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Our Ref: DG/va/23244

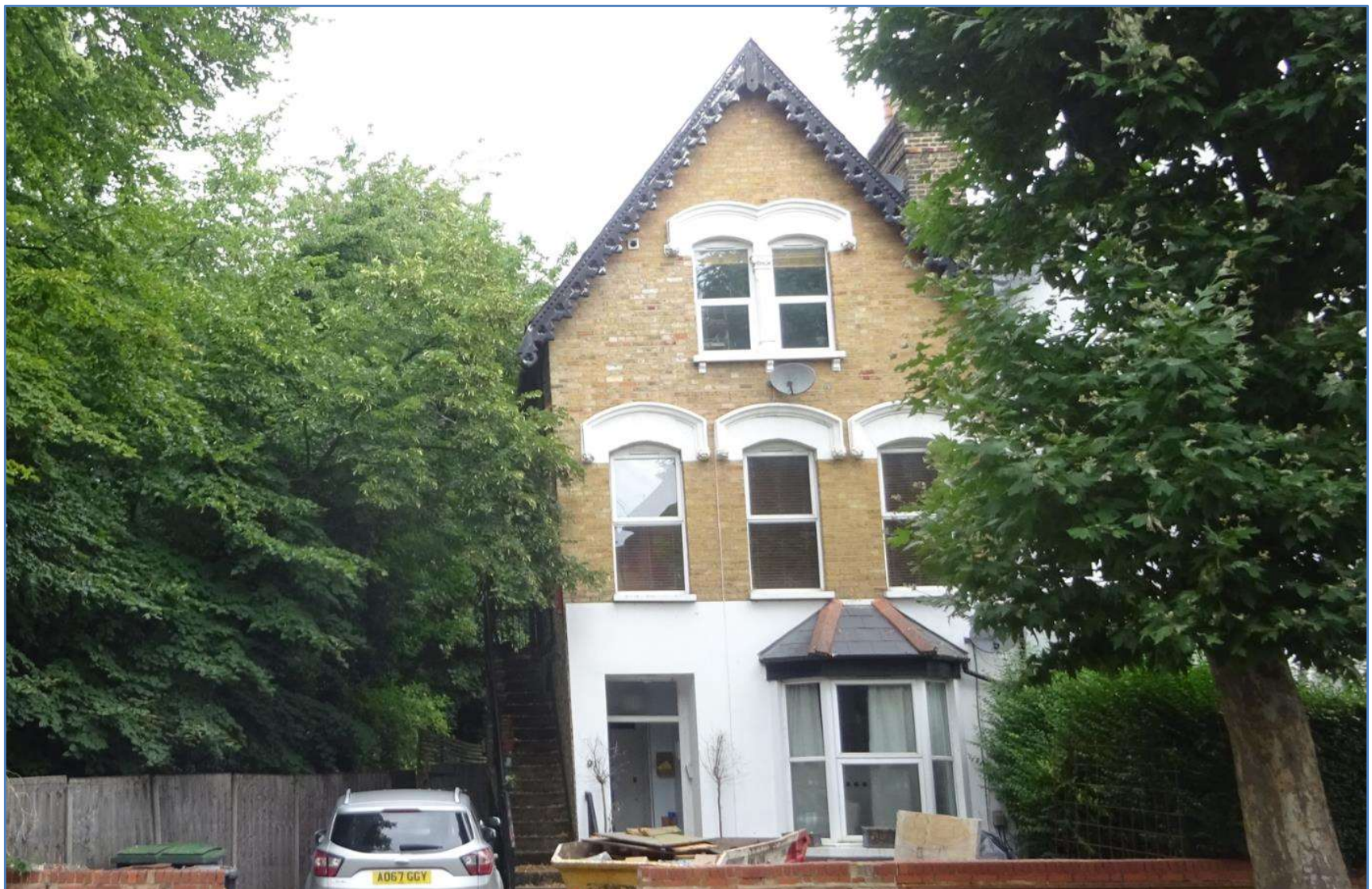
REPORT

ON: 91 UPPER TOLLINGTON PARK, LONDON,
N4 4LP

FOR: Folgate Insurance Company Ltd
(C/o Quadra Claims Services)

DATE: 6th FEBRUARY 2024

PREPARED BY: D GIERKE (CEng, MEng, CBuildE, MCABE
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1.0 INTRODUCTION

- 1.1 Further to our initial site visit and subsequent report issued 22nd September 2023 (report reference, DG/va/23244/002, attached as Appendix C), I confirm the further investigations recommended within the report have been completed and I summarise the findings below.

2.0 ARBORICULTURALIST REPORT

- 2.1 A site visit and report were undertaken by MDJ Arboricultural Consultancy Limited in January 2024. Their report is attached as Appendix A.
- 2.2 In summary, it was noted that there were several trees with a moderate to high water demand in close proximity to the property and particularly the area of concern. The arboriculturist recommended that monitoring is continued for a period of 12 months to confirm the ground movement and then (depending on the results of the subsidence monitoring) fully remove certain trees and prune others. A schedule of the tree management plan has been provided as part of the report provided by MDJ Arboricultural Consultancy Limited.

