

**BARNBURGH LANE, GOLDTHORPE
for Gleeson Homes & Regeneration**

TREE SURVEY

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DRAWINGS: 2303/1 (EXISTING TREES ON SITE)
 2303/2 (TREE CONSTRAINTS PLAN)

1.0 GENERAL

- 1.1 This tree survey was undertaken by Ben Pickering (Landscape Architect) and Georgina Tearne (Arboricultural Consultant) on 28th November 2011 on behalf of Gleeson Homes & Regeneration in conjunction with proposals to develop the site for housing.
- 1.2 The survey should be read in conjunction with drawings 2303/1 (Existing Trees on Site) and 2303/2 (Tree Constraints Plan).
- 1.3 The site is located on the south eastern edge of the settlement of Goldthorpe, approximately 7km west of Doncaster. The proposed development would be situated within a large open field situated south of Barnburgh Lane as it approaches Goldthorpe. Currently used as arable farmland, vegetation on site is confined to the boundaries, consisting of hedgerows with the occasional tree.
- 1.4 In terms of topography the site is of a sloping profile, lying at a height of around 35m Above Ordnance Datum (AOD) in the north west corner of the site and sloping down to around 21m AOD to the south east.
- 1.5 It is not known at this stage whether trees on the site are protected by a local authority Tree Preservation Order.
- 1.6 Trees grow and can develop weaknesses, the climate is thought to be changing and the many other factors which affect trees are rarely static. It is advisable to have trees inspected by a qualified arboriculturalist regularly, and in this instance it is recommended that these inspections should be made every year.
- 1.7 The 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.
- 1.8 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.
- 1.9 No liability can be accepted by the consultant in respect of the trees unless the recommendations (see Section 9) are carried out under their supervision and within the timescale indicated.
- 1.10 The report aims to consider both the aesthetic qualities of the trees as well as their health. The health of the trees is considered in relation to the proposed change of use to housing.
- 1.11 It must be noted that this tree report and accompanying drawing(s) do not constitute a Schedule of Works, and approval should be sought from the local authority prior to any works commencing.

2.0 SPECIES AND THEIR ARRANGEMENT IN THE LANDSCAPE

- 2.1 As previously explained the vegetation on this site is confined to the boundaries and mainly consist of hedgerows with the occasional tree scattered around the boundary. There is also a relatively limited range of species on site with Hawthorn being the most common, occupying most of the perimeter hedgerows. Elder can also found within some of these hedgerows. The tree species vary, with Field Maples and Elm found to the south of the site and Ash found to the east and north.

3.0 HEIGHT AND SIGNIFICANCE IN THE LANDSCAPE

- 3.1 The majority of vegetation located around the site boundary is either middle aged or mature however due to regular trimming of the hedges the general height remains modest (around 2-5m) with some isolated trees such as G9 (Field Maples), T10 (Hawthorn), G17 (Ash) and G24 (Ash and Elm) reaching heights of around 10m. In terms of significance within the local landscape, the vegetation on site provides little impact.
- 3.2 The main group of trees (G24) located to the north east of the site are the most visually important as they are situated adjacent to Barnburgh Lane and is the only vegetation located on the northern boundary of the site with any significance. This group of trees is also located next to Engine Lane which is a Public Right of Way that is regularly used by local dog walkers. Towards the south as the site slopes away, the only notable trees are those located beyond the south west corner of the site (G9 and T10).

4.0 AGE AND CONDITION

- 4.1 As indicated above, much of the vegetation on site is middle aged or mature. The health of the vegetation varies greatly across the site with only one tree (T11) recommended for removal. The majority of the hedges have been regularly trimmed and are dense in form. There is however large gaps within these hedges which if gapped in would provide a much more effective boundary treatment. Some trees such as the Sweet Chestnut (T5) and Hawthorn hedge (H6) are however in good condition.

5.0 ENVIRONMENTAL CONDITIONS

- 5.1 The site lies on sloping land orientated north to south overlooking the River Dearne floodplain to the south. The site itself is open though some shelter is gained from the higher topography to the north of the site and the housing to the immediate west. The site is however exposed to the prevailing winds due to the large open expanses of farmland and limited planting to the south of the site. It can therefore be expected that the trees on site will have been subject to wind pressure over their lifetimes.
- 5.2 The sloping nature of the ground would indicate that ground water drainage is good throughout the site – certainly there was no evidence of poor ground conditions at the time of survey.

