



Report on Arboricultural Issues

Wrexham Football Club Training Ground

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Drawing P.096.10.01 *Tree Survey*

1.0 Introduction

- 1.1 Pinnacle Tree & Landscape Solutions Ltd has been instructed by Wrexham Football Club to carry out an assessment of the impact of recent development activities upon trees and vegetation within and adjacent their training ground at Colliers Park, Chester Road South, Gresford.
- 1.2 Wrexham Football Club seeks to assess the implications of recent activities for trees and vegetation and to provide a written report for the consideration Wrexham County Borough Council.
- 1.3 The site was visited on 12th April 2010, when details of implicated trees and vegetation within and adjacent the site were recorded to British Standard 5837: 2005 *Trees in relation to construction – Recommendations*. This report sets out the details of selected trees within the site as well as the impact of the development activities. Tree data tables and associated drawings can be found within the Appendices of this report. Only trees that are in proximity to recent development activities or that were identified as potentially hazardous have been noted for the purposes of the survey carried out and this report.
- 1.4 We are informed by Wrexham County Borough Council that a number of trees on or adjacent the site are afforded statutory protection in the form of an area Tree Preservation Order, TPO DT5 – Gresford, which affords protection to all trees that were present at the time the TPO was made in 1953.

2.0 Site Description & Development History

- 2.1 Wrexham Football Club training ground is known as the Colliers Park. The name of the site gives an indication of one of the previous uses of the site, which was as a colliery. Evidence of this can be found in the ground conditions on site with a relatively shallow depth of top soil over a substrate of debris and ash. There is further evidence that the area has also been used for farming in the past, apparent from the remains of farm structures still existing on site and the location of the site within a semi-rural area.
- 2.2 The training ground comprises a number of grassed and synthetic sports pitches surrounded by a belt of newly planted trees to the north and west, a hotel complex to the south and a linear group of mature trees and semi-mature planted trees which shelter and screen the facilities from the B5445 Chester Road South.
- 2.3 Wrexham Football Club has recently carried out an upgrade of facilities at its training ground, through the installation of a two storey portacabin structure adjacent to the existing clubhouse building. In addition to this, a new tractor shed with an improved access track and parking area for grounds maintenance staff has also been constructed in the north east corner of the site.
- 2.4 The portacabin structure has been installed under the north western edges of the canopy of a mature beech tree which is situated on the adjacent Beeches Hotel complex. The installation was facilitated by 'pruning' of some of the north western crown of the tree. This tree is afforded statutory protection by the aforementioned Tree Preservation Order, TPO DT5 – Gresford.
- 2.5 The new tractor/storage shed for grounds maintenance purposes has been installed upon an existing concrete slab which appears to be the remains of previous farming activities, possibly being the remains of an old cattle shed.
- 2.6 The improved access track and parking area for grounds maintenance purposes has been installed in close proximity to a number of mature beech trees and a mature sycamore tree. Historically there has been an access track and clear area in this location, however Wrexham Football Club has taken the opportunity of the ready and local availability of suitable surfacing material to provide an upgraded and better functioning track and parking/turning area.

3.0 Key Issues for Consideration

- 3.1 The key issues for consideration within this report are the condition of existing trees situated adjacent to the development activities carried out on the site and the impact that recent development activities have had on existing trees.
- 3.2 The tree data tables at Appendix 1 to this document record details of trees within and immediately adjacent the site to BS5837: 2005 *Trees in relation to construction – Recommendations*. It should be noted at this stage that only those trees that warrant attention on account of their current condition, or have been impacted by the recent activities have been surveyed as individuals. The location of the trees surveyed can be seen on drawing P.096.10.01 *Tree Survey*. A number of trees along the wooded boundary adjacent Chester Road South require attention as a priority on account of their current condition, irrespective of the recent activities within the site.
- 3.3 As can be seen from Photograph 1, ‘access facilitation pruning’ has been carried out on T1 (see also appended plan and tables) in order to allow the installation of the two storey portacabin structure beneath the edge of its canopy. The term ‘access facilitation pruning’ implies that the tree works have been carried out in accordance with current industry standards, i.e. the specifications contained within BS3998: 1989 *Tree Work*. However, from observations on site and as can be seen on Photograph 1 this is clearly not the case. The pruning of the crown of T1 has been carried out in a rather crude manner by persons unknown at this stage. Whilst it is regrettable that this work was not carried out to current best practice, it is easily rectifiable by some minor judicious pruning, the overall impact of which will not detract from the visual amenity value that the tree provides.

