REDBROOK ROAD, GAWBER, BARNSLEY
for Cadam Construction Ltd

TREE SURVEY

ROSETTA LANDSCAPE DESIGN

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1.0 GENERAL

1.1 This tree survey was undertaken by Martin Popplewell (Chartered Landscape Architect) and Scott Reid (Arboriculturist) on 15 May 2021 on behalf of Cadam Construction Ltd in conjunction with proposals for residential development on site.

1.2 The survey should be read in conjunction with drawing 3778/1 (Existing Trees on Site).

1.3 The study site is located around 3km to the north west of Barnsley town centre. It is bounded to the east by Redbrook Road (beyond which lies an area of woodland) and to the south by Redbrook Mill Close which gives access to a residential development (three-storey apartments). A car park lies to the north and an area of public open space abuts the majority of the site to the west. In the extreme south west corner lies the garden of an adjacent dwelling (2a St. Thomas's Road).

1.4 The site is presently not in active use although it is understood that it was previously used for storing cars; remains of the hard standings are still visible. Ground is relatively level across most of the site at around 76.6 metres Above Ordnance Datum (AOD). However, the western part comprises a steep bank rising to 81.5m AOD. Beyond the site boundary to the west ground level remains at this higher level.

1.5 The interactive map on the local planning authority's website shows that that some trees on the steep banking are included within a Tree Preservation Order; however, the site does not lie within a Conservation Area.

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 arboriculturist 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.

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 All trees surveyed lie along or just beyond the site perimeter.

2.2 The principal tree species on or adjacent to the site is Sycamore. These can be found as a singlre tree and two groups of selef sown specicmes on the steep bansksing.

2.3 Other tree species present are Oak (on the northern boundary) and Elm (a Multi-stemmed tree in the south west corner).

2.4 Shrub species comprise Hawthorn and Goat Willow (all shrubby specimens along the western banking).

3.0 HEIGHT AND SIGNIFICANCE IN THE LANDSCAPE

3.1 The most visually prominent trees are: (i) Sycamore T1 and (ii) Oak T8. Both are in the 13-15m range but their prominence relates as much to their isolated positions as much as their height.

3.2 Other than the above the principal vegetation in the vicinity is the area of planting along most of the western site boundary. Although the individual specimens contained therein are only of modest quality and height (around 10m maximum) this block of planting does provide and element of screening from the west.

4.0 AGE AND CONDITION

4.1 The majority of trees surveyed range from 'Semi Mature' to 'Early mature' and all but one is in Fair or Good condition with no action required in the main.

4.2 There is only one poor qualaity tree on site – Elm T3 – which is suffwereiemng from Dutch Elm disease. Its removal will marginally benefit the area of planting within which it lies but not significantly.

5.0 ENVIRONMENTAL CONDITIONS

5.1 Due to their location on elevated ground (in comparison to adjacent ground) trees on the banking might be expected to be subject to potential impact from prevailing winds. However, there is no evidence of this at the present time and the development of the site is likely to provide increasingly sheltered conditions for retained trees on site over time.

5.2 Ground water conditions are also not assessed to be a significant factor in present or future growth or health of trees due to the strongly sloping nature of the ground upon which they lie.

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 centimetres 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. # - estimated value
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, semi mature, early mature, 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 5837:2012 into U 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 UNSUITABLE FOR RETENTION

Definition – Category U
(*Shown in broken outline on drawing with cross at trunk location)*
Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

Criteria – Category U
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 category U trees (e.g. 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 or very low quality trees suppressing adjacent trees of better quality.

NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve;

7.2 TREES TO BE CONSIDERED FOR RETENTION

Definition - Category A1, A2, A3
(*Shown in heavy outline on drawing with star at trunk location)*
Trees of high quality with an estimated life expectancy of at least 40 years.

Criteria - Category A

A1 (*Mainly arboricultural qualities*)
Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue).

A2 (*Mainly landscape qualities*)
Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.

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)*
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

Criteria - Category B

B1 (*Mainly arboricultural qualities*)
Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable fore retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation.

B2 (*Mainly landscape qualities*)
Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.

B3 (*Mainly cultural values, including conservation*)
Trees with material conservation or other cultural value.

Definition - Category C1, C2, C3
(*Shown in light outline on drawing with open circle at trunk location)*
Trees of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm.

Criteria - Category C

C1 (*Mainly arboricultural qualities*)
Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.

C2 (*Mainly landscape qualities*)
Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value; and/or trees offering low or only temporary/transient landscape benefit.

C3 (*Mainly cultural values, including conservation*)
Trees with no material conservation or other cultural value.

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

Items denoted thus # are included within a tree preservation order.

Tree number on dwg	Species	Height (m)	Stem diameter (cm)	Branch spread (m)	Age class	Crown clearance + Ht/direction of lowest branch	Physiological condition	Estimated remaining contribution (years)	Category grading	Notes / Structural condition	Preliminary management recommendations
T1#	Sycamore	15	36, 32	N 7.5 S 6 E 8.5 W 5	EM	3	Good	20-40	B1	Twin-stemmed tree lies mid-way up steep banking; dense, rounded crown. Previously topped over adjacent housing; minor epicormic growth at base. Occasional minor rubbing branches	No action
G2#	Sycamore	9	<10	As plan	Y-SM	0	Good	20-40	C2	Group of self-sown trees on bank. All are single stemmed with relatively narrow crowns that read as one. Provides some screening value.	No action
T3#	Elm	7	12, 4x7	N 4.5 S 3 E 6 W 2	SM	0	Poor	<10	U	Multi-stemmed self-sown tree; wide spreading open crown biased to east with foliage to ground level in places. Crown largely dead due to Dutch Elm Disease. Limited arboricultural value.	Fell and remove
T4#	Elder	6	15	N 4 S 3 E 4 W 3	SM	0	Fair	20-40	C1	Stem forks into multiple limbs @1.5m; wide spreading dense crown. Limited access prevents a detailed examination but appears to be in acceptable condition.	No action
G5	2nr. Sycamore	10	9x10	5m rad.	SM	0	Fair	20-40	C2	Pair of multi-stemmed trees on bank. dense, rounded crowns that read as one. Provides some screening value. Provide good screening and appear to be in good condition at present.	No action
T6	Oak	10	3x13	5m rad.	SM	0	Fair	40+	C1	Tree lies on site boundary. Stem forks into 2 at 4m; evenly balanced, rounded crown. Good future potential.	No action

Tree number on dwg	Species	Height (m)	Stem diameter (cm)	Branch spread (m)	Age class	Crown clearance + Ht/direction of lowest branch	Physiological condition	Estimated remaining contribution (years)	Category grading	Notes / Structural condition	Preliminary management recommendations
G7	4nr. Hawthorn	9	6x7	5m rad.	EM	0	Fair	20-40	C1	Four mature trees on steep banking. All are Multi-stemmed with dense, shrubby crowns that read as one. Provides good screening as a group.	No action
T8	Oak	13	23, 21, 20	N 5 S 7 E 6 W 4	SM	2	Good	40+	B1	Multi-stemmed tree growing out of steep bank; dense, rounded crown. Minor deadwood noted.	No action

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 'U' 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 5837:2012.

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 4.6 of British Standard 5837:2012 "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 5837:2012 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 5837:2012 provides guidance for methods of working on development sites in proximity to retained trees and the principles set down in Section 7 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.

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18 May 2021

projects/docs/3778-ts-18may21