3.0 DRAINAGE CCTV INVESTIGATION AND REPAIRS

- 3.1 A CCTV drainage survey, report and following remedial works were undertaken by Cascadia Water. A summary of their report, works required and a confirmation of works completed is attached as Appendix B.
- 3.2 It was found that a gully and nearby pipes were defective in close proximity to the area of concern. As noted above, the defects identified by the drainage survey have since been rectified.

4.0 SUBSIDENCE MONITORING

- 4.1 Monitoring of the property commenced in December 2023, by Subsidence Monitoring Limited. A deep datum was installed, and an initial set of readings have been undertaken. The report and initial set of readings have been attached as Appendix D.

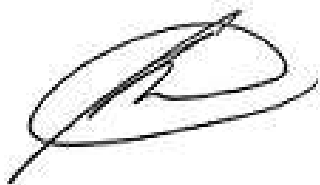
5.0 CONCLUSIONS

- 5.1 Similar to our previous conclusions, it is my opinion that the main cause of the subsidence at the property was likely due to seasonal swelling and shrinkage of the underlying London Clay material as a result of changes in the moisture content and significant moisture extraction from the roots of the nearby trees in the adjacent land.
- 5.2 The defective drainage may have also altered the moisture content of the underlying material. With this being said, remedial repair works have since been undertaken on the drainage.

6.0 RECOMMENDATIONS

- 6.1 It is recommended that the precise level monitoring of the property is continued over a period of 6 to 12 months (since commencement in December 2024) to include the upcoming summer months (recordings at 2-month intervals). After 6 months, the monitoring may be assessed and an updated report provided. This will assist in further understanding the movement and if the drainage repairs have aided in stabilising the property in any way.
- 6.2 Depending on the above results, it is probable that the tree management recommendations may need to be undertaken in accordance with MDJ Arboricultural Consultancy Limited's report (attached as Appendix A).
- 6.3 Similar to our previous report, in the event that tree management is not undertaken by the Local Authority, then alternative solutions, such as underpinning of the rear extension's foundations would need to be considered.
- 6.4 Further to the above and with reference to item no 9.4 of our report DG/va/23244/002, it is likely that in order to ensure stability of the property, underpinning or ground improvement will most likely be necessary in any event and this may be confirmed following the additional monitoring recommended above.

I trust the above is clear, but should you have any comments or queries, please feel free to contact me.



SIGNED:

D Gierke (CEng, MEng, CBuildE, MCABE, AStructE, MSAICE)
Associate Director, Chartered Structural Engineer
On behalf of Philip Goacher Associates

DATED: 6th February 2024

APPENDIX A

MDJ ARBORICULTURAL CONSULTANCY LIMITED REPORT

TREE-RELATED DAMAGE REPORT

**For alleged tree-induced subsidence at
91 Upper Tollington Park, London, N4 4LP**

Prepared For:	Mr L McAlindon
Local Authority:	The London Borough of Haringey Council (LBHC)
Document reference:	MDJAC-23.126-TRDR-01
Date:	January 2024
Revision:	01

15 Windsor Close
Southwater
West Sussex
RH13 9XH

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EXECUTIVE SUMMARY

- S1. This Tree-Related Damage Report (TRDR) has been instructed by Mr L McAlindon; the owner of the subject property: 91 Upper Tollington Park, London, N4 4LP.
- S2. The purpose of this report is to provide an independent, preliminary arboricultural assessment of the current site conditions, an assessment of the role that the existing trees may have played in the current damage, to highlight any future risks of repeat damage occurring in the future, and to make arboricultural-specific recommendations for tree management where necessary.
- S3. I have consulted the LBHC Planning Maps, which suggests that none of the trees on the adjacent bank are covered by a Tree Preservation Order (TPO). However, the subject site and adjacent trees are within the Stroud Green conservation area and therefore, consent from The London Borough of Haringey Council will be required prior to carrying out any recommended works.
- S4. Based on my observations, an assessment of the sizes, species and water demands of the trees present, and the technical reports provided to me, I conclude that:
- the group sycamore and cherry trees (T8-T13) are likely contributing to the alleged building damage and that the only practicable arboricultural action to arrest moisture extraction by these trees would be to remove them and to grind out or treat the stumps with herbicide to prevent regrowth;
 - This opinion is not corroborated by the geotechnical evidence due to the timing of the CGL investigation being carried out in April 2022 and thus at a time where seasonal desiccation would be less clear; but I would expect seasonal desiccation to be confirmed by continued monitoring and further assessments;
 - By contrast, the geotechnical evidence further suggests, due to the timing of the investigation, that no persistent soil moisture deficit exists;
 - Accordingly, subject to confirmation of seasonal desiccation in proximity to the foundations by ongoing monitoring data, I recommend that the following trees are removed: **T3, T4 and T8-T13** inclusive; and
 - Moreover, I recommend pruning the following tree to the specifications provided at **Table 2**, to mitigate against future or repeat instances of damage occurring: **T1-T3 and T17**.

