



Caroline Hall

Arboriculture

Arboricultural Impact Assessment for proposed new development at Barber's Drove, Crowland, Peterborough PE6 0BE

Site: Barber's Drove North, Crowland, Peterborough

Commissioned by: Mr Patrick Burke

Date: December 2020



Contents

- 1. Instructions**
- 2. Limitations of this report**
- 3. Tree inspection and site information**
- 4. Arboricultural Implications**
- 5. Conclusion**

References

Contacts

APPENDICES

TREE SCHEDULE

TREE CONSTRAINTS PLAN

SITE PLAN



Section 1

Instructions

- 1.1 This report was commissioned by Mr Patrick Burke of Burmor Construction Ltd.
- 1.2 The client has commissioned the report to support a planning application in respect of a new housing development at the site.
- 1.3 The report will contain considerations for the impact of the development upon trees and woody plants on the site, in line with the recommendations within BS5837:2012.
- 1.4 Inspection date: 7th October 2020.
- 1.5 Inspected by Caroline Hall (Tech Cert (Arbor A)) – arboriculturalist.

Section 2

Limitations of this report

- 2.1 As trees are living plants, their health and condition can change both by forces of nature, intervention by people or vehicles, and with the seasons. For this reason the recommendations in the report are valid for one year only.
- 2.2 The trees were examined from ground level and to the guidance in BS5837:2012, thus trees with a stem diameter below 75mm at 1.5m from ground level are not included within the appraisal.
- 2.3 Soil samples were not taken during the survey. Engineering solutions in relation to foundation design are outside the scope of this report.
- 2.4 The report takes into account the site as laid out at the time of inspection. Any additional structures, alterations or extensions to buildings, altering of soil levels or trenching, without consultation, could render the report on the surveyed trees void.
- 2.5 Preliminary management considerations are included, as part of routine arboricultural management, however, *no tree should ever be regarded as completely safe or free from risk. Trees are dynamic, living organisms subject to change and the physical and environmental conditions that surround them.*



Section 3

Tree Inspection and Site Information

- 3.1 The trees were surveyed in relation to the guidance in the document ***BS 5837:2012 Trees in Relation to design, demolition and construction – Recommendations***, and assessed to the criteria accompanying the survey sheet appended to this report.
- 3.2 The site is presently occupied as an equestrian field, with associated stabling and a residential dwelling situated upon the south west boundary.
- 3.3 The proposed site is not within a conservation area and there are no trees protected under a TPO within the site, though there is a group of TPO Poplar trees situated to the north, which are outside of influencing distance of the development.

Section 4

Arboricultural Implications Assessment

4.1 Tree Survey

- 4.1.1 Trees for consideration are shown on the attached map, and have been assessed to the criteria in BS5837:2012, Trees in Relation to design, demolition and construction – recommendations.
- 4.1.2 The site is presently an open field with boundary trees upon the south east and north west sides.
- 4.1.3 26 trees plus 5 groups form the basis of this assessment, many of the trees along the north west boundary appear to be off-site.
- 4.1.4 On appraisal of the trees, 1 tree, receives the retention category “A”; 22 trees have received the classification of “B”; 8 trees and groups classed as “C”, and 1 tree is classified as U, or Unsuitable for retention.
- 4.1.5 Trees classified as “B” consist of Red Pine, Pear, Birch, Chestnut, Sycamore and Whitebeam and have the potential to offer a further 20 to 40 years contribution, with good screening and wildlife habitat, and are of benefit to the local landscape. These trees are recommended for retention, any losses in respect of the development to be replaced within landscaping proposals.



- 4.1.6 One tree worthy of note is T9 Oak which has an expected longevity of at least 40+ years. This tree is presently part of a linear boundary group, and it's stature is not fully visible, however this species may outlast other trees within this group by many, possibly hundreds of years.
- 4.1.7 The trees classified as "C" consist of Hawthorn and Ash. While this category would not normally pose a constraint to the development, it is recommended that any losses be considered in terms of wildlife habitat potential. T29 Whitebeam is in poor condition, and this tree is recommended for removal under routine arboricultural maintenance.

