | Adjacent to a fence. Single-stemmed and vertical with a well developed crown. Occasional pruning wounds due to crown lifting. Horse Chestnut Scale, large epicormic shoots and suckers noted. No major visible defects. | Remedial prune to remove the epicormic shoots. | GOOD GOOD | MOD | 40+ | C |
| T18 | Semi-Mature Rowan *Sorbus aucuparia* | 7 | 2 | 25 | N 3 / W 3 / E 3 / S 3 | In a central lawn area. Multi-stemmed at 2m with a well developed, multiple-stemmed crown. No evidence of significant pruning. Some crossing branches. No major visible defects. | Remedial prune and remove the first lateral branch at 1.5m. | GOOD GOOD | MOD | 40+ | B |
| T19 | Young Birch *Betula sp.* | 7.5 | 1.5 | 15 | N 2 / W 2 / E 1.5 / S 2 | Single stemmed with a slight lean and a well developed crown. Stem damage at 1m due to a former stake tie. No evidence of significant pruning. No major visible defects. | No action at present. | GOOD FAIR | MOD | 40+ | C |
| T20 | Early-Mature Whitebeam *Sorbus aria* | 8.5 | 1.5 | 31 | N 4 / W 3.5 / E 6 / S 3 | Multi-stemmed with tight unions at 2m. Has an unbalanced crown and leans to the east. Occasional pruning wounds due to crown lifting. No major visible defects. | No action at present. | GOOD FAIR | MOD | 20-40 | C |

| Ref No. | Age & Species & *Latin Name* | Height (m) | Crown Height (m) | Stem *Diameter (cm)* | Crown Spread N / W / E / S | Observations | Recommendations | Physio-logical Condition & Structural Condition | Amenity Value | Life Expectancy (yrs) | Retention Category |
|---|---|---|---|---|---|---|---|---|---|---|---|
| T21 | Young Rowan *Sorbus aucuparia* | 5.5 | 2 | 11 | N 2.5 / W 0.5 / E 2 / S 2 | Single-stemmed with a slight lean and an unbalanced crown. No evidence of significant pruning. No major visible defects. | No action at present. | GOOD GOOD | LOW | 40+ | C |
| T22 | Young Ash *Fraxinus excelsior* | 6.5 | 2 | 10 | N 2 / W 2.5 / E 0.5 / S 2.5 | Multi-stemmed from ground level with an unbalanced crown. Tight unions at base. No evidence of significant pruning. | Monitor the tight unions in the future. | GOOD FAIR | LOW | 40+ | C |
| T23 | Mature Sycamore *Acer pseudoplatanus* | 12.5 | 5 | 59 | N 5 / W 5.5 / E 5.5 / S 5 | In a planting pit. Multi-stemmed at 3m with a well developed crown. Multiple pruning wounds due to crown lifting – some with cavities and minor decay. Horse Chestnut Scale. No major visible defects. | Remedial prune. | FAIR FAIR | HIGH | 20-40 | B |
| T24 | Semi-Mature Manna Ash *Fraxinus ornus* | 8 | 2 | 20 | N 2.5 / W 3 / E 2 / S 2.5 | Single-stemmed and vertical with a well developed crown. Occasional pruning wounds due to crown lifting. No major visible defects. Hard surfacing all around base. | No action at present. | GOOD GOOD | MOD | 40+ | B |
| T25 | Early-Mature Lime *Tilia sp.* | 14 | 2 | 30 | N 3 / W 4 / E 4 / S 4 | Twin-stemmed at 2m with a well developed crown. Multiple pruning wounds due to crown lifting. Horse Chestnut Scale and epicormic shoots noted. No major visible defects. Crown overhangs the adjacent footpath. | Crown lift in the future. | GOOD GOOD | MOD | 40+ | C |
| T26 | Semi-Mature Lime *Tilia sp.* | 10 | 1.5 | 26 | N 3 / W 2 / E 4 / S 1.5 | Single stemmed with a slight lean. Unbalanced crown. Occasional pruning wounds due to crown lifting. Snapped branches. Horse chestnut scale. Small bark wounds up stem. Crown overhangs the footpath. | Remedial prune then crown lift in the future. | GOOD FAIR | MOD | 20-40 | C |
| T27 | Mature Plum *Prunus sp.* | 9.5 | 1 | 33 | N 4 / W 5 / E 2.5 / S 4.5 | Twin-stemmed at 2.5m with a well developed crown. Occasional pruning wounds and a stub on the eastern side at 0.5m. Crown overhangs the footpath. No major visible defects. | Crown lift in the future. | GOOD GOOD | MOD | 20-40 | B |
| T28 | Young Lime *Tilia sp.* | 8 | 1 | 10 | N 0 / W 0.5 / E 0.5 / S 1 | Adjacent to the footpath and road. Dying – most of the crown dead. *Ganoderma* at base. | Fell immediately. | POOR POOR | DEAD | 0 | R |
| T29 | Early-Mature Horse Chestnut *Aesculus hippocastanum* | 10 | 2 | 28 | N 4 / W 3 / E 4 / S 3 | Single-stemmed and vertical with a well developed crown. No evidence of significant pruning. Early symptoms of Bleeding Canker. Adjacent to the footpath and road. | Closely monitor in the future. | FAIR FAIR | MOD | <10 | C |
| T30 | Semi-Mature Zelkova *Zelkova sp.* | 10 | 2 | 20 | N 3 / W 1.5 / E 3.5 / S 2.5 | Single-stemmed and leaning with an unbalanced crown. No evidence of significant pruning. No major visible defects. Adjacent to the footpath and road. | Crown lift in the future. | GOOD GOOD | MOD | 40+ | C |

