ARBORICULTURAL REPORT
at
The Old School
The Common
Eye
Suffolk
IP23 8EE

Client:
Davies Group Ltd
on behalf of Covea

Client Address:
Wing A
2 Parklands
Bolton
BL6 4SE

Client Telephone:
01204 328620

Insured:
Mr Peter Scott

Claim Number:
H023106833

JCA Ref:
21407/ChC

Client Ref:
0715931

JCA Limited
Arboricultural & Ecological Consultants

Contents

1. Introduction

1.1 Purpose of the Report

1.1.1 This arboricultural report is required by our client as part of an investigation into soil shrinkage subsidence damage at:

The Old School, The Common, Eye, Suffolk IP23 8EE.

1.2 Terms of Reference

1.2.1 We are instructed by **Davies Group Ltd** to visit the site and carry out an arboricultural survey covering all vegetation within likely influencing distance of the subject property. It has been requested that we only consider vegetation management options for the purpose of this report. However, vegetation management work should only be carried out once all other possible causal factors have first been discounted.

1.2.2 We have been supplied with details of the site investigation, which was carried out by **Catalyst Claims**, and have included the salient points in this report. We have applied this information to our knowledge of trees and the arboricultural data we gathered on site and prescribed recommendations for current, or future action, where required.

1.2.3 We are to prepare our findings in a detailed report, making specific recommendations as to any arboricultural management which may be required.

1.3 Scope of the Report

1.3.1 The subject property is a detached house which is suffering from movement and subsequent cracking.

1.3.2 The distance between the vegetation surveyed and the building is measured from the closest part of the property.

2. Survey Conditions and Methods

2.1 Date of Inspection and name of Inspector

2.1.1 The site was surveyed during October 2023 by **Peter Wilkins** *BA (Hons) MArborA MIEnvSc.*

2.2 Data Collection Methods and Explanations

2.2.1 The inspection was carried out at ground level using visual assessment of the tree canopy, stem and rooting area. No digging or drilling was carried out by JCA Ltd.

2.2.2 The measurements were made using instruments including clinometers for tree *HEIGHT*, diameter tapes for *STEM DIAMETER* (measured at 1.5m above ground level) and tape measures or electronic distometers for *CROWN SPREAD* and *DISTANCE TO PROPERTY.* Where this was not possible, measurements were estimated.

2.2.3 *AGE CLASS* and *LIFE EXPECTANCY* values are estimated based upon our knowledge of trees and the way they grow. No core sampling was carried out on this occasion.

2.2.4 The term *INFLUENCING DISTANCE* as used in this report is guided from the NHBC's 'zones of influence' formula. It is an estimation of the potential of a tree or a shrub to cause damage to the subject property after due consideration of many factors including soil characteristics, specimen size, vigour, species, likely water uptake and distance from the property.

2.2.5 *'NHBC WATER DEMAND'* (low, moderate or high) are categories originated by the National House Building Council. The concept was designed to be used as an aid for determining the correct foundation depths for new build situations where there are existing trees present.

3. Ground Investigation, Soil & Root Analysis

3.1 Introduction

3.1.1 Trees influence soil conditions, and in some soil types root activity can create a soil moisture deficit (S.M.D.), which means that the amount of water being used by the tree and by natural evaporation has exceeded the amount of water entering the ground through precipitation or other means. This deficit can lead to soil shrinkage which in turn can cause a building to move, particularly if its foundations are shallow. The result is *SUBSIDENCE.*

3.1.2 The soil's *PLASTICITY INDEX, PLASTIC LIMIT, MOISTURE CONTENT* and the likely water uptake of the tree/trees in question are key factors in determining whether shrinkage has occurred.

3.1.3 On shrinkable soils, damage to buildings can also occur as a result of tree removal. In such cases, re-hydration of the soil beyond that which would ordinarily occur prior to the removal of vegetation can cause an upwards movement of the ground which is known as *HEAVE.* Trees should not, therefore, be removed without due consideration of likely effects.

3.1.4 The ground investigation and root analysis at this site have been carried out by others. Results of these investigations are briefly summarised below.