1 INTRODUCTION

1.1 INSTRUCTION

1.1.1 This Tree-Related Damage Report (TRDR) has been instructed by Mr L McAlindon; the owner of the subject property: 91 Upper Tollington Park, London, N4 4LP.

1.2 TERMS OF REFERENCE (ToR)

1.2.1 The purpose of this report is to provide an independent, preliminary arboricultural assessment of the current site conditions, an assessment of the role that the existing trees may have played in the current damage, to highlight any future risks of repeat damage occurring in the future, and to make arboricultural-specific recommendations for tree management where necessary.

1.2.2 The agreed scope of work is outlined below:

- To undertake a site visit and tree inspection of the trees growing on the historical railway embankment to the south-west of the property;
- To assess these in accordance with the supplied technical reports; and
- To produce this TRDR, which identifies the existing vegetation, assesses the quality and condition of the trees, and presents conclusions and recommendations where necessary.

1.2.3 This report should be read in conjunction with the documents and plans listed below for context:

- The Tree Survey Schedule (ref. MDJAC-23.126-TSS-01); and
- The Tree Work Plan (ref. MDJAC-23.126-TWP-01).

1.3 SUPPLIED DOCUMENTS

1.3.1 Prior to my instruction, I was provided with a number of technical reports produced as part of the ongoing investigations, as summarised below.

Table 1: supplied documents.

Title	Author	Date	Reference
Drainage Report	Construction Testing Solutions	April 2022	EQU001
Geotechnical Report	Card Geotechnics Limited	February 2023	CGK00335
Structural Report	Philip Goacher Associates	22 September 2023	DG/va/23244/002

1.4 AUTHOR

1.4.1 I am Matthew Jones BSc (Hons), MArborA, the Director and Principal Arboriculturist of MDJ Arboricultural Consultancy Limited.

1.4.2 I hold a Bachelor of Science Degree with Honours in Arboriculture and Urban Forestry, awarded by The University of Central Lancashire (UCLan) in 2022. This is a top up degree following successful

completion of a Foundation Degree in Arboriculture, also awarded by UCLan in 2020. I have also completed the National Diploma (RQF Level 3) in Arboriculture and Forestry at Merrist Wood College, Guildford in 2009.

1.4.3 During the course of my career I have attended various CPD events and courses. I hold the Professional Tree Inspection accreditation awarded by LANTRA and I am a registered user of The International Society of Arboriculture (ISA) Tree Risk Assessment Qualification (TRAQ) methodology.

1.4.4 I am a Professional Member of the Arboricultural Association (The AA) and an Associate Member of The Institute of Chartered Foresters (The ICF). I am therefore bound by the code of ethics and required to uphold the professional standards expected of both professional bodies.

1.4.5 I am regularly instructed to carry out appraisals of various sizes of tree stocks in relation to development, health and safety considerations, and the potential impact of trees on the built environment; and I am required to provide considered tree management recommendations as necessary during the course of these instructions.

2 CONTEXT AND OBSERVATIONS

2.1.1 I understand that the subject property has become damaged, and that the extraction of moisture from within the soil solution by trees located on an adjacent, local authority owned and managed area of land, is considered to be a primary cause of the damage.

2.1.2 Defective underground utility pipework can lead to excessive moisture levels. Where trees are present, they are likely to capitalise on any excess water in the soil structure, but can incorrectly be implicated as a primary cause of subsidence. To mitigate against this, a CCTV survey was undertaken by Card Geotechnics limited in April 2022, and this confirmed that no such defects exist.

2.1.3 I also understand that the existing foundations, which extend to 650mm below ground level, are original, and have not been underpinned in the past.

2.1.4 I observed damage to the southern boundary flank wall, both internally and externally. The below text has been extracted from the PGA structural report for context and descriptive purposes only:

'3.1. There was a horizontal crack in the south flank wall of the rear extension. The crack was located approximately 4 to 5 brick courses above ground level, and stepped down at either ends of the crack. The crack varied in width, with the maximum crack width being around 15 to 20mm, measured towards to the centre the crack.

3.2. The brickwork below the horizontal crack mentioned above had rotated outwards and was projecting by around 10mm further outward to that of the brickwork above the crack.

3.3. Multiple verticality measurements were taken on the external walls of the rear extension, and it was found that the south flank wall was leaning outwards by a maximum

of 15mm in 600mm. It was noted that the maximum outward lean was recorded in close proximity to the horizontal crack and at ground level.'

Photograph 1: (below left), showing the general location of horizontal cracking to the southern flank wall; and

Photograph 2: (below right), showing a close up of the horizontal cracking.



Photograph 3: (below left), showing broadly vertical cracking in the south-west corner of the property; and

Photograph 4: (below right), looking eastward at the south-west corner, showing ascending cracking.