6.0 CODES USED WITHIN SCHEDULE

Column	Information
1	Tree reference number (recorded on tree survey drawing).
2	Species (common and scientific names, where possible).
3	Height of tree in metres.
4	Stem diameter in millimetres at 1.5m above adjacent ground level (on sloping ground taken on the upslope side of the tree base) or immediately above the root flare for multi-stemmed trees.
5	Branch spread in metres taken at the four cardinal points to derive an accurate representation of the crown (recorded on the tree survey drawing).
6	Age class (young, middle aged, mature, over mature, veteran).
7	Height in metres of crown clearance above adjacent ground level (to inform on ground clearance, crown stem ratio, and shading).
8	Physiological condition (e.g. good, fair, poor, dead).
9	Estimated remaining contribution in years (e.g. less than 10, 10-20, 20-40, more than 40).
10	Category grading. Trees are assessed in terms of quality in accordance with BS 5837:2005 into R or A to C categories (see Section 7.0) which are recorded on the tree survey drawing.
11	Notes on appearance and structural condition (e.g. collapsing, the presence of any decay, and physical defect).
12	Preliminary management recommendations, including further investigation of suspected defects that require more detailed assessment, and potential for wildlife habitats.

7.0 TREE QUALITY ASSESSMENT

7.1 TREES FOR REMOVAL

Definition – Category R

(Shown in broken outline on drawing with cross at trunk location)

Those in such a condition that any existing value would be lost within 10 years and which showed, in the current context, be removed for reasons of sound arboricultural management.

Criteria – Category R

Trees that have a serious, irredeemable, 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 the adjacent trees of better quality.

NOTE: Habitat reinstatement may be appropriate (e.g. R category tree used as bat roost: installation of bat box in nearby tree).

7.2 TREES TO BE CONSIDERED FOR RETENTION

Definition - Category A1, A2, A3

(Shown in heavy outline on drawing with star at trunk location)

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).

Criteria - Category A

A1 *(Mainly arboricultural values)*

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).

A2 *(Mainly landscape values)*

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 of other arboricultural features assessed as groups).

A3 *(Mainly cultural values, including conservation)*

Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture).

Definition - Category B1, B2, B3

(Shown in medium outline on drawing with solid dot at trunk location)

Those of moderate quality and value – those in such a condition as to make a significant contribution (a minimum of 20 years is suggested).

Criteria - Category B

- B1 *(Mainly arboricultural values)*
Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including sympathetic past management and minor storm damage).
- B2 *(Mainly landscape values)*
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.
- B3 *(Mainly cultural values, including conservation)*
Trees with clearly identifiable conservation or other cultural benefits.

Definition - Category C1, C2, C3

(Shown in light outline on drawing with open circle at trunk location)

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 150mm.

Criteria - Category C

- C1 *(Mainly arboricultural values)*
Trees not qualifying in higher categories.
- C2 *(Mainly landscape values)*
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.
- C3 *(Mainly cultural values, including conservation)*
Trees with very limited conservation or other cultural benefits.

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 150mm should be considered for relocation.

8.0 DETAILED SCHEDULE OF VEGETATION ON SITE

Tree number on dwg	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Age class	Crown clearance (m)	Physiological condition	Estimated remaining contribution (years)	Category grading	Notes / Structural condition	Preliminary management recommendations
T1	Hawthorn	5	500b	N 2.5 S 2.5 E 2.5 W 2.5	M	0	Fair	20-40	C1	Multi-stemmed from base. Topped at 1m in past leaving detached stubs and new shoots. Dense. Crossing branches. Limited individual value. Relatively easy to replace if lost to development.	No action.
G2	3Nr Hawthorn 1Nr Elder	6	<350b	As plan	M	0	Fair	20-40	C2	Multi-stemmed crowns. Elder with significant deadwood. Crossing branches. Some decaying stubs. Reasonable shape and form. Limited individual value.	No action.
T3	Laurel	5	400b	N 2 S 2 E 2 W 2	M	0	Fair	20-40	C2	Clipped as a hedge up to 1.8m. Reasonable shape and form. Limited value. In neighbouring property.	No action.
T4	Hawthorn	3	<300b	N 2 S 1.5 E 1 W 2	M	0	Poor	10-20	C2	Stubs at base. Dense crown.	No action.
T5	Sweet Chestnut	5	160	N 1.5 S 1.5 E 1.5 W 1.5	Y	2	Good	40+	C1	Single stem twisted. Potential but relatively easy to replace if lost to development. No major visual defects.	No action.
H6	Hawthorn	1.5		1m wide	MA	0	Good	20-40	C2	Regularly pruned. Foliage to base. Dense. No major visual defects.	Continue to maintain.
H7	Hawthorn, Elder, Bramble	<3		1.5m wide	MA	0	Fair	10-20	C2	Overgrown and although topped not really maintained. Limited value. Some branches felled and left.	No action at present.
H8	Hawthorn	1.5	<400b	1m wide	M	0	Poor	10-20	C2	Old hedge with some gaps. Regularly pruned. Dense. No major visual defects.	Continue to maintain.