4.2 Arboricultural Impact

- 4.2.1 The proposal to develop the site with a housing scheme has been designed to make use of the existing trees, and minimize losses wherever possible. The building footprint in relation to the trees is shown upon the attached site plan, and is appraised as follows:
- 4.2.2 The scheme will require removal of T2 Pear, T11 & T12 Ash, G17 Hawthorn and T25 Hawthorn. These trees are all categorised as "C" due to their condition and expected longevity, and would not normally pose a constraint to a development. The trees all offer wildlife habitat potential, and their losses should be considered for replacement within new landscaping.
- 4.2.3 Also proposed for removal are T1 Pear, T3 Red Pine, and T24 & T26 Sycamore. These trees all receive the retention category "B", offering 20-40 years future contribution. It is recommended these trees are replaced with suitable alternatives elsewhere upon the site.
- 4.2.4 T1 Pear and T3 Red Pine are situated within the turning head and access road to the southerly end of the site; it is not possible for the trees to successfully co-exist with the development as laid out. These losses, once the dwellings are constructed, will not be visible from the wider area, and it is recommended these are mitigated with replanting.
- 4.2.5 T24 and T26 Sycamore are situated along the boundary with James Road, and their RPAs are situated within the new proposed site access. Alternative options aimed at preserving these trees have been considered, however, as adopted highway, construction methods over tree roots with a moderate volume of traffic are likely to be unsuitable. Considering this, plus future maintenance requirements to clear T26 for height and visibility, it would be prudent to remove these two trees.
- 4.2.6 Encroachments into the RPA of T23 is considered to be tolerable, and suitable construction methods are to be adopted to minimise disruption to the soil, plus any root severance to be carried out following consultation



with an arboriculturalist. There are likely to be future pruning demands on the canopy of this tree, as this extends close to Plot 01.

- 4.2.7 Foundation design in proximity to trees is outside of the scope of this report.
- 4.2.8 Trees T18 to T31 have the potential to cast shade over the proposed dwellings for part of each day. In addition to this, leaf litter and tree debris may fall upon the buildings and hard standing areas, which may create a future maintenance responsibility.
- 4.2.9 The site is presently well screened from neighbouring property and the public highway on both the north west and south east boundaries by tree cover. The north end of the site has an easement of 9 metres from the boundary, thus any new buildings will be situated within a generous proximity from this boundary.

4.3 Tree Protection

- 4.3.1 The proposal will require some site preparation prior to construction, including demolition of outbuildings. It is recommended that the demolition contractor is made aware of the importance of retained trees and their root protection areas, and to avoid these areas with any demolition plant or equipment.
- 4.3.2 Tree and shrub removals are to be carried out between the end of August and mid-March, in order to avoid the bird nesting season. Tree contractors should be suitably qualified and works carried out to BS3990:2010. Adequate care to be taken when working within the RPA of a retained tree, not to disrupt the soil, nor should plant or equipment to be situated with the RPA of any of the retained trees
- 4.3.3 Standard tree protection measures will be required at site set up and prior to demolition of any buildings. Tree protection is to remain in-situ for the duration of construction.



Section 5

Conclusion

The proposal to create a new housing development upon the site will require the loss of four category “C” trees, one “C” group, and four category “B” trees. These are necessary in order to facilitate an entrance from the public highway, and create site access roads.

In consideration of proposed tree losses, T1, T2 and T3 will not be visible from the wider area, as these trees will be screened from view by new buildings; T11, T12 and G17, all “C” category trees may be replaced via new landscaping proposals; T24, T25 and T26 are required for the new site access, and it is not possible for these to co-exist with the development.

It is recommended that all “B” category losses be replaced with suitable alternatives elsewhere on the site.

Standard tree protection methods will be required from site set-up and during construction.

The site will be adequately screened by the retained trees, and may be enhanced with additional planting. Future tree maintenance will be kept to a minimum.

On balance, with tree losses kept to the least possible and having sufficient scope for new landscaping, the proposal is acceptable.

