

Engineers Report

Risk Address 41 Knox Green
Binfield
Bracknell
Berkshire
RG424NZ

360 Reference DLG-SN-22-004171
Claim Reference 083212738
Policy Holder Mrs Alison Sinclair

Date Notified 25.04.2022
Date Instructed 25.04.2022
Report Date 08.06.2022



Description of premises

The risk address is a semi-detached two storey domestic property and includes four bedrooms, brick walls with a pitched tiled roof. The house dates to around 1975. The policyholder purchased the freehold around August 1990.

There is a large mature Weeping Willow located opposite to the policyholder's address, namely located off the front elevation, believed to be under the control of Anne Parry of 42 Knox Green.

Policyholders has a large Ash tree which is located within their front, right garden. Said tree is confirmed to be protected by means of a tree protection order and therefore falls under the control of the local council - planning department.

To the front of the policyholder's property includes a concrete entrance drive with a single garage attached, which also attaches to the neighbouring garage.

To the front right of the ground floor window is a shrub with the area to front of the window is laid to lawn.

Discovery of Damage

The policyholder has advised they had noticed crack damage to their hallway and chose to instruct their own surveyor who reported around July 2020. Surveyor advised at that juncture that the policyholder should speak with the neighbour who owns the Weeping Willow, whereby the neighbour had the tree reduced shortly thereafter. However, the crack damage appears to have increased. Concerned, the policyholder notified Insurers of this claim, seeking insurers advices.

All directions are stated when viewing the property from the front.

Focus of Damage and Report



25-04-22

This document addresses damage notified to insurers in relation to movement affecting hallway towards the front of the property and neighbouring room off the front right. The descriptions below relates to the damage;

