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Arboricultural Appraisal – Land off Bury Road, Edenfield, Lancashire

Report Number: TG 1064_2010_Arb_01
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TYLER GRANGE
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Section 1: Introduction

1.1. Tyler Grange Ltd (TG) was commissioned by The Casey Group to undertake an Arboricultural Survey of land off Bury Road, Edenfield, Lancashire (hereafter referred to as the ‘Site’). The Site is centred on Ordnance Survey (OS) grid reference SD 80171 18905.

1.2. The work involved collecting data relating to the existing tree stock, in order to inform the proposed redevelopment of this former industrial Site.

1.3. Where appropriate, broad recommendations for the removal of trees or tree works are made in order to facilitate the proposed works or to improve the overall condition of the existing tree stock.

Tree Survey

1.4. The tree survey was carried out on Thursday 6th May 2010. The weather conditions were dry, overcast and still (approximately force 1 Beaufort Scale).

1.5. No invasive investigations or climbing inspections were necessary to confirm visual or audible signs of defect or debility and no tissue or soil samples were undertaken. Where identified, signs of substantial defects or debility significant to the pre-development context have been recorded.

Survey Methodology

1.6. The pre-development survey and assessment was undertaken in accordance with British Standard 5837:2005 ‘Trees in Relation to Construction – Recommendations’ (hereafter BS5837:2005).

1.7. In accordance with the above recommendations, the tree survey included all trees within the Site boundary that were over 7cm diameter at breast height (dbh). Topographical survey data was available for the majority of the tree stock; however, some areas of denser tree planting have been approximately placed within groups that form cohesive arboricultural features either aerodynamically, visually, culturally or in biodiversity terms.

1.8. The tree survey involved collecting the following data:

- Tree Number / Group Reference;
- Species;
- Height;
- Branch Spread (in metres taken at the four cardinal points);
- Crown Clearance (in metres above the adjacent ground level);
- Age Class;
- Physiological Condition;
• Structural Condition;
• Estimated Remaining Contribution (in years);
• Management Recommendations; and,
• Notes.

1.9. For further clarification, please refer to the tree survey explanatory notes in Appendix 1.

Tree Categorisation

1.10. The quality and value of each tree or group of trees has been recorded by allocating it to one of the four categories below in accordance with BS5837:2005. Categories A, B and C deal with trees that should be a material consideration in the development process and are divided into subcategories that reflect arboricultural, landscape and cultural values. Category R trees are those which would be removed in the short term for reasons connected with their physiological or structural condition. For this reason, they should not be considered in the planning process.

• Category Grading A: Trees of high quality and value, which are in such a condition as to be able to make a substantial contribution from an arboricultural, landscape or cultural perspective (a minimum of 40 years life-expectancy is suggested);
• Category Grading B: Trees of moderate quality and value, which are in such a condition as to make a significant contribution from an arboricultural, landscape or cultural perspective (a minimum of 20 years life expectancy is suggested);
• Category Grading C: Trees of low quality and value, which are currently in adequate condition to remain until new planting could be established (a minimum of 10 years life expectancy is suggested), or young trees with a stem diameter below 150mm; and,
• Category Grading R: Trees which are in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management.

1.11. Findings for each of the tree groups surveyed are summarised on Plan 1064_2010/01, contained at the rear of this report and, individually within the Tree Survey Table at Appendix 2.

Preliminary Management Recommendations

1.12. Any recommendations made for management of the trees (e.g. tree works) prior to development are not a detailed ‘specification’ for tree work and should not be considered as such.

1.13. These recommendations are proposed on the basis that they are advised and undertaken by a qualified arboricultural contractor working in accordance with best practice as, for instance, embodied in BS3998:1989 Recommendations for Tree Work, or in the European Tree Pruning Guide, published in 2001 by the Arboricultural Association and who must be listed in the Arboricultural Association’s Approved Contractors Directory www.trees.org.uk.

