

**Ward Green, Worsborough
for Harron Homes Ltd**

TREE SURVEY



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1.0 GENERAL

- 1.1 This tree survey was undertaken by Martin Popplewell (Landscape Architect) and Georgina Tearne (Arboricultural Consultant) on 30 November 2010 on behalf of Harron Homes Ltd in conjunction with proposals to develop the site for housing.
- 1.2 The survey should be read in conjunction with drawings 2241/1 (Existing Trees on Site) and 2241/2 (Tree Constraints Plan).
- 1.3 The site is located towards the western edge of the settlement of Ward Green around 2 kilometres south of Barnsley town centre. It is bounded to the west by a substantial public playing field and to the north by a former petrol filling station (on Genn Lane) now used as a furniture shop and warehouse. To the east the site is bounded in part by the open grounds of Ward Green Baptist Church (on Vernon Road) and partly by the rear and side garden of a two storey modern brick dwelling. To the south the site is bounded by the rear gardens of dwellings on Dorchester Place and to the south east - alongside the site access road on to High Ridge lies the bungalow and garden belonging to the former school caretaker.
- 1.4 ~~The site was formerly in use as a primary school and the school buildings, though empty, are still in place in the centre of the site. The remainder of the site comprises open/grassed areas (primarily to the west and south of the school buildings) and vehicle/pedestrian circulation areas (to the east and north). The site falls from around 4.15 metres Above Ordnance Datum (AOD) along the northern boundary to around 1.05m AOD on the southern boundary. The northern boundary however comprises a brick retaining wall and ground immediately to the north (i.e. that occupied by the furniture shop and warehouse) is substantially higher.~~
- 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 A range of mainly smaller-growing species exists on site mostly - but not all - lying around the site perimeter and concentrated towards the northern part of the site.
- 2.2 Tree species include Alder, Silver Birch, Weeping Birch, Cherry, Field Maple, Norway Maple and Rowan together with two Sycamore and a single Weeping Beech. Shrubby species - located mostly within the tree line along the northern boundary - include Goat Willow and Hazel.
- 2.3 Hedges can be found along the eastern and western site boundaries - the predominant species here is Hawthorn though Cypress Elder and Cherry Laurel are found within H20 in the south east corner.

3.0 HEIGHT AND SIGNIFICANCE IN THE LANDSCAPE

- 3.1 None of the trees are particularly tall - the tallest being the pair of Alders (T12/13) along the northern boundary and the Silver Birch (T1) to the right of the site entrance. Other trees range between 5 and 10 metres.
- 3.2 Notwithstanding the above comments some pairs of trees have limited visual significance in the immediate vicinity not due to their height but their wide spreading dense crowns that read as one block of foliage. Chief among these are the two Norway Maples (G16) in the north west corner of the site. The two smaller Field Maples (G15) lying just to the east have a similar impact.

4.0 AGE AND CONDITION

- 4.1 All the trees on site are young to middle aged - presumably all have been planted since the school was erected around 40-50 years ago. Health ranges from poor to good; the poorer quality trees tend to be those with multiple stems whereas the better specimens have single straight stems.

5.0 ENVIRONMENTAL CONDITIONS

- 5.1 The site is relatively exposed to the west. Some of the trees - especially along the western boundary have distorted crowns which may have resulted from their response to strong prevailing winds. The trees within the centre of the site have better balanced crowns, although those along the northern boundary have somewhat restricted crowns to the north due to their proximity to the retaining wall.
- 5.2 It can be expected that the gently sloping site will give good ground water conditions throughout.