Internal Damage

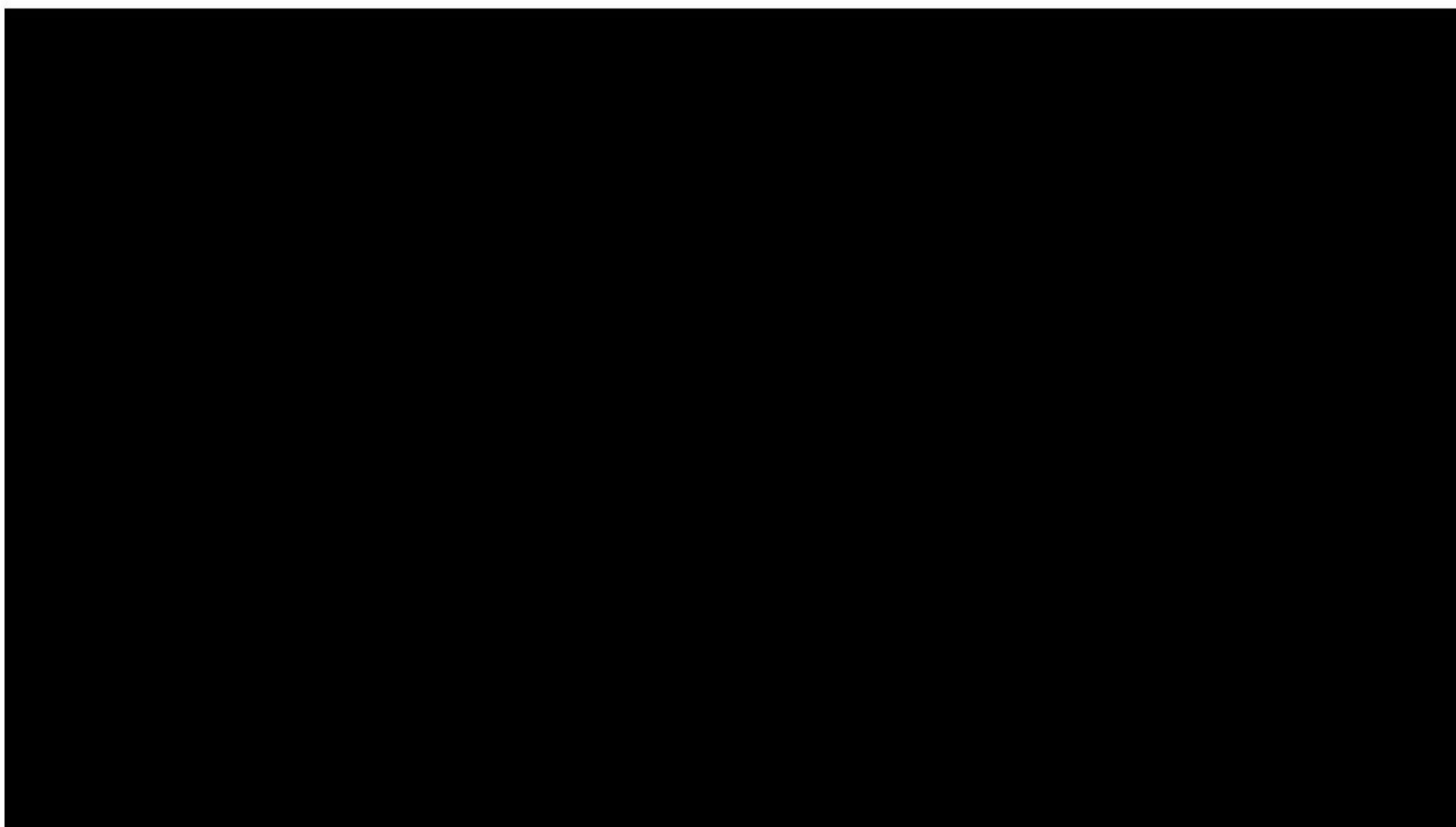
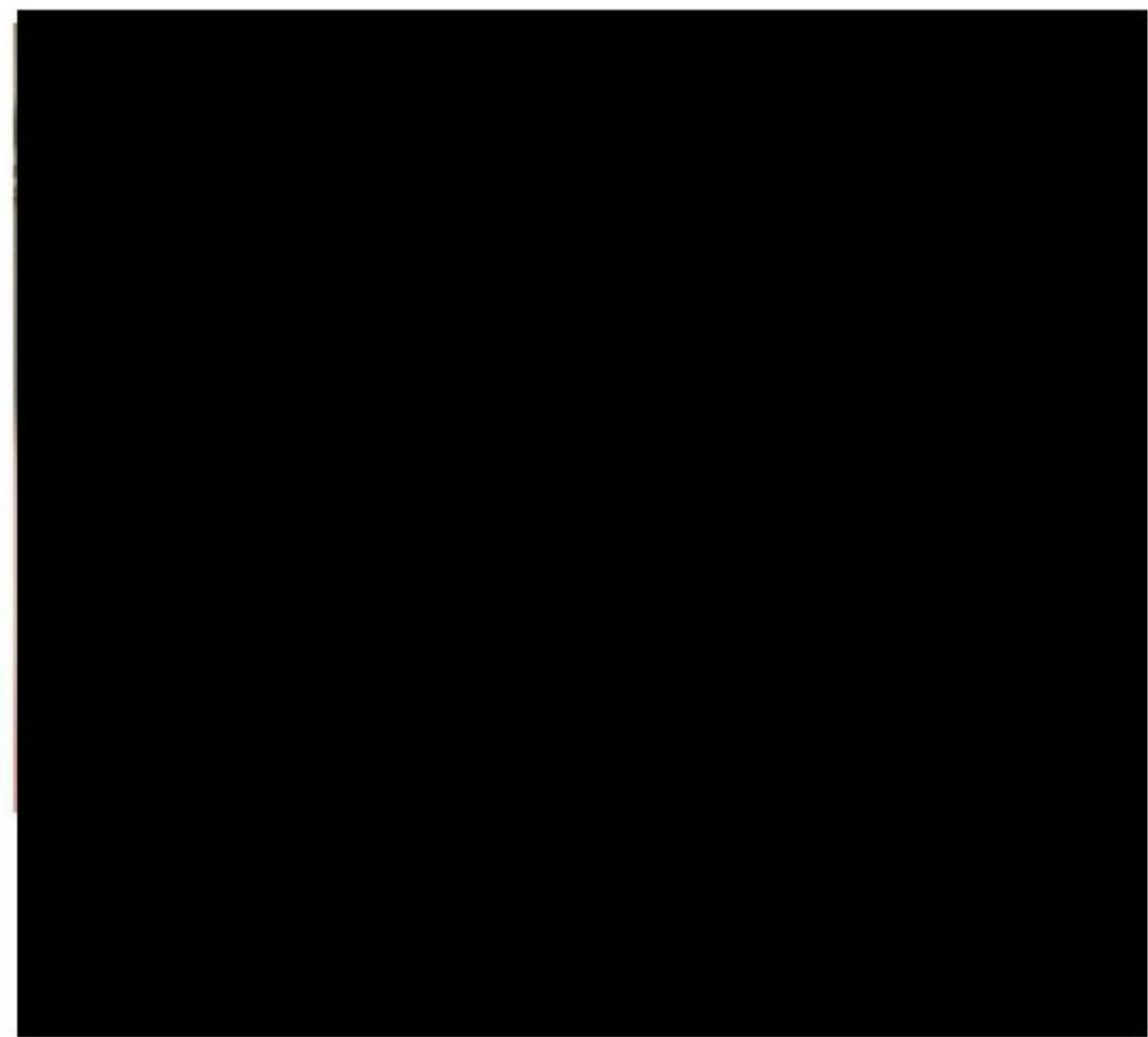
- Slight horizontal crack to hallway noted either side of hall radiator.
- Similar corresponding slight horizontal crack to hallway noted either side of hall radiator.
- Tapered crack left hand side of window to ground floor right room.
- Hairline crack in the cloakroom.
- Tapered crack within hallway gas cupboard.