| Ref No. | Age & Species & *Latin Name* | Height (m) | Crown Height (m) | Stem Diameter (cm) | Crown Spread N W E S | Observations | *Recommendations* | Physio-logical Condition & Structural Condition | Amenity Value | Life Expectancy (yrs) | Retention Category |
|---|---|---|---|---|---|---|---|---|---|---|---|
| T31 | Mature Birch *Betula pendula* | 13 | 2 | 43 | 3 / 4.5 7 / 4 | Twin-stemmed at 3m with a well developed crown. Leans slightly. No evidence of significant pruning. Minor deadwood and canker. | Monitor the health and condition and crown lift in the future. | FAIR FAIR | MOD | 10-20 | C |
| G32 | Semi-Mature Blackthorn *Prunus spinosa* | 8.5 | 2.5 | 16 + 15 | See Plan | Two trees - both Single stemmed with slight leans and well developed crowns. No evidence of significant pruning. No major visible defects. | No action at present. | GOOD GOOD | MOD | 40+ | C |
| G33 | Semi-Mature Lime *Tilia sp.* | To 11.5 | +2 | 18 + 23 | See Plan | Two trees. One twin-stemmed at 2m with a well developed crown and one single-stemmed and vertical with a well developed crown. No evidence of significant pruning. Horse Chestnut Scale. No major visible defects. | No action at present. | GOOD GOOD | MOD | 40+ | C |
| T34 | Early-Mature Sycamore *Acer pseudoplatanus* | 13 | 1.5 | 27 | 5 (est.) / 4.5 3 / 5 | Single-stemmed with a slight lean and a well developed crown. Occasional pruning wounds due to crown lifting works. Epicormic shoots. minor deadwood and Horse Chestnut Scale noted. No major visible defects. | No action at present. | GOOD GOOD | MOD | 40+ | C |
| T35 | Semi-Mature Holly *Ilex aquifolium* | 9 | 2 | 17 (ave.) | 2.5 / 2.5 2.5 / 2 | Multi-stemmed with tight unions at ground level. Has a well developed crown. Occasional pruning wounds, some with decay. Epicormic shoots noted. | No action at present. | GOOD FAIR | MOD | 20-40 | C |
| T36 | Semi-Mature Sycamore *Acer pseudoplatanus* | 10.5 | 3 | 24 | 3 / 2 3 / 5 | Single-stemmed with a slight lean and a well developed crown. No evidence of significant pruning. Epicormic shoots noted. No major visible defects. | No action at present. | GOOD GOOD | MOD | 40+ | C |
| T37 | Semi-Mature Holly *Ilex aquifolium* | 6 | 1 | To 18 | 3 / 2.5 2.5 / 3 | Three-stemmed at ground level. The central stem is dead and decay was observed at the base of a second stem. Limited future. | Remove. | FAIR POOR | LOW | 10-20 | R |
| T38 | Early-Mature Sycamore *Acer pseudoplatanus* | 16 | 3 | 33 | 4.5 / 4 4 / 5.5 | Single-stemmed with a slight lean and a well developed crown. No evidence of significant pruning. Epicormic shoots. minor deadwood and a large bark wound from 0.4 m to 1.5m observed. | Monitor the future health and condition. | FAIR FAIR | MOD | 20-40 | C |
| T39 | Early-Mature Birch *Betula sp.* | 15 | 4 | 24 | 2.5 / 4 2.5 / 3 | Twin-stemmed at 2.5m with an unbalanced crown. The eastern stem is dead and decayed. No long term future. | Remove. | FAIR FAIR | MOD | 10-20 | R |
| T40 | Early-Mature Sycamore *Acer pseudoplatanus* | 15 | 3 | 33 (est.) | 5 (est.) / 5.5 3 / 6 | Behind a fence – a full detailed inspection not possible. Multi-stemmed at 3.5m with tight unions. Epicormic shoots noted. No major visible defects apparent. | Monitor the tight union in the future. | FAIR FAIR | MOD | 40+ | C |

