Arboricultural Impact Assessment

54a Colney Lane

Norwich

TE-277.1

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Grid reference	TG 19420 06300
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Client	Mr Lee Hearnden
Date	23rd April 2021

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Executive Summary

Site Address	54a Colney Lane, Cringleford, Norwich, NR4 7RF
Grid Reference	TG 19420 06300
Proposed Development	The development proposal is to refurbish the existing garage into an office and extend the existing footprint of it to the west.
Results	The site survey identified a total of 4 individual trees and 2 groups of trees/hedges on/adjacent to the site. This included 2 Category B trees of moderate quality, 2 Category C trees and 2 category C groups of trees/hedges of low quality.
Conclusions and Recommendations	No trees are proposed for removal to facilitate the development proposals. It is recommended that all works follow an Arboricultural Method Statement, which should include the provision of temporary tree protection fencing.

1. Introduction

Instruction

Talking Elm Tree Services have been instructed by Mr Lee Hearnden, to undertake an Arboricultural Impact Assessment of the land found at 54a Colney Lane, Norwich, NR4 7RF, hereafter referred to as 'the site'.

1.1. The purpose of the report is to:

- Assess the quality of the trees on and immediately adjacent to the site, in accordance with BS5837: 2012 – Trees in Relation to Design, Demolition and Construction: Recommendations (hereafter referred to as BS5837: 2012).
- Identify trees suitable for retention and for removal due to the proposed development.
- Prescribe tree protection measures to ensure that retained trees thrive after the development has been completed.
- Prescribe arboricultural recommendations for the long-term management of trees on the site.
- To assess the site for its suitability for mitigation planting, and to specify planting requirements.