Tree number on dwg	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Age class	Crown clearance (m)	Physiological condition	Estimated remaining contribution (years)	Category grading	Notes / Structural condition	Preliminary management recommendations
G9	2Nr Field Maple	9	<600 est	N 3.5 S 3.5 E 3.5 W 3.5	MA+ M	1.5	Fair	20-40	B2	One straight stemmed and one multi stemmed poorly formed. Typical hedgerow trees. Some crossing branches.	No action.
T10	Hawthorn	7	190	N 2 S 2 E 2 W 2	MA	1	Good	20-40	C1	Single stemmed with multi-stemmed crown. Good shape and form. Slightly one-sided. No major visual defects.	No action.
T11	Hawthorn	5	350b	N 3.5 S 1 E 2 W 3	M	1.5	Poor	<10	R	Decaying and split out. Very limited value. Not worthy of retention.	Fell and remove.
G12	Elder	<2.5	<200b	As plan	MA	0	Poor	10-20	C2	Multi-stemmed, deadwood in crowns. Stubs. Limited individual value. Relatively easy to replace if lost to development.	No action at present.
H13	Hawthorn, Elder	<2		2m wide	M	0	Fair	20-40	C2	Dense, regularly pruned. No major visual defects.	Continue to maintain.
G14	Elm	<7	<200	1.5m wide	MA	0	Poor	10-20	C2	Poor group of stems. Limited value. Relatively easy to replace if lost to development. Limited long-term value. Poorly formed with minor stubs.	No action at present.
H15	Hawthorn, Elder	<2		1m wide	M	0	Fair	20-40	C2	Dense, regularly pruned. No major visual defects.	No action.
G16	Hawthorn	6	<250b	N 2.5 S 2.5 E 2.5 W 2.5	M	0.5	Good	20-40	C2	Multi-stemmed from base. Crossing branches and minor deadwood.	No action.
G17	Ash	10	<220	N 5 S 3 E 5 W 4	MA	1	Poor	10-20	C2	Multi-stemmed from base. Decay at base. Stubs and deadwood. Limited long-term value.	Remove deadwood.

Tree number on dwg	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Age class	Crown clearance (m)	Physiological condition	Estimated remaining contribution (years)	Category grading	Notes / Structural condition	Preliminary management recommendations
H18	Hawthorn	<2		1m wide	M	0	Fair	20-40	C2	Sporadic but uniformly pruned. Sections present are dense. Some decaying stubs.	Continue to maintain.
H19	Blackthorn	<2.5		2m wide	M	0	Fair	20-40	C2	2m wide base with original stems in field and younger stems towards truck. Regularly pruned. No major visual defects.	Continue to maintain.
G20	Field Maple	8	<200	N 1.5 S 1.5 E 1.5 W 1.5	MA	0	Fair	20-40	C2	Multi-stemmed from base. Topped at 1m. Crossing branches. Bark wounds on stem.	No action at present.
H21	Hawthorn, Elder	2.5		1m wide	M	0	Fair	20-40	C2	A continuation of H19 but change of species. Regularly pruned. Dense. No major visual defects.	Continue to maintain.
H22	Hawthorn, Elder	<1.5		1.5m wide	MA	0	Poor	10-20	R	Bitty hedge with Japanese Knotweed present. Limited value. Many stubs and deadwood.	Remove Japanese Knotweed
H23	Hawthorn	<6	<350b	1m wide	M	0	Fair	20-40	C2	Dense, pruned at 1.5m in distant past. Now mostly maintained at 2m. Some stems left to 6m. No major visual defects.	No action.
G24	Ash	<12	<260	N 4 S 4 E 4 W 4	MA	0	Poor	10-20	C2	A collection of poor stems many with significant bark wounds and deadwood. Limited value. Relatively easy to replace if lost to development.	Remedial prune.