Photograph 1 – T1 showing top of two storey portacabin structure and ‘access facilitation pruning’



3.0 Key Issues for Consideration (continued)

- 3.4 The portacabins are clearly located within the canopy spread and Root Protection Area (RPA) of the large Beech tree T1. The cabins have however been installed on stilts / feet resulting in very little, if any physical impact on the root system of T1. There have been no excavations or ground works involved in the installation of the cabins and whilst the footprint of the cabins does slightly reduce the amount of permeable surface area available to the roots of T1, there is a clear gap beneath the cabins, therefore it is only likely to be the dynamics of water percolation that has been slightly altered. We do not consider therefore that the positioning of the portacabins will have any significant or long-term detrimental effect upon the adjacent vegetation.
- 3.5 Of greater concern is the current structural and physiological condition of a number of mature trees on site. We consider that T2, T3, T4, & T7 (all Beech) represent an unacceptable level of risk to users of the site on account of their current condition. The circumstances that have led to the infection by a number of fungal pathogens and thus the current condition of these trees are unknown, however it is clear that in line with good arboricultural practice and management of the Health & Safety risks associated with the use of the site, consideration should be given to the removal and replacement of these trees as a priority.
- 3.6 Trees T2 & T3, as can be seen on Photographs 2 & 3 below have large wounds at the base of the stems and are infected by *Kretzschmaria deusta*. This pathogen produces a heart rot which can leave the decayed wood in a brittle condition. Such a decay type can cause failure of the tree with little or no warning. Added to this T3 has a large section of deadwood where it appears that a leader has failed and which has resulted in a decay column extending down a large portion of the upper main stem (see Photograph 4 below). Both trees are situated very close to a driveway/footpath which is used frequently as an informal parking area on training days. Due to the age, species, location, condition, presence of the pathogen and potential 'targets', these trees are in our opinion hazardous in their current context and as such remedial action should be sought without delay to reduce the associated risk to users of the site.

Photograph 2 – T2 with basal wound and pronounced *Kretzschmaria deusta* infection

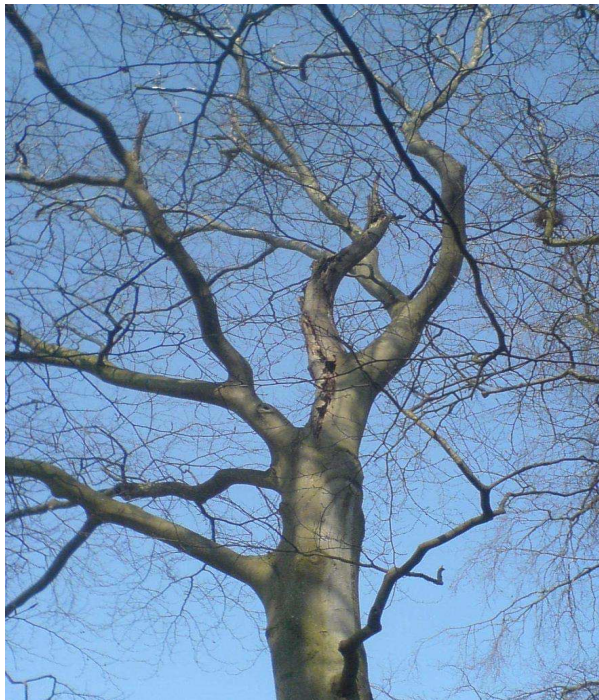


3.0 Key Issues for Consideration (continued)

Photograph 3 – T3 with basal wound and pronounced *Kretzschmaria deusta* infection



Photograph 4 – T3 showing failed leader with decay column



3.0 Key Issues for Consideration (continued)

- 3.7 T4 is a mature beech tree located adjacent the access track to the tractor shed/ground maintenance area. At the time of survey two dried fungal fruiting bodies were observed in two different locations within the buttresses of the tree. After liaison with the Local Planning Authority Tree & Landscape Officer and our own inspection of the tree, it is considered that these fruiting bodies are those of the fungus *Meripilus giganteus*. The significance of the presence of this fungus is that due to the impact and likely decay present within the root system, it is likely that a high chance of windthrow exists. We therefore consider that this tree poses an unacceptable level of risk to users of the site and that the tree should be removed as a priority.