Site Details

1.2. The site is located at grid reference TG 19420 06300 and is accessed from Harmer Lane.

1.3. The site is bordered by residential properties. The topography of the site is sloped downwards from west to east.

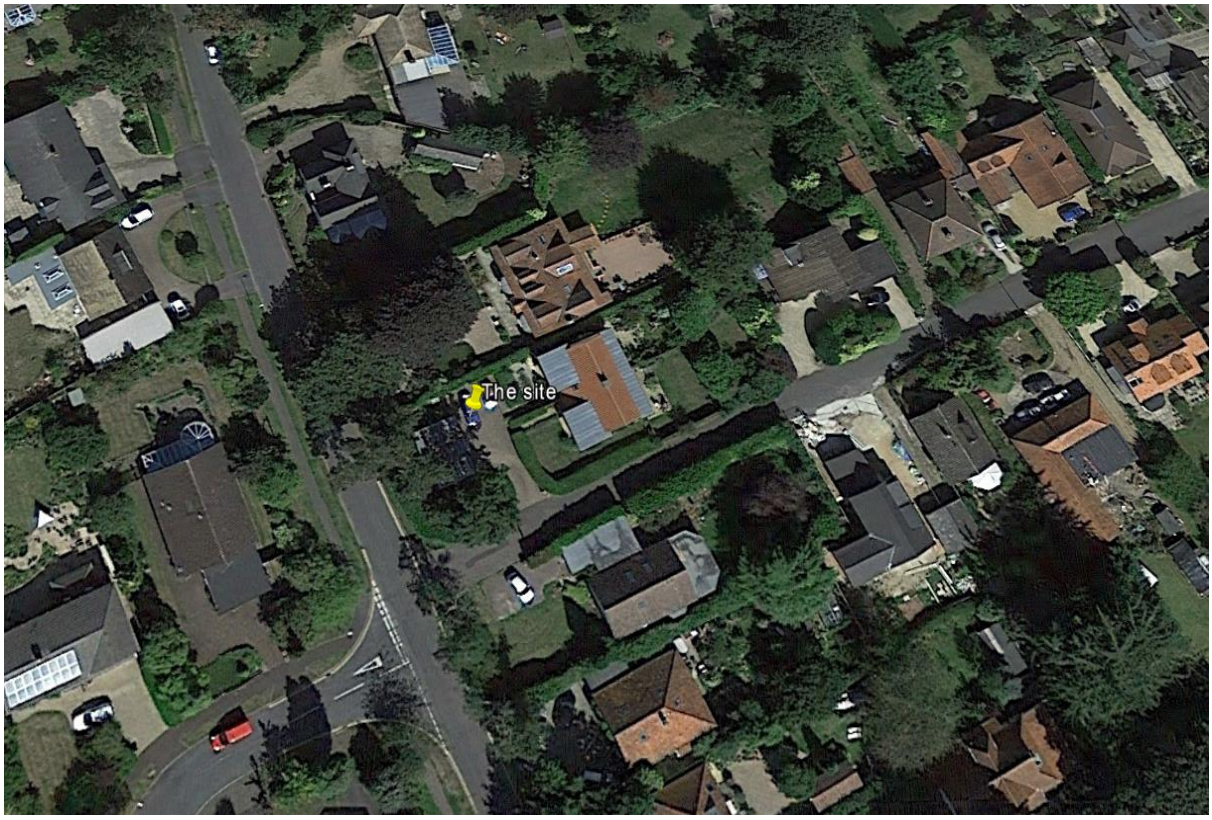

Figure 1.1. Aerial imagery of site and surrounding area (Google Earth Pro, 2021)

Proposed Development

1.4. The development proposal is to develop the existing garage into an office and extend the existing footprint of it to the west.

2. Methods

2.1. The local council was consulted to determine if any trees on the site and immediately adjacent to the site are protected by Tree Preservation Orders (TPOs) and/or are within Conservation Areas. Cranfield (2020) was consulted as to the soil type of the surrounding area.

2.2. The site survey was carried out on 19th April 2021. The survey was carried out by Larry Liptrot, an experienced Arboricultural Consultant, who holds an FdSc in Arboriculture, a BSc (Hons) in Ecology and has been awarded the Lantra Professional Tree Inspection Certificate.

2.3. All trees on site were inspected from ground level, using the Visual Tree Assessment (VTA) method (Mattheck *et al,* 2015). Tree locations were plotted, and tree heights and crown clearance heights were measured using a clinometer. Canopy spread was paced out by the consultant. The diameter at breast height (DBH) of trees was recorded by measuring the circumference of tree stems at an approximate height of 1.5m.

2.4. Any visible structural and/or physiological defects of trees were recorded; however, no advanced decay analysis or aerial inspection techniques were carried out, and the tree inspection does not constitute a full tree safety assessment.

2.5. The retention value of all trees was classified as A, B, C or U, using the criteria shown in Table 2.1.

Table 2.1. BS5837 Cascade Chart (adapted from British Standards, 2012)

Category	Definition	Retention
Category A	Trees of high quality with an estimated remaining life expectancy of at least 40 years; trees that are particularly good examples of their species, especially if rare or unusual.	Highly desirable
Category B	Trees of moderate quality with an estimated remaining life expectancy of at least 20 years; trees lacking the special quality to merit category A designation.	Desirable
Category C	Trees of low quality with an estimated remaining contribution of at least 10 years, or trees with a stem diameter below 150mm; unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	Feasible, but can be removed if posing a constraint to development
Category U	Trees that have serious, irremediable, structural and/or physiological defects, including those that will become unviable after removal of other category U trees.	Unfeasible

3. Results

Desk Based Study

3.1. An internet search of South Norfolk Councils' website on 28/04/2021, confirmed that the property is not within a Conservation Area (CA) and that four trees at the front of the property are covered by a group Tree Preservation Order (SN382).

3.2. Cranfield (2021) states that the surrounding area consists of freely draining, slightly acid and loamy soils.

Tree Population Assessment

3.3. The site survey identified a total of 4 individual trees and 2 group of trees with the potential to be affected by the development proposals.

3.4. The trees on the site include; 2 Category B trees of moderate quality, 2 Category C trees and 2 category C groups of trees/hedges of low quality.

Category	Description	Tree/group numbers	Totals
A	Trees of high quality which should where possible be retained throughout any proposed development	-	-
B	Trees of moderate quality which should where possible be retained throughout any proposed development	T3 and T4	2 Trees
C	Trees of low quality which should not be considered a constraint to development	G1, G2, T1 and T2	2 Groups & 2 Trees
U	Trees which should be removed for sound management reasons, regardless of proposals	-	-
Total:			**4 Trees & 2 Groups**

The tree species on and adjacent to the site include: Apple *Malus sp*, Beech *fagus sylvatica,* Box *Buxus sempervirens*, Corsican pine *Pinus nigra*, Cherry laurel *Prunus laurocerasus*, Dogwood *Cornus sp*, English oak *Quervus robur*, Hazel *Corylus avellana*, Holly *Ilex aquifolium*, Laburnum *Laburnum anagyroides* and Portuguese laurel *Prunus lusitanica.*

4. IMPACT ASSESSMENT

Tree Removals due to Development

No trees will require removal to facilitate the development proposals.