| Ref No. | Age & Species & *Latin Name* | Height (m) | Crown Height (m) | Stem Diameter (cm) | Crown Spread N / W / E / S | Observations | Recommendations | Physio-logical Condition & Structural Condition | Amenity Value | Life Expectancy (yrs) | Retention Category |
|---|---|---|---|---|---|---|---|---|---|---|---|
| T41 | Young Sycamore *Acer pseudoplatanus* | 9.5 | 4 | 15 (est.) | N 2.5 / W 2.5 / E 2 / S 2 | Growing behind fence –a full detailed inspection was not possible. Single-stemmed and vertical with a well developed crown. No evidence of significant pruning. No major visible defects. | No action at present. | GOOD GOOD | LOW | 40+ | C |
| T42 | Semi-Mature Manna Ash *Fraxinus ornus* | 14 | 3 | 24 | N 4 / W 4 / E 3 / S 2.5 | Single-stemmed and vertical with a well developed crown. No evidence of significant pruning. Small bark wound at 0.5m. Vandalised - nails in stem. | No action at present. | FAIR FAIR | MOD | 20-40 | C |
| T43 | Semi-Mature Manna Ash *Fraxinus ornus* | 14 | 2.5 | 24 | N 2.5 / W 4 / E 3.5 / S 4 | Single-stemmed and vertical with a well developed crown. No evidence of significant pruning. Epicormic shoots. No major visible defects. | Remove the epicormic shoots. | GOOD GOOD | MOD | 40+ | B |
| T44 | Semi-Mature Sycamore *Acer pseudoplatanus* | 11.5 | 2 | 23 | N 5 / W 3.5 / E 3 / S 0 | Single-stemmed with a slight lean and an unbalanced crown. No evidence of significant pruning. Bark wound at 1.5m. | No action at present. | GOOD FAIR | MOD | 40+ | C |
| T45 | Mature Cherry *Prunus sp.* | 10 | 1 | 42 | N 2.5 / W 5.5 / E 5.5 / S 4 | Multi-stemmed at 3.5m with a well developed crown. No evidence of significant pruning. No major visible defects. Ivy up stem. | Remove the Ivy. Crown lift in the future. | GOOD GOOD | MOD | 20-40 | C |
| T46 | Semi-Mature Silver Maple *Acer saccharinum* | 8 | 1 | 28 | N 4 / W 3 / E 4 / S 5 | Single-stemmed and vertical with a well developed crown. No evidence of significant pruning. Epicormic shoots. No major visible defects. Good potential. | Remove the epicormic shoots. | GOOD GOOD | MOD | 40 | B |
| T47 | Early-Mature Lime *Tilia sp.* | 11.5 | 1 | 29 | N 3 / W 3 / E 3.5 / S 4.5 | Bark wounds at 0.3m and 1.3m. Single-stemmed with a slight lean and a well developed crown. No evidence of significant pruning. Horse Chestnut Scale. Adjacent to the footpath and road. | Monitor and crown lift in the future. | GOOD FAIR | MOD | 20-40 | C |
| T48 | Early-Mature Lime *Tilia sp.* | 11 | 1.5 | 27 | N 3 / W 3 / E 4 / S 2.5 | Twin-stemmed at 2.5m with a well developed crown. Horse Chestnut Scale. No evidence of significant pruning. No major visible defects. Adjacent to the footpath and road. | Crown lift in the future. | GOOD GOOD | MOD | 40+ | B |
| T49 | Early-Mature Lime *Tilia sp.* | 11 | 1 | 28 | N 3 / W 3.5 / E 4.5 / S 3 | Single-stemmed and vertical with a well developed crown. No evidence of significant pruning. Horse Chestnut Scale. No major visible defects. Adjacent to the footpath and road. | Crown lift in the future. | GOOD GOOD | MOD | 40+ | B |
| T50 | Early-mature Lime *Tilia sp.* | 11 | 1.5 | 30 (est.) | N 4.5 / W 3 / E 4 / S 3 | Covered in dense Ivy – a full detailed inspection not possible. Appears ok. Horse Chestnut Scale. Adjacent to the footpath and road. | Remove the Ivy and re-inspect. | FAIR FAIR | MOD | 40+ | C |
| T51 | Early-Mature Lime *Tilia sp.* | 10.5 | 1 | 31 | N 4.5 / W 3.5 / E 3.5 / S 3.5 | Twin-stemmed at 2m with a well developed crown. No evidence of significant pruning. Horse Chestnut Scale. No major visible defects. | Crown lift in the future. | FAIR FAIR | MOD | 40+ | C |