9.0 GENERAL RECOMMENDATIONS

9.1 **Generally**

Any recommended tree works should only be carried out with the consent of the local authority.

9.2 **Trees in relation to Development**

Consider the depth of foundations with reference to NHBC recommendations.

9.3 **Tree Work before Development**

Remove all 'R' category trees including those approved for removal in relation to approved development. Erect a robust fence to protect not only the retained trees themselves, but also the rooting zones at limit of canopy spread or in accordance with BS 5837:2005.

9.4 **Care of Trees during Development**

It is recommended that the precautions below be issued to the site manager for display on site.

GENERAL PRECAUTIONS DURING DEVELOPMENT:

- Section 5.2.2 of British Standard 5837:2005 "Trees in Relation to Construction" gives details of the method for calculating the root protection area (RPA - based on stem diameter) which should be left undisturbed around each retained tree. This is to prevent soil compaction, stacking etc. during demolition/construction. The RPA is included on the Tree Constraints Plan together with an indication of Above Ground Constraints.
- Based on the above calculation, and taking into account site specific issues, fencing in accordance with BS 5837:2005 should be erected around trees to be retained. This shall comprise a framework of scaffold poles driven vertically into the ground with diagonal bracing for support and welded mesh panels wired to uprights. This must be erected before any site access for demolition or construction. The above details and distances of tree protection will normally be set as a condition of any planning approval.
- British Standard 5837:2005 provides guidance for methods of working on development sites in proximity to retained trees and the principles set down in Section 11 of the document should be strictly adhered to. The following principles are particularly important:
 - Traffic must not enter tree root protection areas.
 - Stacking of construction materials should not occur beneath any tree canopies or within tree root protection areas.
 - Cement mixing or flushing should not occur inside minimum tree protective zones or within 10m of any tree (including trees on adjacent properties).
 - Fires should not be lit within 10m of any tree/canopy (this distance should be increased if conditions are windy).
 - Toxic materials (cements, oils, etc) should not be stored beneath canopies or within tree root protection areas.

9.5 **Towards Conclusion of Development**

Surgery is best carried out at this stage so that any known root damage can be corrected by the appropriate crown thinning to restore root/shoot balance. Similarly, trees now seen in relation to garden situations can be shaped as required. Planting to augment existing trees as part of the landscape works can now be appropriately undertaken at this stage.

bp/POPPELWELL ASSOCIATES

December 2011

APPENDIX

PHOTOGRAPHS



Photo 1:

View of the Hawthorns G2 (left) and T1 (right) which are located in the north west corner of the site.



Photo 2:

Again looking north west, T5 (Sweet Chestnut) can be seen in the foreground set within the Hawthorn hedge (H6). The Laurel (T3) can be seen behind. ▼



Photo 3: ▲

View south of H6 (Hawthorn hedge) which travels along the western boundary of the site.



Photo 4:

View south from Barnburgh Lane looking at H18 to the left of the view which runs along the eastern boundary of the site. G16 and G17 can also be seen beyond this hedge. H13 can be seen to the centre of the view, located along the southern boundary with G9 and T10 also visible to the right.





Photo 5:

View south east to the bottom corner of the site. H15 can be seen to the left of the view with H13 to the right travelling along the southern boundary of the site.



Photo 6:

View east from the centre of the site. H15 can be seen in the foreground travelling along the eastern boundary of the site.



Photo 7:

Again looking east, H18 can be seen in the foreground of the view with G16 and G18 seen behind to the right.





Photo 8:

View south along engine lane to the east of the site. H18 and G20 can be seen to the right of the view with the Blackthorn hedge of H19 seen to the left.



Photo 9:

View east looking at the north east corner of the site. H23 can be seen in the foreground with G24 seen beyond on the far side of Engine Lane. The gappy Hawthorn hedge (H18) can also be seen to the right of the view as it extends down the eastern side of the site. ▲