Limitations

1.14. The comments made are based on observable factors present at the time of inspection and are based on maximising the trees’ safe life expectancy given their pre-development context. Although the health and stability of trees in the pre-development context is an integral part of their suitability
for retention, it must be stressed that this report is not a tree risk assessment and should not be construed as such. While every attempt has been made to provide a realistic and accurate assessment of the trees' condition at the time of inspection, it may have not been appropriate, or possible, to view all parts or all sides of every tree to fulfil the assessment criteria of a risk assessment.

1.15. No tree is entirely safe, given the possibility that exceptionally strong winds could damage or uproot even a mechanically 'perfect' specimen. It is therefore usually accepted that hazards are only recognisable from distinct defects or from other failure-prone characteristics of the tree or the Site.

1.16. Assessment of the potential influence of trees upon buildings or other structures resulting from the effects of trees upon shrinkable load-bearing soils or the effects of incremental root or branch growth, are specifically excluded from this report.

1.17. All measurements are metric and approximate.

**Un-assessable Risks**

1.18. Due to the changing nature of trees and other Site circumstances this report and any recommendations made are limited in validity to a period of 12 months. Any alteration to the application Site or development proposals could change the current circumstances and may invalidate this report and any recommendations made.

1.19. The Wildlife and Countryside Act (WCA) 1981 (as amended) makes it an offence to disturb nesting birds or recklessly endanger a bat or its roost. Bats are also a European protected species and are additionally protected under the Conservation (Habitats & c) Regulations 1994 (as amended).

1.20. A lack of recommended work does not imply that a tree does not pose an unacceptable level of risk and, likewise, it should not be implied that a tree will present an acceptable level of risk following the completion of any recommended work.
Section 2: Findings of the Survey

Site Context

2.1. The Site is located to the south-east of Edenfield, to the immediate south of Dearden Clough. It can be accessed from both Bury Road to the west and Rochdale Road to the east.

2.2. The Site was once of industrial use, but the mill structure has been demolished leaving an area of hard standing interspersed with rubble. The Site also contains an area of dense wet woodland and scattered emergent vegetation.

2.3. A total of 13 individual trees and 6 tree groups were surveyed and are shown on Plan 1064_2010_01, located to the rear of this report.

Tree Preservation Orders

2.4. At this stage the data search undertaken does not identify any of the trees surveyed as being protected by a Tree Preservation Order (TPO) designation and the proposed development does not lie within a designated Conservation Area. The closest TPO is approximately 250m to the south of the Site (TPO No. 40: Hollins Lane).

Species Composition

2.5. The species across the Site are dominated by Willow, Alder and Ash. A total of 10 principal species were recorded in all; these are listed below with the species found in the greatest number listed first. (This has been based on estimates, as exact numbers of each species within a group were not recorded).

- Willow (Goat Willow predominantly) (Salix caprea);
- Alder (Alnus glutinosa);
- Ash (Fraxinus excelsior);
- Sargent Cherry (Prunus sargentii);
- Horse Chestnut (Aesculus hippocastanum);
- Crab Apple (Malus sylvestris);
- Hawthorn (Crataegus monogyna);
- Elder (Sambucus nigra);
- Rowan (Sorbus aucuparia); and,
- Laburnum (Laburnum anagyroides),

Health, Physiological and Structural Condition

2.6. The survey involved ground level examination of the external features of the trees. Growing conditions were noted together with the presence of dead branch wood, small die-back and any fungal fruiting bodies.
2.7. Of the trees surveyed, the majority (65%) were found to be in a fair condition, with 23% in the fair-poor category. None of the trees surveyed were considered to represent the best quality rating and only 1% were recorded as being dead or dying. The remaining 11% of the tree stock was considered to be poor both physiologically and structurally.