## Appendix 2: Glossary of Terms & Abbreviations

| | |
|---|---|
| **Arboriculture** | The cultivation of trees in order to produce individual specimens of the greatest ornament, for shelter or any primary purpose other than the production of timber. |
| **Canker** | Disease damaged area of a tree, usually caused by fungus or bacteria. |
| **Co-dominant Stem** | A stem which has grown in direct competition to the main stem and which has formed a substantial size influencing the appearance of the tree. |
| **Crown Lift** | The removal of the lowest branches, usually to a given height. It allows more residual light and greater clearance underneath for vehicles etc. |
| **Crown reduce** | The reduction of a tree's height or spread while preserving its natural shape. |
| **Crown thin** | The removal of some of the density of a tree's crown, usually 5-25% allowing more light through its canopy and reducing wind resistance. |
| **Deadwood** | Either dead branches, or a procedure involving the removal of dead, dying and diseased branches. |
| **Dieback** | Where branches are beginning to show signs of death usually at the tips in the crown. |
| **Epicormic shoots** | Small branches that grow in uncharacteristic clusters around the base or the stem of a tree, usually as a result of bad pruning or some other stress factor. |
| **Formative pruning** | The trimming of a tree to remove weaknesses and irregularities which may lead to problems. The formative pruning operation is aimed at reducing the potential for future weaknesses or problems within the tree's crown. |
| **Included bark** | Where the bark on two adjoining branches or stems is growing tight together, forming a joint with limited physical strength. |
| **Pollarding** | A method of tree management in which the main trunk of the tree is cut at about 4m, and the resulting branches are then cropped on a regular basis. |
| **Remedial pruning** | The removal of old stubs, deadwood, epicormic growth, rubbing or crossing branches and other unwanted items from the tree's crown. Sometimes referred to as crown cleaning. |
| **Topping** | Topping is a form of pruning that removes terminal growth leaving a 'stub' cut end. Topping causes serious health problems to a tree. |

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# Appendix 3: The Author's Qualifications

## Principal Consultant and Managing Director

**Jonathan Cocking** *FRES PDipArb(RFS) FArborA CBiol MIBiol.* Jonathan is a Registered Consultant and Fellow of the Arboricultural Association and sits on its Professional Committee. He has 25 years experience in the arboricultural profession and served for eight years as Senior Arboriculturist with a large local authority before establishing JCA in 1997. He has since developed JCA's portfolio of services and its extensive client base. Jonathan is an expert witness with much experience of litigation work.

## Consulting Arboriculturists

**Toby Thwaites** *BSc (Hons) HND (Arboriculture).* Toby joined JCA in 1998 after graduating in Ecology at the University of Huddersfield. He has recently completed a HND in Arboriculture at the University of Lancashire.

**Ivan Button** *NCH (Arboriculture) BSc (Hons) PGCE.* Ivan joined JCA in 2005 after nine years having managed his own landscaping and tree surgery business. He has studied at the Universities of Leeds, Lincoln and Wales and is currently working towards a degree in arboriculture at the University of Lancashire.