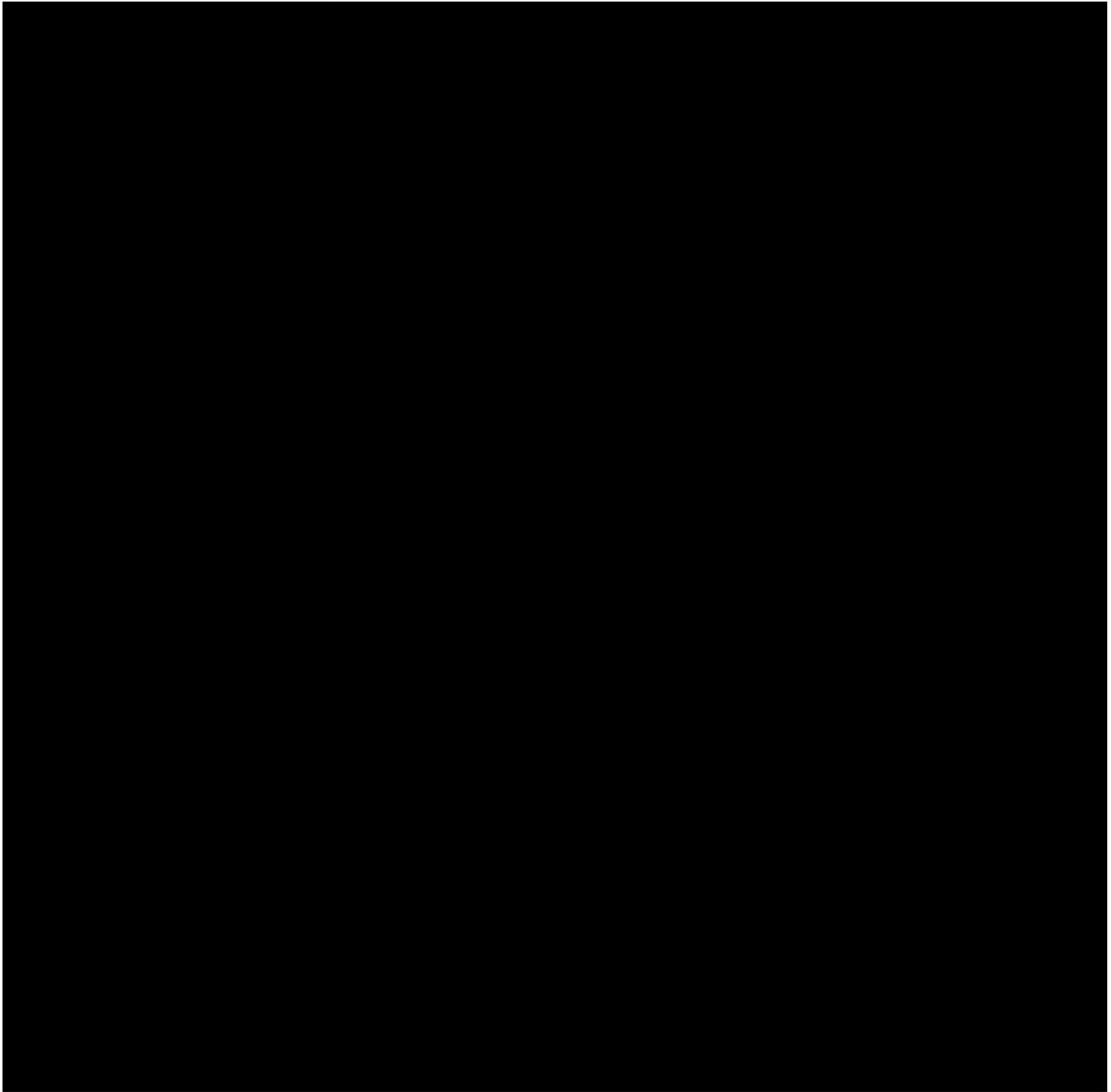
External Damage

- Slight crack damage to policyholder's concrete drive.
- Slight crack above front right ground floor window lintel.