2.8. The reason for many of the trees being assessed as fair to poor condition relates to the density/proximity of the tree stock and the resultant competition for light, space and nutrition. Much of the woodland plantation has been left to develop naturally without active management, and as the tree stock has matured, the canopies have become compacted. Such compaction has resulted in crossing laterals and an increase in presence of deadwood.

2.9. Some of the trees have also suffered from ground compaction as a result of demolition works undertaken. Many of the woodland groups contain dead wood and evidence of dieback; however, no major health problems were noted.

2.10. Structurally, the wet woodland plantation to the north-east and south-west of the Site offers a degree of enclosure. The raised ornamental tree belt to the north-west offers some screening value to the adjacent properties associated with Dearden Clough; however, these trees are largely in recession and are affecting the structural integrity of the retaining wall.

Age Class

2.11. Whilst the majority of the individual trees are mature or young-mature in age classification, the woodland groups range from sapling to mature. The average age of the tree stock surveyed is considered to be in the region of 30-40 years old, with some older trees associated with the wet woodland areas. Some of the mature stock will be considered as fully mature within the next 15-20 years, and certain trees are already showing signs of recession.

2.12. Self-seeded emergent stock is also evident within the woodland areas, but the central portion of the Site is largely free of vegetation cover.

Category Grading

2.15 Of the trees surveyed, there is a majority split between those classified as Category C (50%) and a slightly lower proportion of Category Grade B (47%). Only a small proportion of the trees were found to be dead or dying (2% Category Grade R) and none of the trees were attributed the Category Grade A value. This reflects the overall moderate quality of the maturing tree stock, and the requirement for active management, to include selective thinning.
Section 3: Recommendations

Management Requirements

3.1 It is clear from inspection that many of the trees within the Site have received little maintenance or management for a number of years. The woodland areas do have some amenity value and provide an element of connectivity with the off-Site vegetation located along the south-eastern side of the valley.

3.2 In order to retain and improve the diversity, structure and value of the woodland, appropriate management should be implemented. Such measures should include the selective thinning of the densest groups (G3, G4 and G5). Given the screening function of the plantation, 30% thinning would improve crown growth and vitality but ensure the amenity value was retained. The coppicing of the denser areas of Willow is also likely to improve the structure of the plantation and encourage the development of a tiered woodland system.

3.3 The ornamental belt of trees that borders the residential properties on Dearden Clough (T1-T8) has some amenity value, but many show signs of recession due to the proximity of growth and competition for light, space and nutrients. The tree belt also grows in close proximity to a retaining wall structure. The roots associated with the larger Horse Chestnut (T5) may well continue to undermine the structural integrity of the wall. This will need to be monitored if the trees are retained.

3.4 In relation to the current Site context, trees that are dead or dying and require removal include T2 and T10. T9 may also become increasingly weakened by the presence of the rubble at its base and the remaining mill structures are likely to become further colonised by emergent Ash and Sycamore.

3.5 Any deadwood removal or management must be subject to wildlife considerations, and an appropriately qualified ecologist should be appointed to determine the implications of any tree works. Ideally work should be timed to avoid the bird nesting season wherever possible. If not, each tree will need to be searched for nesting birds prior to clearance. If a nest is found the tree and its immediate surroundings will need to be left undisturbed until nesting is complete. This could result in significant delays to work being undertaken.
Section 4: Development Implications

4.1 A fixed development masterplan has not been assessed as part of this report and it should not be considered a full Arboricultural Implications Assessment (AIA); however, some general observations have been set out below regarding any future redevelopment of the Site:

- The central portion of the Site and previously developed areas remain largely free from tree stock;
- The ornamental belt (T1-T8) associated with the Dearden Clough residential boundary is in recession; however, the large Horse Chestnut (T5) is one of the better individual trees on the Site. The belt does have an amenity and screening function, but this will clearly reduce as the trees begin to fail. The belt could also undermine the structural quality of the retaining wall structure, so replanting may be necessary;
- The group of Willow and Ash (G2) growing on the northern embankment should not be considered a constraint to development given the moderate form and vitality of the trees. New planting would be more effective in defining the boundary of the Site;
- The southern portion of G3 is also of lower arboricultural value and would not need to be safeguarded in its entirety;
- The northern portion of G3 and the wet woodland areas associated with G4 and G5 should be retained and safeguarded from the impacts of redevelopment;
- Given the current ground conditions associated with T9 and the proximity of rubble, it may be difficult to retain the tree without further damage to the root zone; and,
- Whilst the southern access is narrow, the adjacent tree stock is of moderate to low arboricultural merit. The removal of T10, T11, T12, T14 and part of G6 would not be considered detrimental.

4.2 Given the potential scale of the proposed redevelopment proposals and the tree stock present, it is likely to be necessary to produce a Tree Protection Strategy and an Arboricultural Method Statement.
Appendix 1: Tree Survey Explanatory Notes
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Tree Numbers

‘T’ prefixes have been used to identify individual trees and commence with ‘T1’.

‘G’ prefixes have been used to identify groups of trees.

‘H’ prefixes have been used to identify hedges.


Species

Species are listed by their common name, both in the schedule and in the report text.

Height

Tree heights are measured in metres (m).

Stem Diameter

The stem diameter of single stemmed trees is measured at 1.5m above ground level and given in millimetres (mm). The diameter measurement of multi-stemmed trees is taken immediately above the root flare.

Crown Spread

Radial crown spread is measured in metres and is listed for each of the four cardinal points. The canopy shape for individually surveyed trees depicted on the accompanying plans accurately represents the canopy spread as measured on-site.

Height of Crown Clearance

This is the height above ground in metres of the attachment point of the first significant branch, or the height to which the lowest (living) branch reaches; whichever is the lower.

Age Class

The age of each tree is defined as follows:

Y Young - within the first third of life expectancy;

YM Young Mature - within the second third of life expectancy;

M Mature - within the last third of life expectancy;

OM Over mature - Tree in decline; and
V Veteran – tree that, by recognised criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species’ concerned. For the purpose of this report the term ‘ancient tree’ and ‘veteran tree’ are interchangeable.

Physiological and Structural Condition

The physiological or structural condition of each tree is defined as either; good, fair, poor or dead. For each tree, where appropriate, notes on the structural integrity are provided on form, taper, forking habit, storm damage, decay, fungi, pests, etc.