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 should, 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	Silver Birch	11	260	N 5 S 3.5 E 3.5 W 4.5	MA	0	Fair	20-40	C1	Slightly curved main stem forks in 2 at 3m. Dense somewhat congested crown with foliage to ground level. Stubbed limb in crown. No major visual defects.	Remove suckers and remedial prune.
H2	Hawthorn	1.8	<120b	1.5m wide	MA	0	Good	20-40	C2	Hedge has been closely trimmed in past but recently allowed to grow out. Some new shoots, quite dense. No major visual defects.	Continue to maintain.
T3	Sycamore	10	400b est	N 3 S 3.5 E 4.5 W 3.5	MA	1	Fair	20-40	C1	Middle-aged, multi-stemmed specimen beyond chain link fence. Dense rounded crown. Poorly formed. Limited individual value and relatively easy to replace if lost to development.	No action at present.
T4	Cherry	8	450b est	N 5 S 4 E 5 W 4.5	MA	2	Fair	20-40	C1	Twin-stemmed tree just beyond fence. Open spreading crown. No major visual defects.	No action.
T5	Silver Birch	10	105	2.5m radius	Y	1	Good	40+	C1	Young tree with delicate narrow crown. Reasonable shape and form. Not pruned to any extent. No major visual defects. Relatively easy to replace if lost to development.	No action.
T6	Alder	8	180	3m radius	Y	1	Good	40+	C1	Young tree with single straight stem and high compact crown. Good shape and form. Not pruned to any extent. No major visual defects.	No action.
T7	Goat Willow	8	<140	N 4 S 2 E 5 W 3	MA	0	Poor	10-20	C1	Multi-stemmed tree with dense shrubby crown. Poorly formed. Stubs at base and suckers. Wounds on stems, stubs and deadwood. Limited long-term value.	Consider removal.

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
T8	Sycamore	9	<180	N 5 S 3 E 2 W 4	Y	0.5	Poor	10-20	C1	Twin stemmed tree, stems curve around each other. Sparse, relatively narrow crown. Minor stubs. Limited long-term value due to form and position. Relatively easy to replace if lost to development.	Fell and remove.
G9	2Nr Silver Birch	7	<150	N 1 1 S 3 2 E 3 3 W 3 1	Y	0.5	Good	40+	C2	Pair of middle-aged trees with straight stems and evenly balanced relatively narrow crowns. Not pruned to any extent. Good shape and form. Relatively easy to replace if lost to development although potential.	No action.
T10	Alder	7	240b	N 1.5 S 2.5 E 2.5 W 3	Y	0	Poor	10-20	C1	Multi-stemmed tree with shrubby form. Very close to boundary wall. Limited long-term value and limited individual value. Relatively easy to replace if lost to development.	No action at present.
T11	Alder	8	270b	N 1 S 3.5 E 2.5 W 1.5	Y	0	Fair	10-20	C1	Single stemmed tree with narrow twin stemmed crown. Limited individual value. Close to building and relatively easy to replace if lost to development.	No action at present.
T12	Alder	11	300	N 2.5 S 5.5 E 4 W 4	MA	1.5	Good	20-40	B1	Middle-aged tree with straight main stem and dense relatively narrow crown biased to south. Very close to building. Not pruned to any extent. No major visual defects.	Prune to clear building.
T13	Alder	11	190	N 2.5 S 2.5 E 2.5 W 2.5	Y	3	Good	20-40	C1	Single stemmed tree with sparse narrow high crown. Minor deadwood and stubs. Limited individual value. Very close to building.	No action at present.
T14	Rowan	6	150	1.5m radius	Y	1.5	Fair	20-40	C1	Slightly curved stem forks in 2 at 1m. Sparse, narrow high crown. Reasonable shape and form. No major visual defects. Relatively easy to replace if lost to development.	No action at present.

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
G15	2Nr Field Maple	6	250b	N 3 S 4.5 E 4 W 5	MA	0	Fair	20-40	C2	Both trees have short stems that fork into multiple limbs near ground level. Wide spreading dense crowns. Foliage to ground level in places. Tight unions between stems and generally poorly formed. Limited individual value. Relatively easy to replace if lost to development.	No action at present.
G16	2Nr Norway Maple	10	320 360	N 4.5 S 5 E 5.5 W 5.5	MA	0+	Poor	10-20	C1	Pair of middle-aged trees; both have short main stems that lean somewhat to south and fork into multiple limbs at 2m. Wide spreading dense crowns. Ripped wounds where limbs lost in past. Hanging branches.	Remedial prune.
G17	3Nr Weeping Birch	<7	<200	N 2.5 S 4 E 4 W 1	MA	0	Fair	20-40	C2	Group of young trees with single stems and weeping canopies biased to south. Relatively easy to replace if lost to development. No major visual defects.	No action at present.
H18	Hawthorn	2		1.5m	MA	0	Good	20-40	C1	Closely trimmed hedge along site boundary. Dense foliage to ground level. No major visual defects.	Continue to maintain.
G19	2Nr Hawthorn	<3.5	<150b	2.5m radius	Y	0	Fair	20-40	C2	Pair of middle-aged trees with shrubby form. In adjacent garden but overhanging site. Reasonable shape and form. No major visual defects.	No action.
H20	Hawthorn, Cherry Laurel, Cypress, Elder	<2		1.5m radius	MA	0	Fair	20-40	C2	Mixed species in adjacent garden but overhanging site. Partially obscured by fence. Regularly pruned. No major visual defects.	Continue to maintain.
T21	Weeping Beech	4	200	N 2.5 S 6 E 6 W 2	Y	0	Good	40+	B1	Contorted main stem, weeping crown with foliage to ground level. No major visual defects. Potential.	No action.