3 SITE-SPECIFIC ASSESSMENT

3.1 TREE-RELATED STATUTORY CONTROLS

3.1.1 I have consulted the LBHC Planning Maps, which suggests that none of the trees on the adjacent bank are covered by a Tree Preservation Order (TPO).

Figure 1: screen print of the LBHC Planning Maps, showing no confirmed TPOs on the adjacent land (The London Borough of Haringey Council, 2024).



3.1.2 Conversely, the LBHC website does confirm that both the property and the adjacent land are within the Stroud Green Conservation Area (The London Borough of Haringey Council, 2024).

3.1.3 Accordingly, any work to the off-site trees will require a formal notification of intent to be submitted to LBHC under Section 211 of the Town and Country Planning Act 1990, with sufficient evidence to enable it to determine the application. Landowner consent will also be required to carry out any permitted works in due course.

3.2 TREE SURVEY DETAILS

3.2.1 I undertook a site inspection and tree survey on Tuesday 9 January 2024. Weather conditions at the time were overcast but dry and deciduous trees were not in leaf.

Limitations

3.2.2 The dimensions and assessments of the trees contained within this document reflect their condition at the time of the survey. I surveyed the trees from within the boundaries of the subject property, and from the adjacent local authority owned land.

3.2.3 I collected the baseline data using a handheld tablet, which was then exported to Microsoft Excel to produce the tree survey schedule at **Appendix 1**. The locations of the trees have been plotted on the Tree Survey Plan which is in turn based on Ordnance Survey data.

3.3 GEOTECHNICAL ANALYSIS

3.3.1 The geotechnical report by Card Geotechnics Limited confirms that the soil beneath the subject property is underlain London Clay Formation; a clay soil that can be highly susceptible to volumetric changes as a result of moisture extraction causing shrinkage, and by excessive moisture levels which can cause swelling. I have confirmed this by referring to the British Geological Survey datasets available (British Geological Society, 2024).

3.3.2 Roots were found within the two trial holes carried out in April 2022 to a maximum depth of 3.3m below ground level.

3.3.3 In the absence of significant tree roots, I would expect the usual seasonal drying out and associated shrinkage of London Clay Formation to occur within the upper soil horizons only. However, where tree roots exist, they are able to extract moisture from greater depths which can cause either seasonal or persistent desiccation; which can in turn cause or expedite foundation movement and building damage.

3.3.4 Botanical identification of the sampled roots concluded that a 12mm diameter root was that of the *Acer* genus, which includes sycamore which is present in abundance on the adjacent land. Additional samples were found to be too decayed for accurate identification.

4 DISCUSSION

4.1 WATER DEMANDS AND ZONES OF INFLUENCE

4.1.1 To ensure the foundations of new properties are able to withstand the likely volumetric soil changes caused by the extraction of water by tree roots, which can take place at considerable depths of up to 3m, The National House Building Council (NHBC) has produced information on foundation design in proximity to trees (The National House Building Council, 2023).

4.1.2 The rate at which common tree species extract water, referred to hereafter as 'water demand', differs between tree species. This water demand dictates the distance from the trunk that a tree might be able to extract water, hereafter referred to as the 'zone of influence'. The water demand of common tree species is set out below.

Figure 2: water demand of common tree species (The National House Building Council, 2023).

High water demand species	Mature height (m)	Moderate water demand species	Mature height (m)	Low water demand species	Mature height (m)
Broad-leaved trees:					
English elm	24	Acacia (False)	18	Birch	14
Wheatley elm	22	Alder	18	Elder	10
Wych elm	18	Apple	10	Fig	8
Eucalyptus	18	Ash	23	Hazel	8
Hawthorn	10	Bay laurel	10	Holly	12
English oak	20	Beech	20	Honey locust	14
Holm oak	16	Blackthorn	8	Hornbeam	17
Red oak	24	Japanese cherry	9	Laburnum	12
Turkey oak	24	Laurel cherry	8	Magnolia	9
Hybrid black poplar	28	Orchard cherry	12	Mulberry	9
Lombardy poplar	25	Wild cherry	17	Tulip tree	20
White poplar	15	Horse chestnut	20		
Crack willow	24	Sweet chestnut	24		
Weeping willow	16	Lime	22		
White willow	24	Japanese maple	8		
		Norway maple	18		
		Mountain ash	11		
		Pear	12		
		Plane	26		
		Plum	10		
		Sycamore	22		
		Tree of heaven	20		
		Walnut	18		
		Whitebeam	12		
Coniferous trees:					
Lawson's cypress	18	Cedar	20		
Leyland cypress	20	Douglas fir	20		
Monterey cypress	20	Larch	20		
		Monkey puzzle	18		
		Pine	20		
		Spruce	18		
		Wellingtonia	30		
		Yew	12		

4.1.3 Tables 3a and 3b of Chapter 4.2 (The National House Building Council, 2023) also sets out the parameters to determine the lateral zones of influence of trees, which is based on the water demand and mature height of the species in question; these methods have been replicated below for reference.