Estimated Remaining Contribution (ERC) in Years

The Estimated Remaining Contribution (ERC) for each tree is based on species and existing and apparent physiological and structural condition of the tree. The ERC may affect the proposed development layout, since the longer the tree is likely to live the greater the contribution it will make and the greater the need for retention.
Appendix 2: Tree Survey Table
<table>
<thead>
<tr>
<th>No</th>
<th>Species</th>
<th>Height (m)</th>
<th>Stem Diameter (mm)</th>
<th>Branch Spread (m)</th>
<th>Height of Crown Clearance (m)</th>
<th>Age Class</th>
<th>Physiological Condition</th>
<th>Structural Condition</th>
<th>Estimated Remaining Contribution (Years)</th>
<th>Category Grading</th>
<th>Preliminary Management Recommendations</th>
<th>Root Protection Area msq (and offset in metres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>Laburnum</td>
<td>7.5</td>
<td>270</td>
<td>4.2</td>
<td>3.8</td>
<td>2.2</td>
<td>4.4</td>
<td>5.0</td>
<td>&lt;10</td>
<td>C</td>
<td>Retention Optional</td>
<td>34.81 (3.24)</td>
</tr>
<tr>
<td>T2</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>R</td>
<td>Dead</td>
<td>n/a</td>
</tr>
<tr>
<td>T3</td>
<td>Horse Chestnut</td>
<td>10.5</td>
<td>380</td>
<td>7.5</td>
<td>10.0</td>
<td>5.2</td>
<td>7.2</td>
<td>4.0</td>
<td>15+</td>
<td>C</td>
<td>n/a</td>
<td>65.33 (4.56)</td>
</tr>
<tr>
<td>T4</td>
<td>Sargent Cherry</td>
<td>5.8</td>
<td>170</td>
<td>6.5</td>
<td>1.8</td>
<td>1.9</td>
<td>2.0</td>
<td>2.5</td>
<td>10+</td>
<td>C</td>
<td>n/a</td>
<td>13.07 (2.04)</td>
</tr>
<tr>
<td>T5</td>
<td>Horse Chestnut</td>
<td>15</td>
<td>420</td>
<td>7.3</td>
<td>7.6</td>
<td>5.6</td>
<td>5.1</td>
<td>5.0</td>
<td>15+</td>
<td></td>
<td>Retention Optional</td>
<td>79.81 (5.04)</td>
</tr>
<tr>
<td>T6</td>
<td>Sargent Cherry</td>
<td>7.5</td>
<td>270</td>
<td>6.9</td>
<td>6.8</td>
<td>4.3</td>
<td>4.2</td>
<td>6.0</td>
<td>&lt;15</td>
<td>C</td>
<td>Retention Optional</td>
<td>34.81 (3.24)</td>
</tr>
<tr>
<td>T7</td>
<td>Sargent Cherry</td>
<td>8.0</td>
<td>260</td>
<td>5.5</td>
<td>6.1</td>
<td>6.0</td>
<td>5.1</td>
<td>6.0</td>
<td>&lt;15</td>
<td>C</td>
<td>Retention Optional</td>
<td>30.58 (3.12)</td>
</tr>
<tr>
<td>T8</td>
<td>Sargent Cherry</td>
<td>6.8</td>
<td>240</td>
<td>4.5</td>
<td>6.8</td>
<td>5.1</td>
<td>5.0</td>
<td>6.0</td>
<td>&lt;15</td>
<td>C</td>
<td>Retention Optional</td>
<td>26.06 (2.88)</td>
</tr>
<tr>
<td>T9</td>
<td>Ash</td>
<td>16</td>
<td>2 stems totalling 350</td>
<td>7.0</td>
<td>5.8</td>
<td>5.1</td>
<td>6.8</td>
<td>8.0</td>
<td>Young-Mature</td>
<td></td>
<td></td>
<td>38.48 (3.5)</td>
</tr>
<tr>
<td>T10</td>
<td>Ash</td>
<td>8.3</td>
<td>2 stems totalling 320</td>
<td>6.5</td>
<td>6.2</td>
<td>5.1</td>
<td>6.8</td>
<td>4.0</td>
<td>Mature</td>
<td></td>
<td></td>
<td>32.17 (3.2)</td>
</tr>
</tbody>
</table>

Notes:
- T1: South-west bias. Heavily pruned with central rot hole. Contorted leaders and thin canopy. Growing 0.5m from retaining wall.
- T2: Tree appears to be dead / has been cut back to 2m.
- T3: Formed by 7 principal leaders. Crown reduced with poor vigour and form. Possible weak union. Growing 1.5m from retaining wall.
- T4: Northerly bias, pruned back with weak canopy and poor vitality. 2.8m from retaining wall.
- T5: Dense rounded canopy with vigorous growth. Some pruning wounds with southerly leader removed. Minor decay with possible weak union. 1.3m from retaining wall.
- T6: Suppressed by adjacent T5. Weak canopy with central dieback. Previously pollarded. Growing 2.5m from retaining wall. Crab Apple growing in close proximity.
- T7: Low sprawling canopy with a number of contorted laterals. Suppressed by adjacent garden trees. Pruning wounds and some minor decay. 2.5m from retaining wall.
- T8: Suppressed by adjacent garden trees. Flat canopy with moderate vigour. Some dieback and pruning wounds evident. 6.0m from retaining wall.
- T10: Growing on embankment with pronounced south-east bias. Weak canopy with poor form and dieback. Emergent Ash at base.
<table>
<thead>
<tr>
<th>No</th>
<th>Species</th>
<th>Height (m)</th>
<th>Stem Diameter (mm)</th>
<th>Branch Spread (m)</th>
<th>Height of Crown Clearance (m)</th>
<th>Age Class</th>
<th>Physiological Condition</th>
<th>Structural Condition</th>
<th>Estimated Remaining Contribution (Years)</th>
<th>Category</th>
<th>Grading</th>
<th>Preliminary Management Recommendations</th>
<th>Root Protection Area (off set in metres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T11</td>
<td>Ash</td>
<td>8.5</td>
<td>2 stems totalling 320</td>
<td>3.6</td>
<td>5.9</td>
<td>3.8</td>
<td>5.1</td>
<td>2.0</td>
<td>Young-Mature</td>
<td>Poor</td>
<td>Poor</td>
<td>10+</td>
<td>C</td>
</tr>
</tbody>
</table>