References

BS5837:2012 - *Trees in relation to design, demolition and construction – Recommendations*

BS3998:2010 - *Tree work Recommendations*

The Body Language of Trees – Claus Mattheck and Helge Breloer

Manual of Wood Decays in Trees – C Mattheck and K Weber

<http://www.forestry.gov.uk>

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees – Issue 2



Contacts

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APPENDICES

TREE SCHEDULE, Key to Tree Schedule

TREE CONSTRAINTS PLAN

SITE PLAN, AS PROPOSED

TREE SURVEY SCHEDULE

Tree no	Species	Height (m)	Stem diameter at 1.5 metres (mm)	Radius of nominal circle	Root Protection area m ²	Branch Spread (m)	Height of Crown Clearance (m)	Age/Class	Physiological Condition	Structural Condition	Preliminary Management Considerations	Estimated Remaining Contribution (years)	Category/Grading
T1	Pear (multi-stem) <i>Pyrus communis</i>	#6	160, 140, 80, 220, 70	3.8	46	N 3 S 3 E 3 W 3	1	EM	GOOD	GOOD - pruning wounds, minor dead wood, stubs,	No work required	20-40	B2
T2	Pear (multi-stem) <i>Pyrus communis</i>	#3	80, 95, 140	2.2	15	N 2 S 1 E 2 W 2	0.5	Y	GOOD	FAIR - pruning wounds, low branches, poor form	No work required	10-20	C1
T3	Red Pine <i>Pinus resinosa</i>	#8	#600	7.2	163	N 5 S 5 E 4 W 5	0.5	EM	GOOD - ivy	GOOD - ivy, pruning wounds, stubs, minor dead wood, low branches, shrubs around base	Sever ivy, remove shrubs, lift crown to 2 metres from ground level	20-40	B1

TREE SURVEY SCHEDULE

Tree no	Species	Height (m)	Stem diameter at 1.5 metres (mm)	Radius of nominal circle	Root Protection area m ²	Branch Spread (m)	Height of Crown Clearance (m)	Age/Class	Physiological Condition	Structural Condition	Preliminary Management Considerations	Estimated Remaining Contribution (years)	Category/Grading
T4	Hawthorn (off-site) <i>Crataegus monogyna</i>	#7	50,50,60	1.1	4	N 2 S 2 E 2 W 2	2	Y	FAIR - suppressed	FAIR - swept stem, crossed branches, pruning wounds, stubs, sparse crown, minor dead wood	No work required	10-20	C1
T5	Birch (off-site) <i>Betula pendula</i>	#13	#300	3.6	41	N 3 S 3 E 3 W 3	2	EM	GOOD - ivy	GOOD - ivy	No work required	20-40	B2
T6	Birch (off-site) <i>Betula pendula</i>	#15	#300	3.6	41	N 3 S 3 E 3 W 3	1.5	M	GOOD - ivy	GOOD - minor ivy, minor sweep on stem	No work required	20-40	B2
T7	Chestnut (off-site) <i>Aesculus hippocastanum</i>	#12	#300	3.6	41	N 3 S 3 E 3 W 3	1.5	EM	FAIR - leaf miner infection, minor ivy, defoliating	GOOD	No work required	20-40	B2

TREE SURVEY SCHEDULE

Tree no	Species	Height (m)	Stem diameter at 1.5 metres (mm)	Radius of nominal circle	Root Protection area m ²	Branch Spread (m)	Height of Crown Clearance (m)	Age/Class	Physiological Condition	Structural Condition	Preliminary Management Considerations	Estimated Remaining Contribution (years)	Category/Grading
T8	Birch (off-site) <i>Betula pendula</i>	#15	#300	3.6	41	N 3 S 3 E 3 W 3	1.5	EM	GOOD	GOOD - swept stem, pruning wounds, minor dead wood	No work required	20-40	B2
T9	Oak (off-site) <i>Quercus robur</i>	#12	#400	4.8	72	N 4 S 4 E 4 W 4	1.5	EM	GOOD	GOOD - minor dead wood, pruning wounds, stubs	No work required	40+	A2
G10	Ash (5 hedgerow trees) <i>Fraxinus excelsior</i>	#12	300	3.6	41	see plan	2	EM	GOOD	FAIR - suppressed, minor dead wood, pruning wounds	No work required	20-40	B2
T11	Ash <i>Fraxinus excelsior</i>	#9	80, 100	1.6	8	N 2 S 2 E 2 W 2	2	Y	GOOD	FAIR - suppressed, self set tree	No work required	10-20	C1
T12	Ash <i>Fraxinus excelsior</i>	#8	90	1.1	4	N 1 S 1 E 2 W 1	2	Y	GOOD	FAIR - suppressed, self set tree	No work required	10-20	C1