3.2 Foundation Types and Depths

3.2.1 Please refer to the site plan at **Appendix 2** for an indication of the trial pit/borehole locations.

3.2.2 **Trial pit/borehole 1a** revealed a foundation at a maximum depth of 300mm below ground level.

3.2.3 **Trial pit/borehole 1b** revealed a foundation at a maximum depth of 300mm below ground level.

3.2.4 **Trial pit/borehole 2a** revealed a foundation at a maximum depth of 300mm below ground level.

3.2.5 **Trial pit/borehole 2b** revealed a 260mm thick concrete foundation at a maximum depth of 340mm below ground level.

3.3 Soil Types

3.3.1 Information regarding the plasticity index, moisture contents, plastic limit and liquid limit of the soils are not available at this time.

3.3.2 However, according to the borehole logs, clay was present below the depth of the foundations.

3.3.3 Due to the presence of clay soil, our recommendations in this report are based on the assumption that the soils are of medium or high shrinkability.

3.4 Root Analysis

3.4.1 Microscopic examination of tree root anatomy generally enables the GENUS of roots recovered during the ground investigation to be established. However, it rarely identifies individuals to SPECIES level.

3.4.2 Certain species, for instance Willows and Poplars, are indistinguishable by these methods and identification can only be made at FAMILY level.

3.4.3 The diameter and the depth of the root can be an indication of its significance.

3.4.4 To establish whether the root is alive, iodine is used to test for starch which is stored in some cells of living tree roots but is broken down by micro-organisms upon the death of a root in the soil.

3.4.5 Live root samples are normally a prerequisite for establishing, on a balance of probability, which vegetation is the most likely cause of any damage noted.

3.4.6 Results of the analysis of root material recovered during the ground investigation can be viewed on the following page.

Tree Root Identification Report

at: The Old School, The Common Mellis, Eye, Suffolk, IP23 8EE.

JCA Ref: 20672/TT

28th April 2023

1. Microscopic Analysis

Trial Pit/ Borehole	Sample Depth (mm)	Family	Genus	Diameter (mm)	Starch Test
TP1	U/S Foundation 400 (A and B)	*Salicaceae (x4)*	*Salix* or *Populus* (x4)	2 to 15	Positive
BH1	400 – 1200	*Salicaceae (x1)*	*Salix* or *Populus* (x1)	1	Positive

Salicaceae includes Willows and Osier *(Salix spp.)* and Poplar and Aspen *(Populus spp.)*.

4. Status of the Trees

4.1 A Tree Preservation Order (TPO) and Conservation Area check was made in October 2023 with **Mid Suffolk District Council**.

4.2 We are informed that the site is within a Conservation Area (Mellis 47).

4.3 Before any work is organised for trees with a stem diameter of above 75mm, a 'notice of intent' must be submitted to the Local Authority, outlining all the proposed works along with a suitable justification. A waiting period of six weeks is then required, during which time the Local Authority may or may not decide to afford the trees with further protective status. If, after the required timescale has lapsed and/or the authority does not wish to allocate a Tree Preservation Order (TPO), the works may commence as planned.

4.4 ***No work must be done to trees with a stem diameter of above 75mm until the above process has been completed and the trees have not been allocated with a TPO.***

5. Tree Descriptions & Recommendations

5.1 Descriptions of the surveyed vegetation and all recommended work are detailed in the tables at **Appendix 1**.

5.2 Please refer to the site plan at **Appendix 2** for the locations of the vegetation surveyed and all the relevant site features.

6. Discussion

6.1 Having made a detailed survey of the site and having given due consideration to the other information supplied, it is likely that in this case some subsidence damage has occurred as a result of drying shrinkage caused by vegetation within influencing distance of the property.

6.2 In order to negate their influence, the only vegetation management option available is to remove **T1** and **T2** to ground level, and to treat the stumps to prevent regrowth.

6.3 No other vegetation management work is needed at this time.

6.4 We have summarised all our tree specific recommendations in **Section 7** and made general recommendations in **Section 8**.