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
T22	Rowan	<5	200	3m radius	MA	1	Fair	20-40	C1	Middle-aged tree with short straight stem that forks into multiples at 1m. Dense rounded crown. Reasonable shape and form. No major visual defects. Relatively easy to replace if lost to development.	No action.
G23	2Nr Rowan	<5	<220	N 3 S 3 E 4 W 2	MA	1+	Poor	10-20	C1	Pair of middle-aged trees; both lean to east and have dense rounded crowns biased to east. Signs of decay at base. Minor ripped wounds in crown. Minor deadwood.	Monitor if retained.

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.

mp/POPPELWELL ASSOCIATES

December 2010

projects/docs/2241-ts-03dec10

APPENDIX

PHOTOGRAPHS



Photo 1:

View south east showing Birch T1 located on right hand side of site entrance.



Photo 2:

View north east showing Sycamore T3 lying within hedge H2 on eastern site boundary.

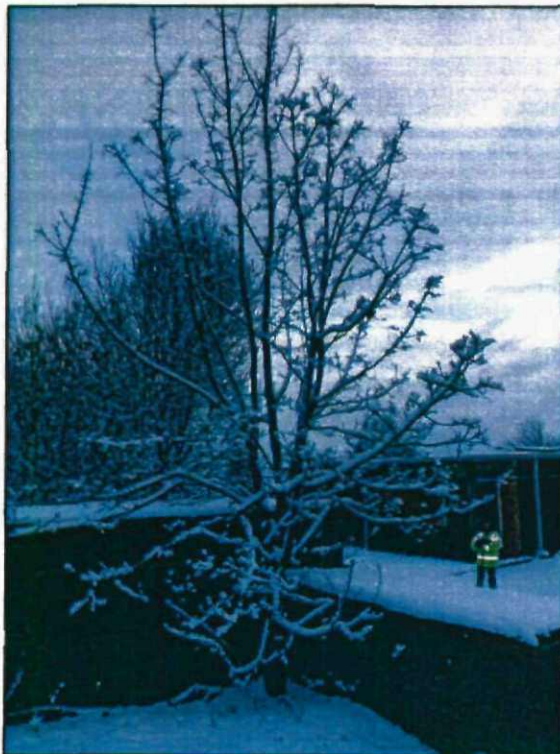


Photo 3:

Twin-stemmed Sycamore T8 located adjacent outbuilding towards northern end of site.



Photo 4:

View east showing trees at front of school buildings - Weeping Beech T21 on right, Rowan T22 in centre and pair of Rowans G2 on left.



TREES ALONG NORTHERN SITE BOUNDARY



Photo 5:

View west showing pair of Silver Birch (G9) towards eastern end of boundary with Alders beyond.



Photo 6:

View north towards substantial brick retaining wall showing Alders T11-T13 (right to left with shrubby Maple and Hazel between).