4.1.4 The water demand and zone of influence of the tree stock at the subject property are shown within the appended tree survey schedule at **Appendix 1**. For the purposes of accurate assessment, existing tree heights have been used to determine the current zones of influence, as shown on the appended drawing.

Figure 3: guidance on determining zones of influence (The National House Building Council, 2023).

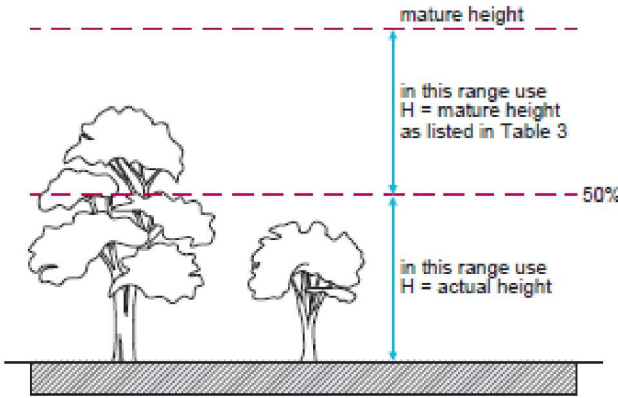
Influencing factor	Guidance	
Heavy crown reduction or pollarding (previously or planned)	The mature height should be used, or a registered arboriculturalist should be consulted to undertake a site-specific assessment.	
Removal of trees (previously or planned)	The water demand of a semi-mature tree may be equal to that of a mature tree, though for a sapling or young tree will be significantly less.	
		Height H should be determined in accordance with this diagram when: ■ deriving foundation depths when trees have been removed, based on tree height at the time of removal ■ checking the appropriate level from which depths should be measured when trees remain and the ground level is increased, based on tree height at time of construction relative to original ground level, or ■ determining if heave precautions are to be provided, based on tree height at time of construction.

Table 3b: Zone of influence (lateral extent) of trees.

Water demand	Zone of influence
High	1.25 x mature height
Moderate	0.75 x mature height
Low	0.5 x mature height

4.2 DISCUSSION

4.2.1 The topography of the land surrounding the subject property includes a relatively steep, former railway embankment, located to the south-west. Mature trees line the top of the bank immediately adjacent to Parkland Walk, and these appear to have been supplemented with the usual regeneration of tree species that tend to self-seed easily, such as sycamore and ash.

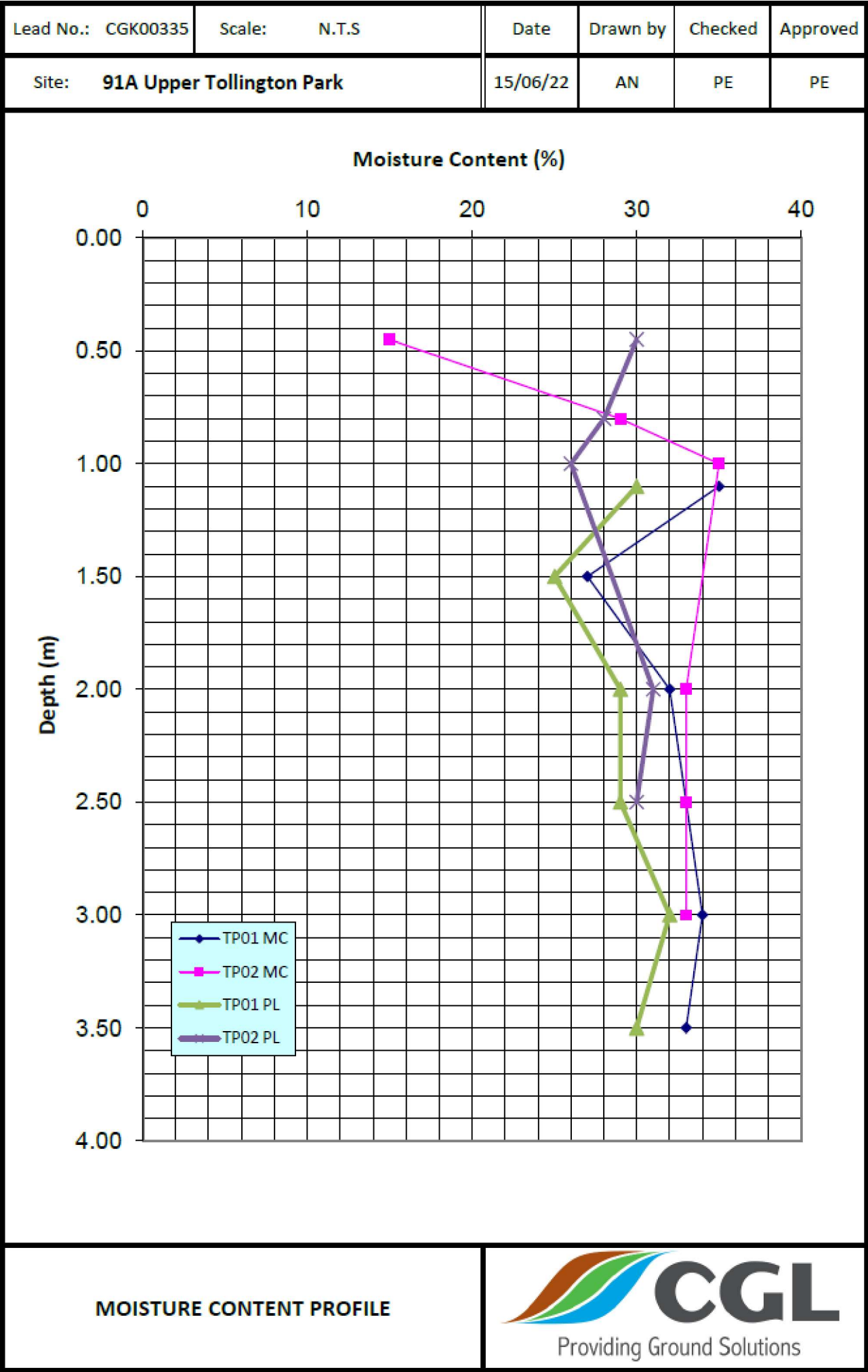
4.2.2 Accordingly, it would be reasonable to assume that there would be some surface water runoff towards the property during inclement weather, and that the trees on the bank would go some way to absorbing some of the excess water.