7. Summary of Tree Specific Recommendations

Item	Species	Vegetation Management Option	Location/ Ownership	Planning Restriction
T1	Weeping Willow	Remove to ground level and treat the stump to prevent regrowth.	Policy Holder	Conservation Area
T2	Weeping Willow	Remove to ground level and treat the stump to prevent regrowth.	Policy Holder	Conservation Area
T3	Viburnum	No action required.	Policy Holder	Conservation Area

8. General Recommendations and Observations

8.1 This report is based upon a visual inspection. JCA Limited 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.

8.2 All tree work must be carried out to BS 3998: 2010 - '*Recommendations for Tree Work'*.

8.3 Any tree work should be carried out by qualified, experienced and skilled arboricultural contractors covered by adequate *public liability and employers liability insurance.* 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.

8.4 The influence of trees on the soil and on buildings may change as they grow, as climate varies, or as other changes occur in the local environment. It is therefore advisable to have trees inspected by JCA Limited annually.

8.5 That the project engineer considers all possible solutions which may not involve vegetation works, if there is a wider public or ecological interest in retaining the trees influencing the property.

8.6 The property and the damage should be monitored by the project engineer on a regular basis after the recommended tree works are complete.

8.7 If, after the works have been carried out, there is little improvement, this may mean that the situation cannot be rectified by arboricultural means alone. If this point is reached the situation must be reassessed in conjunction with other experts.

8.8 No liability can be accepted by the consultant in respect of the trees unless the recommendations of this report are carried out under their supervision and within their timescale.

8.9 That the project engineer considers the possibility of heave.

Appendices

Tree Ref.	Age Common Name *Botanical Name*	Height (m)	Stem Diameter (cm)	Canopy Spread (m)	Owner / Occupier Observations	Condition	Distance to Property (m)	NHBC Water Demand	Life Expectancy (yrs)	Within Potential Influencing Distance when Mature	Root Identification Match	Contributing to Damage at Current Size	Vegetation Management Option
T 1	Mature Weeping Willow *Salix babylonica*	13	50	8	Policy Holder Large tree to the rear.	FAIR	23	HIGH	40+	Yes	Yes	Yes	Remove to ground level and treat the stump to prevent regrowth.
T 2	Mature Weeping Willow *Salix babylonica*	10	50	8	Policy Holder Large tree to the rear.	FAIR	20	HIGH	40+	Yes	Yes	Yes	Remove to ground level and treat the stump to prevent regrowth.
T 3	Mature Viburnum *Viburnum sp.*	2	15	2	Policy Holder No risk to the property at this distance.	FAIR	5	NO DATA	10+	No	No	No	No action required.