Photograph 5 – T4 with *Meripilus giganteus* bracket at base



- 3.8 The recent surfacing of the existing access track with limestone hardcore and building debris is not considered to have caused a significant detrimental impact upon the health of the existing trees. From conversations with staff at the training ground we understand that there has always been an informal access route which historically served farm buildings located in this area of the site. Until recently the track was un-surfaced and accordingly frequently became muddy and impassable to vehicles and machinery at certain times of the year. We understand that delivery vehicles would often become bogged down up to their axles. This would have resulted in rutting and possible root damage in close proximity to T4. It is our opinion that the surfacing of the access track with hardcore will have provided a certain level of stability and protection to the roots of the tree and will enable light vehicles to pass by without causing rutting of the root zone or further compaction in this area.

3.0 Key Issues for Consideration (continued)

- 3.9 Following on from the above, it is also our opinion that the surfacing of the informal car park area with limestone hardcore/rubble, although not ideal, will provide some level of protection for the roots of the adjacent mature trees, particularly in view of the very low frequency of traffic that uses the access track and parking/turning area. It is accepted that the surfacing could have been laid in a more sympathetic manner by keeping it away from the base of T6, however, as can be seen from Photograph 6 below, T6 was already in a relatively poor condition with a hollow/cavity present at the base of the tree. The relatively hardy nature of the species of the tree and the lack of evidence of root damage suggest that T6 will not necessarily be adversely affected by the porous surfacing applied in its vicinity. We understand that the parking/turning area was constructed after strimming the grass in the area, scraping the surface to achieve something approximating a level surface and then applying the hardcore. It appears that there has been no substantial re-grading of levels in the area or excavations in construction of the parking/turning area. This is evident by the fact that the area when visited remains slightly uneven and is far from being a perfectly flat car park.

Photograph 6 – T6 showing basal cavity/hollow and new surface around the tree



- 3.10 It was noted during the survey that at some stage in the past, a fire had been lit in the vicinity of T8 and that two relatively small mounds created from the levelling of the access track have been created adjacent T7. The fire, presumably to burn green waste, has been lit at the edge of the canopy of T8. There is no evidence of fire damage to either the stem or the canopy of T8, however, it is not prudent to light fires in proximity to trees given the risk of fire or 'scorch' damage. It was noted however that grounds maintenance staff have now stopped lighting fires in this area and are now burning waste at the opposite side of the tractor shed, away from mature trees. Although the mounds of soil/debris and green waste in the vicinity of T7 will not be having a substantial detrimental impact on adjacent trees through impeding gaseous or water exchange with tree roots it would be good maintenance practice to remove the piles away from trees.

3.0 Key Issues for Consideration (continued)

- 3.11 T7 is a mature beech tree which has a severely impaired physiological and structural condition as can be seen on Photograph 7 below. The tree has a decay column which extends almost the entire height of the main stem of the tree. There are also numerous cavities apparent at various heights on the stem. Although a closer inspection of the cavities was not possible at the time of survey, there appears to be significant decay within cavities. The presence of deadwood and decay together with the physical characteristics of the tree indicate that the decay column extends the height of the stem of the tree. On this basis we consider that this tree represents an unacceptable level of risk to users of the site and that action should be taken to reduce such risk either by complete removal of the tree or reduction back to a 'habitat stick' to be left as standing deadwood.

Photograph 7 – T7 showing cavities on stem and possible decay column



3.0 Key Issues for Consideration (continued)

- 3.12 Tree T8 is a semi-mature ash tree which has an occluded scar and fungal bracket on the main stem. The bracket is considered to be the fruiting body of *Inonotus hispidus*. As the tree is located adjacent the boundary of the site with the B5445 Chester Road South, there is the potential for partial tree failure onto the road. Wrexham Football Club has a duty of care to ensure that trees on its property do not present a danger to users of the public highway. As such this tree represents an unacceptable risk to users of the highway and should be removed as a priority.

Photograph 8 – T8 displaying occluded scar and fungal bracket



- 3.13 T5 is a mature beech tree that has a large weak /suspect union between the main stem and a large scaffold limb as shown on Photograph 9. This union is a potential failure point on the tree therefore consideration should be given to reduction of the potential impact should the union fail. A short term recommendation would be the reduction / thinning of the canopy on the scaffold limb to reduce the weight on the union. Further inspections would be beneficial to allow future works to be programmed.

