Arboricultural Impact Assessment

Lansdowne

Bannister Green

Felsted

CM6 3NQ

TE-313.1

63 Helena Road,

Norwich, Norfolk, NR2 3BY

Registered in England and Wales number 4326462259

[redacted]

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Report title	Arboricultural Impact Assessment
Report reference	TE-313
Revision	A
Site address	Proposed replacement dwelling at Lansdowne Bannister Green Felsted CM6 3NQ
Grid reference	TL 69480 20823
Report compiled by	Larry Liptrot BSc (Hons) FdSc
Client	Steven Drake
Date	21/11/2023

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Executive Summary

Site Address	Proposed replacement dwelling at Lansdowne, Bannister Green, Felsted, CM6 3NQ
Grid Reference	TL 69480 20823
Proposed Development	The development proposal is the construction of a new garage and driveway, the demolition of the existing shed, and to modify the existing dwelling.
Results	The site survey identified a total of 4 individual trees and 2 groups of trees/hedges on/adjacent to the site. This comprises 1 Category A tree of high quality, 1 Category B tree of moderate quality and 2 trees and 2 groups of trees of low quality.
Conclusions and Recommendations	No trees will require removal to facilitate the development proposal. 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 Steven Drake to undertake an Arboricultural Impact Assessment of the land at Lansdowne, Bannister Green, Felsted, CM6 3NQ.

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 TL 69480 20823 and is accessed from Rayne Road.

1.3. The site is bordered by residential properties on all sides.

Figure 1.1. Aerial imagery of site and surrounding area (Google Earth Pro, 2023)

Proposed Development

1.4. The development proposal is the construction of a new garage and driveway, the demolition of the existing shed, and to modify the existing dwelling.

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 (2023) was consulted as to the soil type of the surrounding area.

2.2. The site survey was carried out on 17th November 2023. 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 the Uttlesford District Council website on 21/11/2023, confirmed that the property is not within a Conservation Area (CA), and T1 is subject to Tree Preservation Order (TPO) 2/85/52.

3.2. Cranfield (2023) states that the surrounding area consists of lime-rich loamy and clayey soils with impeded drainage.

Tree Population Assessment

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

3.4. The trees on the site include: 1 Category A tree of high quality, 1 Category B group of moderate quality, 2 Category C trees and 2 groups of Category C trees of low quality.

Category	Description	Tree/group numbers	Totals
A	Trees of high quality which should where possible be retained throughout any proposed development	T3	1 Tree
B	Trees of moderate quality which should where possible be retained throughout any proposed development	T1	1 Tree
C	Trees of low quality which should not be considered a constraint to development	T2, T4, G1, G2	2 Trees and 2 Groups
U	Trees which should be removed for sound management reasons, regardless of proposals	-	-
Total:			4 Trees and 2 Groups

The tree species on and adjacent to the site include: Cherry laurel Prunus laurocerasus; Cotoneaster Sp; English oak Quercus robur; Holly Ilex aquifolium; Leyland cypress Cupressus × leylandii; Privet Ligustrum vulgare; Silver birch Betula pendula; and Sycamore Acer pseudoplatanus.

4. IMPACT ASSESSMENT

Tree Removals due to Development

No trees will require removal to facilitate the development proposal.

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. Post Development Pressure upon trees is unlikely as most of the trees are located along the boundary and act as a privacy barrier.

4.2. The construction of the new driveway will be within the Root Protection Area (RPA) of T2. However, the footprint will remain the same as the existing driveway, therefore the root system of T2 is unlikely to be impacted.

4.3. The construction of the garage will be within the RPA of T3. However, this area is less than 20% of the trees total RPA and is therefore permissible. An arborist will need to be consulted and care taken to avoid damage to the root system of T3. See Method Statement (Appendix C).

5. RECOMMENDATIONS

Arboricultural Method Statement

5.1. 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.

5.2. 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 D: 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	Sycamore Acer pseudoplatanus	13.5	1.5	1	760	6	7	6	6	M	Bifurcates at 1m. Previously crown raised over neighbouring drive. Good form and vitality.	261	9.1	21-40	B1
T2	Silver birch Betula pendula	8.5	1	1	230	3	3	3	4	SM	Previously crown raised not in accordance with BS3998, with large wounds on main stem.	24	2.8	11-20	C1
T3	English oak Quercus robur	16.5	41	1	710	10	10	9	8	OM	Some minor deadwood in crown. Good form and vitality.	228	8.5	40>	A1
T4	Sycamore Acer pseudoplatanus	4	1.5	3	130, 140, 60	3	3	3	3	SM	Bifurcates at 0.5m. Tree has limited arboricultural merit.	18	2.4	11-20	C1

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						
G1	90% Cherry laurel; 5% Leyland cypress; 5% Holly.	2	-	-	-	-	-	-	-	Y-SM	Boundary hedge with limited arboricultural merit.	-	-	11-20	C2
G2	50% Privet; 50% Cotoneaster Sp.	2.5	-	-	-	-	-	-	-	Y-SM	Boundary hedge with limited arboricultural merit.	-	-	11-20	C2

Appendix B: Photographs of Trees and Groups:

T1

T2

T3

T4

T5

G1

G2

Appendix C: Arboricultural Method Statement

1. Timing of Works

The phasing of works should be carried out in accordance with Table 1, below.