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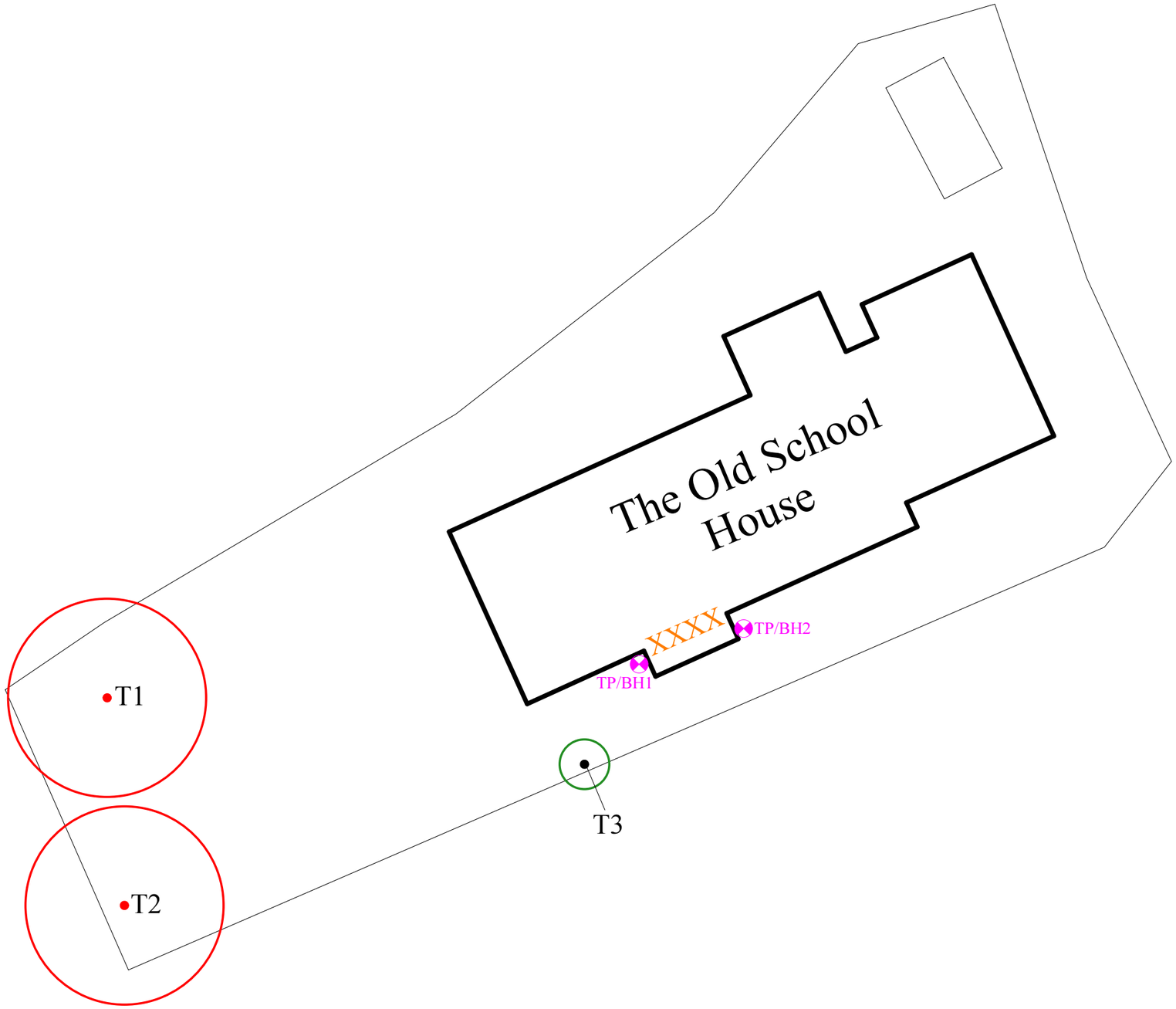

Appendix 2: Site Plan

ADDRESS: The Old School House, The Common, Eye, Suffolk, IP23 8EE.
JCA REF: 21407/ChC

NOT TO SCALE	PAPER SIZE: A3

SURVEYED BY: JS	DRAWN BY: AK	APPROVED BY: ME

	CANOPY OF TREE/SHRUB/GROUP TO BE RETAINED; NO ACTION REQUIRED
	CANOPY OF TREE/SHRUB/GROUP TO BE RETAINED; CURRENT OR FUTURE MANAGEMENT REQUIRED
	CANOPY OF TREE/SHRUB/GROUP TO BE REMOVED
	STEM OF TREE/SHRUB TO BE RETAINED
	STEM OF TREE/SHRUB TO BE REMOVED
	OUTLINE OF SUBJECT PROPERTY
XXXX	APPROXIMATE LOCATION OF THE DAMAGE
	BOREHOLE/TRIAL PIT LOCATIONS

JCA Limited

Arboricultural & Forestry Consultants

Appendix 3: Author Qualifications

Principal Consultant and Managing Director

Jonathan Cocking *F.R.E.S., Tech. Cert. (Arbor.A), PDipArb (RFS) FArborA CBiol MSB. MICFor.* Jonathan is a Registered Consultant and Fellow of the Arboricultural Association and sits on its Professional Committee. He has 31 years' experience in the Arboricultural profession and served for eight years as Senior Arboriculturist with a large local authority before establishing JCA in 1997. Jonathan has since developed JCA's portfolio of services and its extensive client base. He is a Chartered Biologist, a Chartered Arboriculturalist and an Expert Witness with much experience of litigation work.

Technical Director

Toby Thwaites *BSc (Hons), HND (Arboriculture), MArborA.* Toby joined JCA in 1998 after graduating in Ecology at the University of Huddersfield and has since graduated in Arboriculture at the University of Central Lancashire. A former JCA team leader and Consulting Arboriculturist, Toby is now Technical Director and oversees all office and on-site activities at JCA and is on hand to offer technical support and advice.