**Andrew Bagshaw** *HND.* Andrew joined JCA in 2005 having gained several years experience in tree surgery and landscaping. He is trained in aerial rescue and is JCA's principal first aid person. He is currently working towards a degree in arboriculture at the University of Lancashire.

**Adam Winson** *BSc (Hons) E Con, ND (Arboriculture).* Prior to working at JCA Adam has worked as a tree surgeon for eight years for a range of private companies and Sydney City Council. Adam achieved a national award for best Dissertation on the subject of Urban Greenspace Management at Sheffield Hallam University.

**Robert Godwin** *BA (Hons) Landscape Planning, ISA Certified Arborist.* Robert has recently joined JCA having spent several years as an arboricultural consultant particularly in relation to subsidence. He also has considerable experience in landscape and arboricultural contracting.

**Graham King** *Dip Arb (RFS) FArborA MRAC.* Graham covers the Midlands for JCA. He ran his own arboricultural business from 1980 before gaining his Diploma in 1992 and is a Fellow of the Arboricultural Association.

## Arboricultural Technician

**Victoria Black.** Victoria has been with JCA for over 5 years building her knowledge of the arboricultural business. She is currently working towards a degree in arboriculture at the University of Lancashire.

## Administrative Staff

**Andrew C Parker,** GM, BA (Hons), PGCE, Practice Manager
**Catherine Cocking,** Accounts Manager
**Deborah Petterson,** Administrative Officer
**Yasmin Hussain,** Administrative Assistant
**Alec Fielden,** CAD Technician

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## Appendix 4: General Guidelines

A4.1 All work must be to BS 3998:1989 - '*Recommendations for tree work*'.

A4.2 Staff carrying out the work must be qualified, experienced and ideally be Arboricultural Association approved contractors, and should be covered by adequate public liability insurance.

A4.3 This report is based upon a visual inspection. The consultant shall not be responsible for events which happen after this time due to factors which were not apparent at the time, and the acceptance of this report constitutes an agreement with the guidelines and the terms listed in this report.

A4.4 Any defects seen by a contractor or the employer that were not apparent to the consultant must be brought to the consultant's attention immediately.

A4.5 No liability can be accepted by the consultant in respect of the trees unless the recommendations of this report are carried out under his supervision and within his timescale.

A4.6 It is advisable to have trees inspected by an arboricultural consultant regularly. In this instance it is recommended that these inspections are made every year.

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# Appendix 5: Site Plan

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## Appendix 5: Site Plan

**TITLE:**
Longcar School, Barnsley (Ref 8016/TT).

| SCALE : 1:500 | PAPER SIZE : A2 |
|---|---|

**BRITISH STANDARD 5837:2005: 4.3.1 RETENTION CATEGORIES**

Detailed definitions of these categories are at Section 3 of our report. N.B. These categories do not necessarily represent or correspond to the recommendations for action made in this report.

| | |
|---|---|
| | CATEGORY A 'RETENTION MOST DESIRABLE' |
| | CATEGORY B 'RETENTION DESIRABLE' |
| | CATEGORY C 'TREE WHICH COULD BE RETAINED' |
| | CATEGORY R 'TREE FOR REMOVAL' |
| | ROOT PROTECTION AREA |