TREE SURVEY SCHEDULE

Tree no	Species	Height (m)	Stem diameter at 1.5 metres (mm)	Radius of nominal circle	Root Protection area m ²	Branch Spread (m)	Height of Crown Clearance (m)	Age/Class	Physiological Condition	Structural Condition	Preliminary Management Considerations	Estimated Remaining Contribution (years)	Category/Grading
G13	Hawthorn (15 hedgerow trees) <i>Crataegus monogyna</i>	#8	#200	2.4	18	see plan	1	EM	GOOD	GOOD	No work required	20-40	B2
G14	Ash (2 trees forming one crown) <i>Fraxinus excelsior</i>	#12	#300	3.6	41	see plan	2	EM	GOOD	GOOD - limited access	No work required	20-40	B2
T15	Sycamore (twin stem) <i>Acer pseudoplatanus</i>	#12	#350, 350	5.9	109	N 4 S 4 E 4 W 4	2	M	GOOD	GOOD - limited access	No work required	20-40	B2
G16	Hawthorn (40 trees) <i>Crataegus monogyna</i>	#8	#200	2.4	18	see plan	1	EM	GOOD	GOOD - ivy, Elder, Bramble, Rose at base	Clear brambles, ivy, ground cover plants to establish exacr boundary line	20-40	B2

TREE SURVEY SCHEDULE

Tree no	Species	Height (m)	Stem diameter at 1.5 metres (mm)	Radius of nominal circle	Root Protection area m ²	Branch Spread (m)	Height of Crown Clearance (m)	Age/Class	Physiological Condition	Structural Condition	Preliminary Management Considerations	Estimated Remaining Contribution (years)	Category/Grading
G17	Hawthorn group <i>Crataegus monogyna</i>	#5	#150	1.8	10	see plan	0	EM	GOOD	GOOD	No work required	10-20	C1
T18	Cherry <i>Prunus avium</i>	#6	#300	3.6	41	N 3 S 3 E 3 W 3	2	EM	FAIR - die back through crown	FAIR - dead wood on north east side, poor form	No work required	10-20	C1
T19	Sycamore <i>Acer pseudoplatanus</i>	#12	#400	4.8	72	N 4 S 4 E 4 W 4	1	EM	GOOD - minor die back, tar spot fungus	GOOD - low branches	No work required	20-40	B2
T20	Sycamore <i>Acer pseudoplatanus</i>	#14	#450	5.4	92	N 4 S 4 E 4 W 4	1	EM	GOOD - tar spot fungus	GOOD - low branches, minor dead wood	No work required	20-40	B2
T21	Sycamore <i>Acer pseudoplatanus</i>	#14	#450	5.4	92	N 4 S 4 E 4 W 4	1	EM	GOOD - tar spot fungus	GOOD - low branches, minor dead	No work required	20-40	B2
T22	Sycamore (twin stem) <i>Acer pseudoplatanus</i>	#14	110, 420	5.2	84	N 4 S 4 E 4 W 4	1.5	M	GOOD - tar spot fungus, minor die back from top	GOOD - minor dead wood, low branches, pruning wounds	No work required	20-40	B2