4.2.3 Conversely, during periods of sustained dry weather, it might be expected that water availability for tree roots would be more plentiful at the bottom of the bank in comparison to the top. Trees are able to produce roots at significant depths, which is confirmed by the presence of roots within TP01 at 3.3m and within TP02 at 2.9m below ground level in this instance. Therefore, they are able to extract moisture from deeper within the soil when the upper horizons have become desiccated, which can in turn cause shrinkage of the London Clay Formation.

4.2.4 The timing of the geotechnical investigation is of importance when considering the seasonal nature of soil moisture content changes that might be expected for tree-induced subsidence. As this was undertaken in April 2022, following the wetter months during the winter when it is likely that at least some of the moisture that may have previously been lost during the summer of 2021 through root absorption has been replenished by rainfall, it, in my opinion, is likely to provide a snapshot depicting the least desiccated state of the soil; if a seasonal drying pattern is occurring.

4.2.5 This is illustrated by the moisture content profiles included in the CGL report which appears to show a lack of significant desiccation, as shown below.

Figure 4: showing the soil moisture profiles included within the CGL report.



4.2.6 The above shows that within TP01, located approximately midway along the southern elevation, a reduction in moisture content is observed at 1.5m below ground levels; this is consistent with the expected depth of the majority of tree roots (Roberts, Jackson, & Smith, 2006), and so a slight reduction in

moisture at the depth would not normally be cause for concern. However, from 1.5m to 3.5m, moisture levels increase slightly and are more consistent with those found at 1m.

4.2.7 The findings of TP02, located at the south-western corner of the property, show only a very minimal reduction in moisture content between 1m and 3m.

4.2.8 Based on the damage observed, and the proximity of the adjacent trees, I would expect a seasonal drying pattern to occur, and so a similar geotechnical inspection carried out at the end of the summer months, could plausibly provide a significantly altered illustration of soil moisture content.

4.2.9 It is therefore not possible for me to state with certainty, based on the evidence available to date, that the trees are a primary cause of the observed damage. However, the presence of tree roots at 2.9m – 3.3m, confirmed as being of the *Acer* genus and likely those from the group of sycamores (T9, T10, T11 and T13), and those of ‘other broadleaved species’, which in my opinion are likely to be associated with the wild cherries (T8 and T12), is suggestive of the trees being a material factor in soil volume changes.

4.2.10 Consequently, I consider it prudent to carry out removal of the above trees as a priority as part of a period of crack monitoring (the studs for which have already been installed), to confirm seasonal desiccation, and subsequently to assess whether ground movements stabilise following tree removal.

4.2.11 A secondary consideration, and one that could be undertaken as part of the ongoing management regime of other trees with the potential to contribute to the damage, is to remove the small and suppressed or low-quality trees, such as the limes (T3 and T4) and to prune or re-pollard to those trees that have been pruned previously, such as the limes (T1, T2 and T5) and the London plane street tree (T17).

4.2.12 The above works, in combination with ongoing monitoring to confirm stabilisation, is likely to enable soil recovery to take place, thereby facilitating any remedial works considered necessary by the structural engineer.

4.2.13 Accordingly I set out my preliminary recommendations below.

Table 2: list of proposed tree removals.