Photograph 9 – T5 with weak union between main stem and large scaffold limb



4.0 Conclusions & Recommendation s

- 4.1 It is concluded that the recent activities that have taken place at Colliers Park will have had very little detrimental impact upon mature tree cover at the site. There has been some minor damage caused to T1 through poor pruning of the canopy to facilitate the installation of the portacabins in this area, however this damage is easily rectifiable with some remedial pruning in accordance with BS3998: 1989 *Recommendations for Tree Works*. T1 is afforded statutory protection by TPO DT5 and as such Wrexham County Borough Council should advise whether the granting of a retrospective planning consent for the 'development' works would be acceptable under which to carry out this work, or whether a separate application under the Tree Preservation Order should be made.
- 4.2 The surfacing of the access track leading to the tractor shed and parking/turning area has potentially resulted in an improvement to the poor ground conditions along this part of the site and the positive addressing of rutting and thus root damage. There is no significant evidence of root damage from the surfacing activity itself and as the new surface is porous it is considered that this will have no long term detrimental impact on the mature trees on site. We understand that conditions were considerably worse before the track and area were surfaced and that therefore these works will have had a positive impact.
- 4.3 The current condition of several mature trees within the site is of considerable concern and is unconnected to the recent site works that have taken place. We recommend that trees T2-T4, T7 and T8 are removed as a matter of priority to reduce the risk of harm to users of the site and that T5 is pruned in accordance with the recommendations within this report and the accompanying tree data tables. The matter of replacement planting for trees removed can be discussed with Wrexham County Borough Council, however the level of tree planting that has already been carried out adjacent the boundaries of the site is noted, therefore the visual impact of recommended works is likely to be only of significance when viewed from inside the site and compensated for by young trees that are already established. In respect of the statutory controls applying to the existing trees within the site, we would request that Wrexham County Borough Council confirm whether this report, submitted as part of the retrospective planning application for the site will suffice to satisfy the requirements under the existing Tree Preservation Order or whether a separate application will be necessary.



Appendix 1

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Est.	Cat
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T. No	Species	Ht (m)	Stem DBH (mm)	RPA/Radius Max offset	Branch Spread				Ht Crown Clearance (m)	Age Class	P Condition	Structural Condition	Preliminary Recommendations	Est. (yrs)	Cat Grade
					N	S	E	W							
T1	Beech	15	700	221.67	7	8	7	7	10	FM	F	Large mature tree situated on neighbouring land adjacent boundary. DBH is an estimate. Dense ivy on lower stem. Lower crown to north has been crudely pruned to allow installation of portacabins. No inspection of base of tree made as on neighbouring land.	Carry out corrective remedial pruning to remove stubs back to suitable unions in accordance with BS3998: 1989 Tree work	20	B1
				8.4											
				1.68											
T2	Beech	16	720	234.518635	8	6	8	7	6	FM	P	Large mature tree with large basal wound and pronounced Kretzschmaria deusta infection. Given the use of the site we would consider this tree poses an unacceptable level of risk	Fell to ground level & replace as appropriate	10	R
				8.64											
				1.728											
T3	Beech	14	690	215.3825658	8	5	5	7	10	FM	P	Large mature tree with large basal wound and pronounced Kretzschmaria deusta infection. Large section of deadwood at point of failed leader with cavity and possible decay. Given the use of the site we would consider this tree poses an unacceptable level of risk	Fell to ground level & replace as appropriate	10	R
				8.28											
				1.656											
T4	Beech	16	700	221.6707776	6	7	6	5	4	FM	P	Large mature tree with dried fungal brackets at two different locations within buttresses, possibly Meripilus. Given the use of the site we would consider this tree poses an unacceptable level of risk	Fell to ground level & replace as appropriate	10	R
				8.4											
				1.68											
T5	Beech	15	670	203.0775757	7	4	5	5	6	FM	P	Large mature tree with heavy scaffold limb over access track/parking area with suspect included union between stem and limb. Tree is potentially unacceptable risk	Reduce weight on weak union by the reduction / thinning of the canopy structure on the scaffold	15	R
				8.04											
				1.608											



Appendix 2

Table 1 — Cascade chart for tree quality assessment

TREES FOR REMOVAL				
Category and definition	Criteria			Identification on plan
Category R Those 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	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other R category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality NOTE: Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost: installation of bat box in nearby tree).			DARK RED
TREES TO BE CONSIDERED FOR RETENTION				
Category and definition	Criteria — Subcategories			Identification on plan
	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation	
Category A Those of high quality and value: in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested)	Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups)	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
Category B Those of moderate quality and value: those in such a condition as to make a significant contribution (a minimum of 20 years is suggested)	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage)	Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits	MID BLUE
Category C Those of low quality and value: currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150 mm	Trees not qualifying in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit	Trees with very limited conservation or other cultural benefits	GREY
	NOTE: Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150 mm should be considered for relocation.			