Table 1: Timing of Works

Stage	Works
1	Site induction
2	Carry out tree removal works
3	Install tree protection fencing
4	Inspection by arboricultural consultant
5	Carry out construction works, including removal of hard standing surfaces
6	Remove tree protection when works completed

1. Site Induction

2.1. Prior to works commencing, all contractors should be briefed on trees within the site and their root protection areas (RPA's) during a site induction. This method statement and a copy of the Tree Protection Plan (see Appendix D and E) should be issued to all contractors working on the site.

1. Tree Works

3.1. The access point of the site passes through the Root Protection Areas (RPAs) and crown spreads of T2 and T3. In relation to T2, this area is already an existing hard standing driveway and the tree may require crown raising to allow for vehicular access, so machinery and vehicles are permitted to enter this area. Care however, should be taken not to store any construction materials in this area and to check that any plant/machinery/vehicles will be able to pass under the crown of this tree, before they enter the site.

3.2. The construction of the new garage is within the RPA of T3. This area however is less than 20% of T3`s total RPA and should not significantly impact the tree as long as the method statement is followed.

3.3. Excavations will be necessary within the RPA of T3; excavations within the RPA should not exceed 20% of the RPA of the tree and will require hand digging, care must be taken not to sever any roots greater than 25mm; any root pruning should not be done without the presence and permission of an arboricultural consultant. Furthermore, any exposed roots during excavations should be covered in damp straw or hessian covers.

3.4. All work should be undertaken to the standards set out in BS3998: 2010 – Tree Works: Recommendations.

3.5. No works should be carried out on protected trees without consent from the local authority.

4. Tree Protection Fencing

4.1. Prior to machinery entering the site, it will be necessary to ensure that all trees on the site are adequately protected. A tree protection plan can be viewed in Appendix D and E Tree Protection Plan.

4.2. Tree protection fencing should consist of a vertical scaffold framework, well braced to resist impacts. The vertical poles should be spaced at a maximum interval of 3m and driven securely into the ground. Onto this framework, welded mesh panels should be fixed (see figure 1, below).

Laminated waterproof A3 signs should be fixed securely to fencing panels on each enclosure at 9m intervals. The signs should clearly read: 'Protected Tree Zone, no storage or operations within fenced off areas'.

4.3. No materials that are likely to have an adverse effect on tree health, such as oil, bitumen or cement should be stored within the protective fencing. Where possible this area should be extended to 10m away from the fencing. Where there is a risk of polluted water runoff into RPAs, heavy duty plastic sheeting and sandbags must be used to contain any spillages and prevent contamination. No fires should be lit within 20 metres of the protective fencing.

4.4. After the tree protection fencing, has been installed, an arboricultural consultant should visit the site to confirm that the tree protection measures are satisfactory.

4.5. If any breach in the tree protection measures occurs it is the site manager's responsibility to report this to an arboricultural consultant so the appropriate measures may be taken.

4.6. Once the construction works have been completed, the tree protection fencing may be removed. This should be done with care to ensure that no damage to trees is caused.

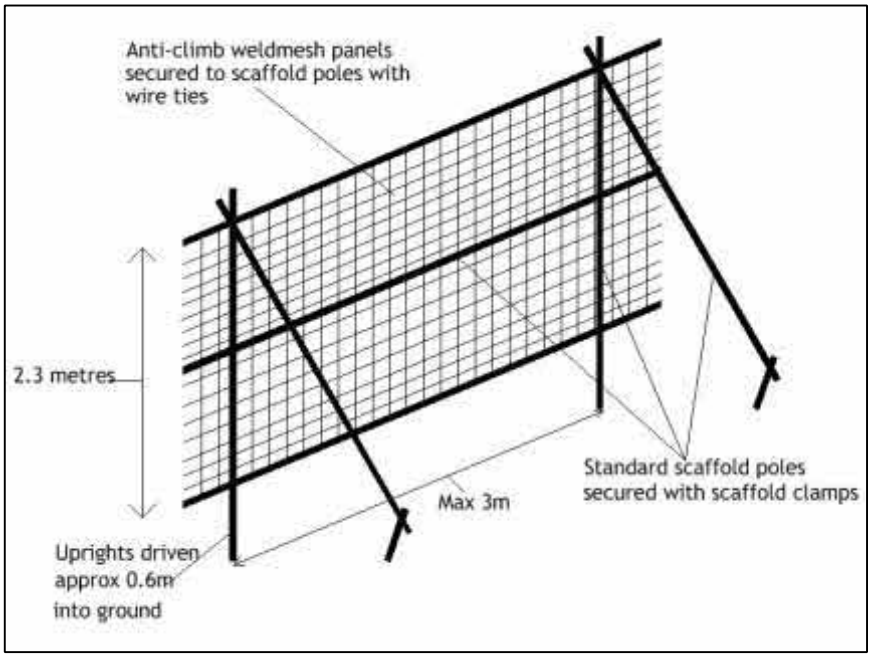

Figure 1: Temporary Protective Fencing

Appendix D and E: Tree Retention and Tree Protection Plan

Project:	Lansdowne, Bannister green
Drawn by:	Larry Liptrot
Date:	21/11/2023
Scale:	1:150 @ A1

Do not scale off this drawing - to be reproduced in colour only

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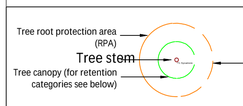
Key:



Trees recommended for removal shown with dashed line

- Category A trees of high quality
- Category B trees of moderate quality
- Category C trees of low quality
- Category U trees unsuitable for retention
- Root protection area - to remain protected throughout proposals
- Tree protection fencing - to remain in place throughout proposals
- Area of existing hard standing gravel driveway

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