Operations Director

Charles Cocking *FdSc (Arboriculture), MArborA.* Charles joined JCA in January 2014 having previously worked for the company on a part time basis during 2013. Charles obtained his Foundation Degree in Arboriculture at Askham Bryan College, York, and is a Professional Member of the Arboricultural Association. Charles now oversees all internal operations for the company.

Consulting Staff: Arboriculture

Andrew Bussey. Andrew started working in consultancy at JCA in 2006 having spent 12 years working as an arborist for various private companies before joining a Local Authority forestry team. He has various NPTC qualifications, is QTRA qualified and is a LANTRA Accredited Professional Tree Inspector.

Emily Wilde *FdSc (Arboriculture).* Emily joined JCA having previously worked for various private tree surgery and consultancy companies over the past 8 years. She initially obtained a ND in Forestry & Arboriculture, followed by a FdSc in Arboriculture at Askham Bryan College, York. Emily has various NPTC certificates and is QTRA qualified.

Mick Eltringham *ND (Forestry).* Mick joined JCA after spending 12 years working in the industry for various private companies in the north and south of England. He has also spent the last five years working as a consultant for two canopy research projects in the Amazon Rainforest, working with Oxford University and the University of Arizona. He has various NPTC Qualifications.

Dan Kemp *FdSc (Arboriculture).* Dan joined JCA with nearly 30 years' experience in arboriculture. He worked as a London Tree Officer for 12 years and in several arboricultural and horticultural management posts, specialising particularly in tree risk assessments and tree related subsidence.

Luke Wickham *FdSc (Arboriculture and Urban Forestry), TechArborA.* Luke joined JCA in 2021 after obtaining his Foundation Degree in Arboriculture and Urban Forestry at Askham Bryan College. Having previously worked within the industry for the past 4 years, running his own small business and sub-contracting for local firms, Luke brings a sound knowledge and understanding of the practical and academic sides of the industry.

Hazel Irving *FdSc (Arboriculture and Urban Forestry).* Hazel joined JCA in 2022 after obtaining her Foundation Degree in Arboriculture and Urban Forestry at Askham Bryan College. She has previously worked in the horticulture industry, volunteered with the National Trust and Yorkshire Arboretum and completed the 2021 student research internship at the RHS Wisley Plant Health Centre.

Andrew McPhaden *BSc (Hons), TechArborA.* Andrew joined JCA in 2022 having spent 5 years working as an Arborist for various private companies in both the UK and Germany. During his time abroad he obtained the European Tree Worker Certification along with a tree inspector certification from the Forschungsgesellschaft Landschaftsentwicklung Ladschaftsbau.

Patrick Gibson *Nch Arb, Lantra PTI.* Patrick joined JCA in 2023 having worked in Arboricultural industry for over 20 years. He has worked for various private companies and was a supervisor/manager at Ealing Council. He has various NPTC qualifications and is a LANTRA Accredited Professional Tree Inspector. Patrick has also been a field ecologist since 1995

Matt Large *DipArb L4 (ABC) TechArborA.* Matt is based in Northampton and assists JCA by undertaking surveys in the south of the country. He has been involved in the arboricultural sector since 1996 and obtained a Level 4 Diploma in Arboriculture in 2011. Matt is a LANTRA Accredited Professional Tree Inspector.

Jonnie Setterfield *BSc (Hons) MArborA. /* **Richard Daubeny** *Level 3 Arboriculture /* **Peter Wilkins** *BA (Hons) MArborA MIEnvSc.* Jonnie, Richard and Peter are based in the south-east of the UK and assist JCA by undertaking surveys in the south of the country.

We hope that this report provides all the necessary information, but should any further advice be needed please do not hesitate to contact the author.

The contents of this report are true to the best of our knowledge and belief.

Charles Cocking *FdSc (Arboriculture) MArborA.*

24th October 2023

For and on behalf of ***JCA Ltd***

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JCA Ltd. Arboricultural and Ecological Consultants
Professional Tree and Ecology Advice nationwide

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- Invasive Species Surveys
- Code for Sustainable Homes

Ecological Post-Planning Services

- Biodiversity Enhancement Plans
- Protected Species Mitigation
- Ecological Management (Bat and Bird box installation and inspection)

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