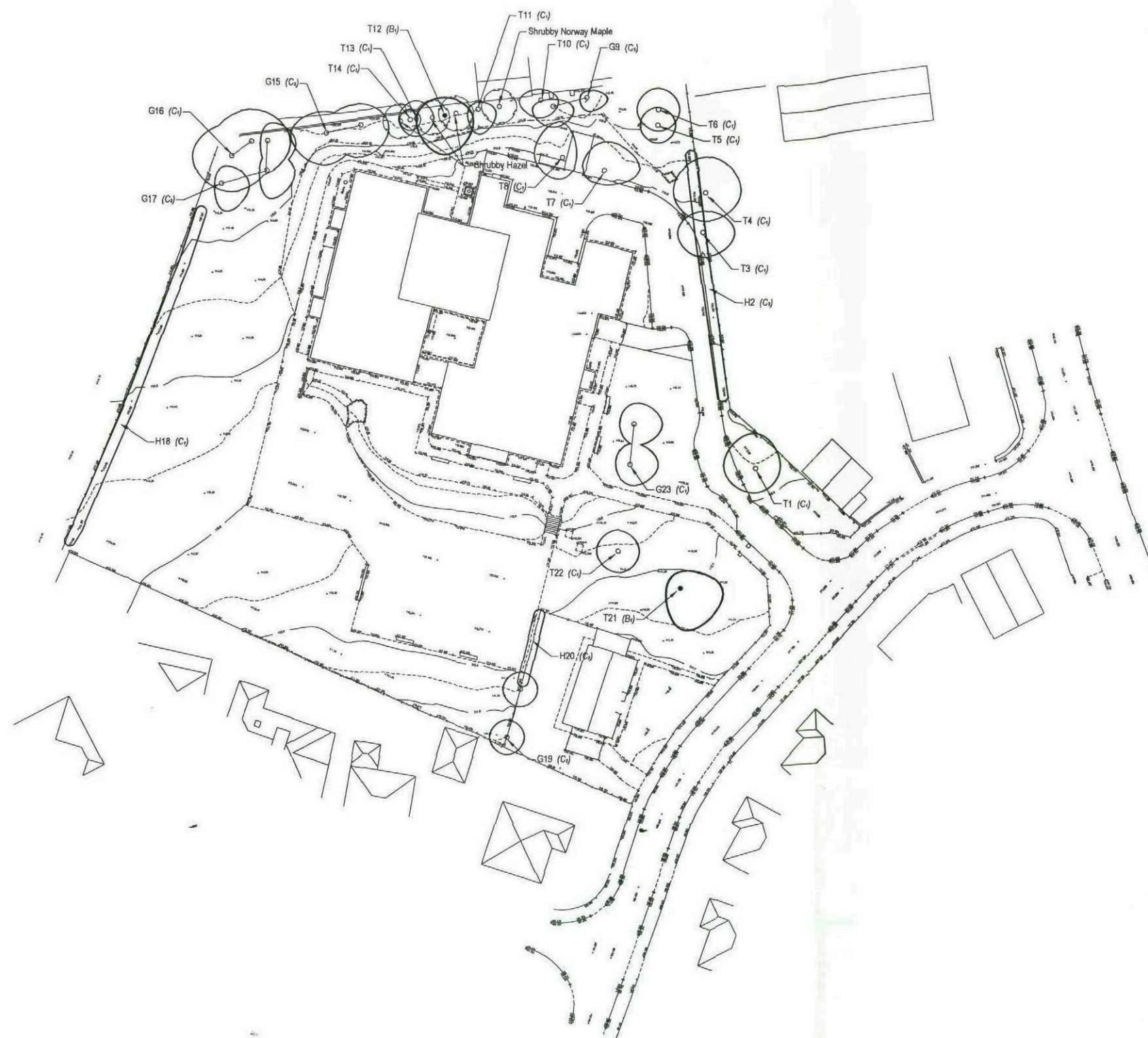
Photo 7:

View north towards retaining wall showing pair of Field Maples (G15) - both have low wide-spreading crowns.



Photo 8:

View north showing group of trees in north west corner of site: Group of three Weeping Birch (G17) in foreground with pair of Norway Maples (G16) beyond.



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This drawing has been prepared for the purpose of planning approval.

LEGEND

-  Existing tree, retention categories A1 to A3
-  Existing tree, retention categories B1 to B3
-  Existing tree, retention categories C1 to C3
-  Existing tree, retention category R
-  Additional vegetation - not surveyed

Note: Tree retention categories as defined by BS 5837:2005

Base: Owner Unknown, 'No title', nonr received 29Nov10

Popplewell

PROJECT Ward Green, Worsborough

TITLE Existing Trees on Site

CLIENT Harron Homes Ltd

DATE 01 Dec 10 SCALE 1 : 500 SHEET A2

DRAWN MP/jr DRAWING NO 2241/1

CHECKED MP REVISION -

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LEGEND

- Existing tree, retention categories A1 to A3
- Existing tree, retention categories B1 to B3
- Existing tree, retention categories C1 to C3
- Existing tree, retention category R
- Root protection area
- Shadow zone, existing height

Note: Tree retention categories, root protection area and shadow zones as defined by BS 5837:2005

Base: Owner Unknown, 'No title', nonr received 29Nov10

Popplewell

PROJECT Ward Green, Worsborough

TITLE Tree Constraints Plan

CLIENT Harron Homes Ltd

DATE 01 Dec 10 SCALE 1 : 500 SHEET A2

DRAWN MP/jr DRAWING NO 2241/2

CHECKED MP REVISION -

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