TREE SURVEY SCHEDULE

Tree no	Species	Height (m)	Stem diameter at 1.5 metres (mm)	Radius of nominal circle	Root Protection area m ²	Branch Spread (m)	Height of Crown Clearance (m)	Age/Class	Physiological Condition	Structural Condition	Preliminary Management Considerations	Estimated Remaining Contribution (years)	Category/Grading
T23	Sycamore (twin stem) <i>Acer pseudoplatanus</i>	#13	280, 470	6.6	137	N 5 S 5 E 4 W 4	0.5	M	GOOD - tar spot fungus, minor die back from top	GOOD - minor dead wood, low branches, pruning wounds	No work required	20-40	B2
T24	Sycamore (multi stem) <i>Acer pseudoplatnus</i>	#14	340, 110, 190, 200, 200, 350	6.8	147	N 4 S 4 E 4 W 4	1.5	M	GOOD - tar spot fungus, minor die back from top	GOOD - exposed roots, crown break inclusions, minor dead wood, low branches, pruning wounds	No work required	20-40	B2
T25	Hawthorn (multi stem) <i>Crataegus monogyna</i>	#5	#150	1.8	10	N 3 S 3 E 3 W 3	0	EM	GOOD	GOOD - crossed branches, minor dead wood, low branches	No work required	10-20	C1

TREE SURVEY SCHEDULE

Tree no	Species	Height (m)	Stem diameter at 1.5 metres (mm)	Radius of nominal circle	Root Protection area m ²	Branch Spread (m)	Height of Crown Clearance (m)	Age/Class	Physiological Condition	Structural Condition	Preliminary Management Considerations	Estimated Remaining Contribution (years)	Category/Grading
T26	Sycamore <i>Acer pseudoplatanus</i>	#13	580	7.0	152	N 4 S 4 E 4 W 4	0.5	EM	FAIR - minor die back in upper crown, tar spot fungus, epicormic growth through lower crown	GOOD - exposed roots, minor dead wood, low branches,	No work required	20-40	B2
T27	Sycamore <i>Acer pseudoplatanus</i>	#12	480	5.8	104	N 5 S 5 E 5 W 5	1	EM	FAIR - minor die back in upper crown, tar spot fungus	GOOD - exposed roots, minor dead wood, pruning wounds, low branches, peg for boundary wire	No work required	20-40	B2

TREE SURVEY SCHEDULE

Tree no	Species	Height (m)	Stem diameter at 1.5 metres (mm)	Radius of nominal circle	Root Protection area m ²	Branch Spread (m)	Height of Crown Clearance (m)	Age/Class	Physiological Condition	Structural Condition	Preliminary Management Considerations	Estimated Remaining Contribution (years)	Category/Grading
T28	Sycamore <i>Acer pseudoplatanus</i>	#10	450	5.4	92	N 5 S 5 E 5 W 5	0.5	EM	GOOD - tar spot fungus	GOOD - exposed roots, low branches, crossed branches, pruning wounds, minor dead wood	No work required	20-40	B2
T29	Whitebeam <i>Sorbus aria</i>	#8	460	5.5	96	N 3 S 3 E 3 W 3	2	M	POOR - moribund	POOR - major dead wood, die back	Fell to ground level	0-10	U
T30	Whitebeam <i>Sorbus aria</i>	#9	650	7.8	191	N 4 S 4 E 4 W 4	1	M	GOOD	FAIR minor lean, stem ribs, tight forks, crossed branches, pruning wounds, minor dead wood, die back, cracks in bark	No work required	20-40	B2

TREE SURVEY SCHEDULE

Tree no	Species	Height (m)	Stem diameter at 1.5 metres (mm)	Radius of nominal circle	Root Protection area m ²	Branch Spread (m)	Height of Crown Clearance (m)	Age/Class	Physiological Condition	Structural Condition	Preliminary Management Considerations	Estimated Remaining Contribution (years)	Category/Grading
T31	Whitebeam <i>Sorbus aria</i>	#9	670	8.0	203	N 4 S 4 E 4 W 4	1	M	GOOD	FAIR minor lean, stem ribs, tight forks, crossed branches, pruning wounds, minor dead wood, die back, cracks in bark	No work required	20-40	B2

Key to Survey

Tree no: Number on plan

Species: Common name of tree

Height: Estimated in metres

Stem diameter: Measured in mm at 1.5 metres above ground level, multi stem values shown separately

Radius of nominal circle: Shown in metres as calculated to the guidance in BS5837

Root protection area m²: The total area in m² of the root protection area

Branch spread: Estimated extent of canopy cover, shown at each point, N, S, E, W in metres