Notes: Southerly bias with thin canopy. Poor form with dead wood present.

T12 | Ash | 8.5 | 210 | 6.2 | 5.9 | 4.8 | 5.7 | 2.0 | Young-Mature | Poor | Poor | 10+ | C | Pruning to remove dead wood | 19.95 (2.52) |

Notes: Slightly larger than adjacent T11 with one main leader and south-west bias, but otherwise similar form.

T13 | Ash | 16 | 2 stems totalling 600 | n/a | n/a | n/a | n/a | n/a | Mature | Fair | Fair | 15+ | B | n/a | 113.11 (6.6) |

Notes: No access to tree as growing on steep embankment. Larger tree with vigorous canopy and better form.

G1 | Crab Apple, Cherry, Horse Chestnut, Ash & Hawthorn | Up to 7.0 | Up to 180 | n/a | n/a | n/a | n/a | n/a | Sapling to Young-Mature | Fair | Fair | 15+ | C | n/a | n/a |

Notes: Dense mixed group growing at the end of the raised embankment / retaining wall. Largely ornamental and emergent stock.

G2 | Willow, Alder, Ash, Hawthorn & Cherry | Up to 8.5 | Up to 220 | n/a | n/a | n/a | n/a | n/a | Sapling to Mature | Fair | Fair | 15+ | C | Retention Optional | n/a |

Notes: Embankment group consisting of mature and emergent stock. The group is much thinner to the east and only has one notable Willow. No great arboricultural value as a group.

G3 | Alder, Willow, Sycamore, Elder & Ash | Up to 16 | Up to 180 | n/a | n/a | n/a | n/a | n/a | Sapling to Mature | Fair-Poor | Fair-Poor | 15+ | B/C | Some woodland management required if retained to improve structure | n/a |

Notes: Mixed woodland block than becomes denser towards the north. A poor under-storey beneath upright Alder and waterside Willows.

G4 | Willow, Hawthorn, Rowan & Ash | Up to 14 | Up to 200 | n/a | n/a | n/a | n/a | n/a | Young-Mature to Mature | Fair | Fair | 15+ | B | n/a | n/a |

Notes: Waterside and embankment woodland block dominated by Willow. Little active management, with density resulting in crossing laterals and some dead wood.

G5 | Willow, Alder, Hawthorn, Rowan & Ash | Up to 14 | Up to 200 | n/a | n/a | n/a | n/a | n/a | Young-Mature to Mature | Fair | Fair | 15+ | B | n/a | n/a |

Notes: As G4 but with more emergent stock present.

G6 | Ash | Up to 9.0 | Up to 70 | n/a | n/a | n/a | n/a | n/a | Young | Fair-Poor | Fair-Poor | 15+ | C | Retention Optional | n/a |

Notes: Upright stand of Ash.
Plans: Plan 1064_2010/01