Table 4.1 Summary of trees necessitating removal due to development

CATEGORY	TREE/GROUP NUMBERS	TOTALS
A	-	0
B	-	0
C	-	0
U	-	0

Retained trees

4.1. The proposed extension is within the RPAs of T3 and T4; special construction methods will be required to facilitate this, to include pile foundations. Furthermore the structure will float above the area from the existing structure to the pile foundations. The rainwater from the structure will be re-directed beneath it (see method statement).

4.2. Post Development Pressure upon trees is unlikely as the proposed extension is to be a reading space/ artistic studio area, with the muse being the trees/ tree trunks.

5. RECOMMENDATIONS

Tree Removals

5.1. No trees will require removal to facilitate the development proposals.

5.2. All tree works should be carried out by a suitably qualified and fully insured arborist who is able to comply with BS3998: 2010 – Tree Works: Recommendations.

5.3. Four trees on site are covered by a group TPO. Killing or damaging a protected tree is a criminal offence which can result in an unlimited fine.

Arboricultural Method Statement

5.4. To ensure that all trees scheduled for retention survive the proposed development and thrive upon its completion, all works should follow an Arboricultural Method Statement (AMS). This should include the specification of temporary tree protection fencing during development works, which should be detailed in a Tree Planting Plan.

5.5. The AMS should account for any further change to the scheme, particularly the provision of any below ground utilities which have the potential to impact upon tree roots.

6. References

British Standards (2010). *BS3998: 2010 – Tree Works: Recommendations*

British Standards (2012). *BS5837: 2012 - Trees in Relation to Design, Demolition and Construction: Recommendations*. London: British Standards Institute

British Standards (2014). *BS8545: 2014 – Trees: from Nursery to Independence in the Landscape.* London: British Standards Institute

Cranfield (2021). *Interactive Soilscapes Viewer* [online]. Available at: >www.landis.org.uk< [accessed 2021]

Google Earth Pro (2021). *Google Earth* [online]. Available at: >www.google.co.uk/earth< [accessed 2021]

Johnson, O., More, D. (2004). *Collins Tree Guide.* London: HarperCollins

Mattheck, C., Bethge, K., Weber, K. (2015). *The Body Language of Trees.* Karlsruhe (Germany). The Karlsruhe Research Institute

Appendices

Appendix A: Tree Survey Schedule

A plan of the tree locations can be viewed in Appendix B: Tree Retention Plan.

Key			
Species	Common name following Johnson & More (2004)	**Age**	EM – Early mature; tree in 2/3 of estimated lifespan
H	Height, to nearest 0.5 metres		M – Mature; tree in 3/3 of estimated lifespan
CC	Height of crown clearance, to nearest 0.5 metres		OM – Over mature; tree that has exceeded its natural life span
No of stems	Number of stems bifurcating below 1.5 metres		V – Veteran tree
DBH	Diameter at breast height (1.5m), to nearest 10 millimetres	**RPA**	Root protection area, in metres squared
Crown spread	To nearest 0.5m	**RPR**	Root protection radius, in metres
Age	Y – Young sapling/newly planted tree	**SULE**	Safe useful life expectancy of tree, in years
	SM – Semi-mature; tree in 1/3 of estimated lifespan	**Category**	See BS5837 cascade chart (Table 2.1) **AV** Average

Tree No.	Species	Height (m)	Crown clearance (m)	No. of stems	DBH (mm)	Crown Spread				Age	Comments	RPA(m2)	RPR (m)	SULE	Category
						N	E	S	W						
T1	English oak *Quercus robur*	15	3	1	500	1	3	5	5	EM	Previously heavily reduced, with a number of limbs removed on eastern side. Old wounds have decay within and bulging on main stem at 3m east.	113	6.0	11-20	C1
T2	Box *Buxus sempervirens*	5	2	1	120	2	3	2	3	EM	None.	7	1.4	11-20	C1
T3	Corsican pine *Pinus nigra*	19	13	1	430	3	3	4	7	M	Previously crown raised to 13m.	84	5.2	21-40	B1

Tree No.	Species	Height (m)	Crown clearance (m)	No. of stems	DBH (mm)	Crown Spread				Age	Comments	RPA(m2)	RPR (m)	SULE	Category
						N	E	S	W						
T4	Corsican pine *Pinus nigra*	18	7	1	730	3	3	5	7	OM	Previously crown raised to 7m and reduced from wire. Uneven crown.	241	8.8	21-40	B1
G1	70% Cherry laurel 30% Portuguese laurel	2	-	-	15 average	-	-	-	-	Y-SM	Boundary hedge well maintained.	-	-	11-20	C2
G2	Portuguese laurel	1	-	-	10 average	-	-	-	-	Y-SM	Boundary hedge well maintained.	-	-	11-20	C2