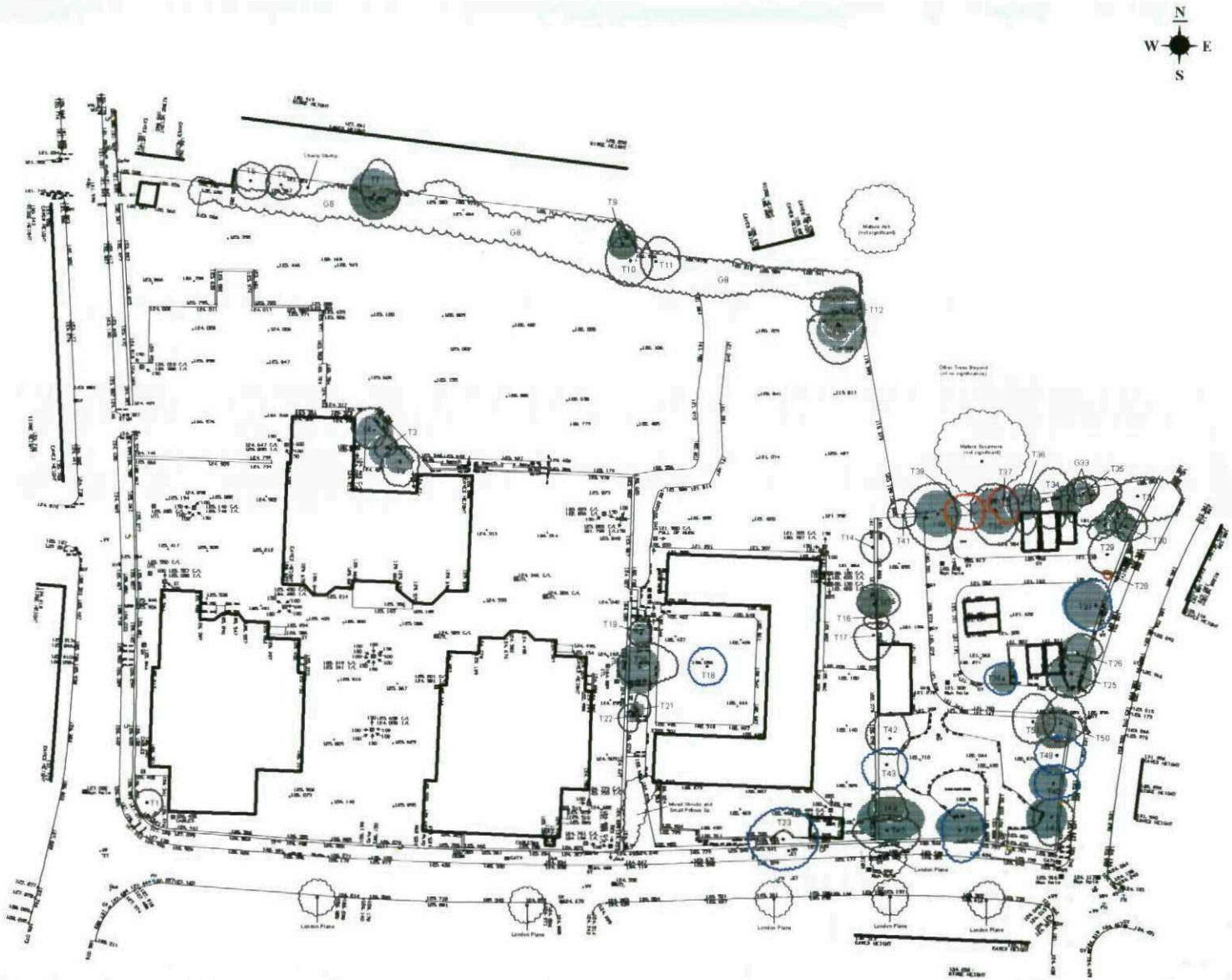
CENTRE OF TREE/SHRUB

CENTRE OF TREE/SHRUB TO BE REMOVED


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Arboricultural Association Consultant


THE ROOT PROTECTION AREA (RPA) IS THE MINIMUM AREA AROUND A TREE WHICH SHOULD BE LEFT UNDISTURBED, IN ORDER TO AVOID DAMAGE TO THE ROOTS OR THE ROOTING ENVIRONMENT.

IF WORK NEEDS TO CARRIED OUT WITHIN THE RPA THEN SPECIALIST SURFACES OR SPECIALIST CONSTRUCTION TECHNIQUES MUST BE CONSIDERED. CARE MUST ALSO BE TAKEN TO AVOID GROUND COMPACTION WITHIN THE RPA AND THE STORAGE OF MATERIALS IS NOT PERMITTED. ANY EXCAVATIONS WHICH ARE REQUIRED WITHIN THE RPA MUST ONLY BE CARRIED OUT BY HAND.

I hope that this report provides all the necessary information, but should any further advice be needed please do not hesitate to contact the author.

Signed

.....

Toby Thwaites. BSc. (Hons), H.N.D. Arboriculture.

30th May 2007

For and on behalf of ***JCA Ltd***

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- Veteran trees
- Woodland Management Plans
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- Tree planting schemes

### Tree Advice for the Legal Profession

- Litigating subsidence claims
- Personal Injury cases
- Expert witness for planning inquiries and appeals


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Photo front cover: Sluice at Bowers Mill
Photo back cover: View from Unit 80

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