Tree no.	Species	Trunk diameter [mm]	Age class	Reason
T3	Common lime	230	Semi-mature	Prevention of future damage
T4	Common lime	200 100 100 150	Semi-mature	Prevention of future damage
T8	Wild cherry	270 130	Early-mature	Contribution to existing damage
T9	Sycamore	160	Semi-mature	Contribution to existing damage
T10	Sycamore	185	Semi-mature	Contribution to existing damage
T11	Sycamore	190	Semi-mature	Contribution to existing damage
T12	Wild cherry	275	Semi-mature	Contribution to existing damage
T13	Sycamore	155	Semi-mature	Contribution to existing damage

4.2.14 In addition to the proposed removals, it would also be prudent to carry out arboricultural management works at regular intervals, to limit and maintain the size of other trees henceforth, which also pose a future risk of damage. These are set out below.

Table 3: list of proposed tree pruning operations.

Tree no.	Species	Trunk diameter [mm]	Age class	Specification
T1	Common lime	550	Mature	Reduce canopy by c. 2m to previous pruning points. Repeat every 3 years to maintain reduced size.
T2	Common lime	420	Early-mature	Reduce canopy to original pollard points at 6m. Repeat every 3 years to maintain reduced size.
T5	Common lime	325 325	Early-mature	Reduce canopy to original pollard points at 4m. Repeat every 3 years to maintain reduced size.
T17	London plane	575	Mature	Continue cyclical pollarding at 3-5 year intervals.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

5.1.1 Based on my observations, an assessment of the sizes, species and water demands of the trees present, and the technical reports provided to me, I conclude that:

- the group sycamore and cherry trees (T8-T13) are likely contributing to the alleged building damage and that the only practicable arboricultural action to arrest moisture extraction by these trees would be to removed them and to grind out or treat the stumps with herbicide to prevent regrowth;
- This opinion is not corroborated by the geotechnical evidence due to the timing of the CGL investigation being carried out in April 2022 and thus at a time where seasonal desiccation would be less clear; but I would expect seasonal desiccation to be confirmed by continued monitoring and further assessments;
- By contrast, the geotechnical evidence further suggests, due to the timing of the investigation, that no persistent soil moisture deficit exists.

5.2 RECOMMENDATIONS

5.2.1 Based on the above conclusions, I present my arboricultural recommendations below:

1. Continue to monitor the ground level and/or cracking as necessary for at least 12 months, to confirm or otherwise seasonal desiccation in proximity to the foundations; and
2. Subject to the above confirmation:
 1. Proactively remove the trees listed at **Table 1** and prune those listed at **Table 2**, as identified on the attached tree survey plan. As these trees are off-site and under the management of The London Borough of Haringey Council, and are within a designated conservation area, a statutory requirement to submit a notice of intention to carry out the proposed works is required under Section 211 of the Town and Country Planning Act 1990. The additional monitoring data will be necessary to justify the proposed works; and
 2. Following a period of soil recovery, which can take several years depending on the severity and nature of the desiccation, carry out remedial works as determined by a structural engineer.
3. Should LBHC not consent to the above works, it is likely that non-arboricultural measures, such as underpinning, may be required, as confirmed by the PGA structural report.



Matthew Jones, BSc (Hons), MArborA
Director & Arboriculturist

26 January 2024

6 REFERENCES

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APPENDIX 1: TREE SURVEY SCHEDULE

15 Windsor Close
Southwater
West Sussex
RH13 9XH

Client name: Mr L McAlindon
Site: 91 Upper Tollington Park, N4 4LP
Reference: MDJAC-23.126-TSS-01
Survey date: 09/01/2024

Tree Survey Schedule



No.	Species	Height [m]	Trunk diameter [mm]	Crown Spread [m]	Life stage	Physiological condition	Structural condition	Water demand [NHBC, 2023]	Current Zone of Influence [m] [NHBC, 2023]	Ultimate Zone of Influence [m] [NHBC, 2023]	Comments	Works required?	Work specification
T1	Common lime	20	550	N5m E5m S5m W5m	Mature	Good	Fair	Moderate	15	16.5	Ivy-covered. Basal inspection limited. Leans towards road. No significant past pruning.	Yes	Reduce canopy by c. 2m to previous pruning points. Repeat every 3 years to maintain reduced size.
T2	Common lime	18	420	N3.5m E3.5m S3.5m W3.5m	Early-mature	Good	Fair	Moderate	13.5	16.5	Profuse suckers. Basal inspection limited. Trunk cavity at 4m. Historically pollarded at c. 6m, since lapsed.	Yes	Reduce canopy to original pollard points at 6m. Repeat every 3 years to maintain reduced size.
T3	Common lime	8	230	N7m E3m S1.5m W2m	Semi-mature	Fair	Poor	Moderate	6	16.5	Suppressed. Heavily leaning trunk to north. Asymmetrical canopy.	Yes	Fell to ground level and grind or treat stump to prevent regrowth.
T4	Common lime	10	200 100 100 150	N2.5m E2.5m S2.5m W2.5m	Semi-mature	Fair	Fair	Moderate	7.5	16.5	Established regeneration growth from stump of historically removed tree.	Yes	Fell to ground level and grind or treat stump to prevent regrowth.
T5	Common lime	17	325 325	N4m E4m S4m W4m	Early-mature	Good	Fair	Moderate	12.75	16.5	Profuse suckers. Basal inspection limited. Trunk cavity. Historically pollarded at c. 4m, since lapsed.	Yes	Reduce canopy to original pollard points at 4m. Repeat every 3 years to maintain reduced size.
T6	Common lime	16	410	N4m E4m S4m W4m	Early-mature	Good	Fair	Moderate	12	16.5	Profuse suckers. Basal inspection limited. Trunk cavity. Historically pollarded at c. 4m, since lapsed.	No	N/A
T7	Sycamore	15	295	N4m E4m S1.5m W4m	Early-mature	Good	Fair	Moderate	11.25	16.5	Trunk leans to north. Asymmetrical and off-centre canopy. No evidence of significant past management.	No	N/A
T8	Wild cherry	15	270 130	N7m E3.5m S2.5m W2.5m	Early-mature	Fair	Fair	Moderate	11.25	12.75	Twin-stemmed. Asymmetrical woodland edge tree. Canopy touching property. Ivy-covered but no suggestion of significant past management.	Yes	Fell to ground level and grind or treat stump to prevent regrowth.
T9	Sycamore	16	160	N2.5m E2.5m S2.5m W2.5m	Semi-mature	Fair	Fair	Moderate	12	16.5	Drawn-up woodland edge trees. Vigorous.	Yes	Fell to ground level and grind or treat stump to prevent regrowth.