Height of crown clearance: Estimated height of lowest branches

Age/Class: Y – Young, newly planted, self set or still supported on a stake

EM – Semi-Mature, within 1/3 of expected normal life

M – Mature, tree has reached maturity, and is within 2/3 of expected normal life

OM – Over Mature, tree is within the last stage of life, or is already in decline

D – Dead

Condition: GOOD – no significant defects seen

FAIR – some defects which can either be rectified, or will not have a significant impact on the health and safety of the tree

POOR – defects which can not be rectified, and could have a significant impact upon the overall health and safety of the tree

DEAD

Preliminary Management Considerations: The recommendations at this stage are purely for good arboricultural management and do not have any bearing upon the proposed development

Estimated remaining contribution – in years

Category/Grading – U – Tree is in poor condition, dead, of low arboricultural value, or may only contribute a further 10 years

A1 – Tree has high value, is a good example of its species, offering 40 years or more

A2 – Tree has high value, offers screening and landscape contribution for 40 years or more

A3 – Tree has high value, offers cultural or historical value for 40 years or more

B1 – Tree has moderate value, has a slightly impaired value, but offers 20 years or more

B2 – Tree has moderate value, has distinct landscape value, offering 20 years or more

B3 – Tree has moderate value, offers clear conservation or cultural benefits for 20 years or more

C1 – Tree is of low quality and value, offers at least 10 years but does not qualify in higher categories

C2 – Tree is of low quality and value, groups or woodlands with temporary landscape value, for at least 10 years

C3 – Tree is of low quality and value, has limited contribution in terms of landscape or conservation but offering 10 years or more

- ⚠ As trees are living plants their health and condition can change both by forces of nature, intervention by people or vehicles, and with the seasons. For this reason the recommendations in the report are valid for one year only

Tree Constraints Plan

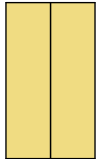
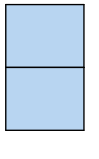
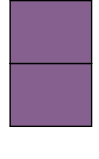
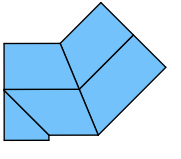
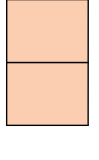
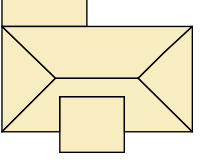
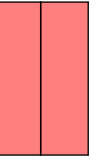
BARBERS DROVE, CROWLAND

INITIAL TREE SURVEY 07/10/2020

SCALE 1:1000 AT A3



HOUSE TYPE LEGEND

	APARTMENT 2 No. 1-bed apartments GIA 45m ² (484 sq.ft.) 2 Storey		HT 5 3-bed house GIA 100m ² (1077 sq.ft.) 2.5 Storey
	HT 1 2-bed house GIA 71m ² (762 sq.ft.) 2 Storey		HT 6 3-bed house GIA 105m ² (1135 sq.ft.) 2 Storey
	HT 2 3-bed house GIA 79m ² (846 sq.ft.) 2 Storey		HT 7 4-bed house GIA 124m ² (1334 sq.ft.) 2.5 Storey
	HT 3 3-bed house GIA 88m ² (947 sq.ft.) 2 Storey		HT 8 Chalet bungalow GIA 133m ² (1431.6 sq.ft.) 1.5 Storey
	HT 4 (Option 1) *drawing reference 2483_AB0805a 3-bed house GIA 97m ² (1047sq.ft.) 2 Storey		
	HT 4 (Option 2) *drawing reference 2483_AB0805 3-bed house GIA 97m ² (1047sq.ft.) 2 Storey		

-  new trees
-  existing trees
-  trees to be removed
-  RPA's of trees
-  Feature Elevation



This drawing is copyright of DT Architects. Do not scale from this drawing. Check all dimensions onsite. The contractor shall bring any discrepancies immediately to the notice of the Architect.

P01	planning application issue	08.01.21
revision	note	date
client	Burmor Construction (on behalf of Lion Investment Group LTD)	
project title	Residential Development at Barbers Dove North Crowland	
drawing title	Site Plan Proposed	
drawing status	Planning	
scale	date	
1:500 @ A1	August 2020	
project number	drawing number	revision
2483	AL0205	P01



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Scale 1:500 @ A1