Client name: Mr L McAlindon
Site: 91 Upper Tollington Park, N4 4LP
Reference: MDJAC-23.126-TSS-01
Survey date: 09/01/2024

Tree Survey Schedule



No.	Species	Height [m]	Trunk diameter [mm]	Crown Spread [m]	Life stage	Physiological condition	Structural condition	Water demand [NHBC, 2023]	Current Zone of Influence [m] [NHBC, 2023]	Ultimate Zone of Influence [m] [NHBC, 2023]	Comments	Works required?	Work specification
T10	Sycamore	16	185	N2.5m E2.5m S2.5m W2.5m	Semi-mature	Fair	Fair	Moderate	12	16.5	Drawn-up woodland edge trees. Vigorous.	Yes	Fell to ground level and grind or treat stump to prevent regrowth.
T11	Sycamore	16	190	N2.5m E2.5m S2.5m W2.5m	Semi-mature	Fair	Fair	Moderate	12	16.5	Drawn-up woodland edge trees. Vigorous.	Yes	Fell to ground level and grind or treat stump to prevent regrowth.
T12	Wild cherry	15	275	N5m E4m S2m W2m	Semi-mature	Fair	Fair	Moderate	11.25	12.75	Heavily ivy-covered. Leans towards property. No visible suggestions of significant past canopy management.	Yes	Fell to ground level and grind or treat stump to prevent regrowth.
T13	Sycamore	15	155	N2m E2m S2m W2m	Semi-mature	Fair	Fair	Moderate	11.25	16.5	Drawn-up woodland edge tree. Vigorous but suppressed.	Yes	Fell to ground level and grind or treat stump to prevent regrowth.
T14	Sycamore	19	560	N6m E6m S5m W5m	Mature	Good	Fair	Moderate	14.25	16.5	Mature tree. No previous canopy management works.	No	N/A
T15	Sycamore	20	300	N2m E2.5m S3m W2.5m	Early-mature	Good	Fair	Moderate	15	16.5	Suppressed and drawn-up. No previous canopy management works.	No	N/A
T16	Sycamore	17	400	N6m E3m S2m W3m	Early-mature	Fair	Fair	Moderate	12.75	16.5	Heavily leaning but self-optimising trunk. Canopy heavily ivy-covered but appears slightly sparse.	No	N/A
T17	London plane	12	575	N3m E3m S3m W3m	Mature	Good	Good	Moderate	9	19.5	Regularly pruned street tree.	Yes	Continue cyclical pollarding at 3-5 year intervals.
Groups of trees													

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Tree Survey Schedule



No.	Species	Height [m]	Trunk diameter [mm]	Crown Spread [m]	Life stage	Physiological condition	Structural condition	Water demand [NHBC, 2023]	Current Zone of Influence [m] [NHBC, 2023]	Ultimate Zone of Influence [m] [NHBC, 2023]	Comments	Works required?	Work specification
G18	Various	3-6 (est.)	75-150 (est.)	See plans	Young	Fair	Fair	Moderate - High	See plans	25	Species include sycamore, hawthorn, ash, holly, privet, wild cherry, English oak and common yew. Group of young trees. Natural regeneration growth. Becomes species-diverse towards Western end.	Yes	Maintain at or below current sizes.
G19	English oak and common lime	17-21	700 (est. max.)	See plans	Mature	Fair	Fair	Moderate - High	See plans	25	Group of mature trees along top of embankment.	Yes	Maintain at or below current sizes.

APPENDIX 2: TREE SURVEY PLAN

15 Windsor Close
Southwater
West Sussex
RH13 9XH