Picture 1: Policyholders Ash tree (TPO)





Classification of Damage

It is common practice to categorise the damage in accordance with B.R.E. Digest 251 "Assessment of Damage in Low-Rise Buildings". In this case, the damage falls into Category 2, "Slight" as there is cracking - movement of between 1 - 5mm wide.

Category	Crack Width	Degree of Damage
0	Hairline cracks of less than 0.1 mm	Negligible
1	Typical crack widths are 0.1 to 1mm.	Very slight
2	Typical crack widths are 1 to 5mm.	Slight
3	Typical crack widths are 5 to 15mm, or several of, say, 3 mm.	Moderate
4	Typical crack widths are 15 to 25mm, but also depends on number of cracks.	Severe
5	Typical crack widths are greater than 25mm but depends on number of cracks.	Very Severe

Site Geology and Ground Conditions

Indicative Site Geology and Soils Data for: 41 Knox Green, Binfield, Bracknell, RG42 4NZ

No of SIs within 1.8km from address on identical lithology. (See comments)	5
Closest - Furthest distance of a site investigation from the address (km).	0.44 - 1.8
Total number of boreholes.	7
Percentage of site investigations where root samples were taken.	80%
Percentage of site investigations where drainage was recorded.	20%
Number of samples tested at greater than 0.5m depth.	45
BRE Digest 240. "Volume change potential" from Av. Modified Plasticity Index (I _p) of 42%.	High

Previous Soils Data nr = Non recorded	Depth m.	M.C. (%)	L.L. (%)	P.I. (%)	P.L. (%)	425um (%)	Suction kPa	Oed Strain
Sample population	45	45	14	14	14	14	0	34
~ Minimum (Av - 1 StdDiv)	0.7	22	47	30	17	96	nr	0.0112
~ Maximum (Av + 1 StdDiv)	5.5	32	76	47	29	100	nr	0.0425
Average	2.7	27	62	39	23	99	nr	0.0112
General soils description	Firm brown sandy CLAY with some fine gravel							
BGS 1:50 000 maps as a: Bedrock Geology	1:50 000 scale bedrock geology description: London Clay Formation - Clay, Silt And Sand. Sedimentary Bedrock formed in the Palaeogene period. Local environment previously dominated by deep seas. Setting: Deep seas. These sedimentary rocks are marine in origin. They are detrital and comprise coarse- to fine-grained slurries of debris from the continental shelf flowing into a deep-sea environment, forming distinctively graded beds.							
BGS 1km Hexagonal Superficial Deposit Depth Data	1:50 000 scale superficial geology description: River Terrace Deposits, 7 - Sand And Gravel. Superficial Deposits formed in the Quaternary period. Local environment previously dominated by rivers (U). Setting: Rivers (U) with older river deposits, where the original upper surface is now higher than today's floodplain. These sedimentary deposits are fluvial in origin. They are detrital, ranging from coarse- to fine-grained and form beds and lenses of deposits reflecting the channels, floodplains and levees of a river or estuary (if in a coastal setting).							
Mean Depth = 1m Max Depth = 1m Coverage = 16% Note: The BGS only record superficial deposits greater than 1m in depth								
BGS 1:50,000 Artificial Ground	Non recorded							

BGS "GeoSure" 5km Hexagonal Hazard Ratings	
Shrink/Swell	Moderate
Collapsible Deposits	Low
Compressible Ground	Low with areas of localised significant rating.
Landslides	Low
Running Sand	Moderate
Soluble Rocks	Low
Mining (not coal) 1km hx grid	No record of activity.

Government Coal Authority Data (<25m = found within 25m)	No data recorded for this location.
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Comments: The location is in a low/medium SI density area. The five SIs reported above are on exactly the same Bedrock Geology with no overlying Superficial deposits. The soil data above is for the underlying Bedrock Geology. The superficial deposit is relatively shallow with an average depth of ≈1m, maximum depth of ≈1m and it has an Av. Modified Plasticity Index (I_p) of 33% - Medium volume change potential.

Evidence of External Influences

Trees

There is significant vegetation located to both the front i.e., to the neighbour's property opposite and to within the policyholders garden.

We note that both the weeping willow and ash to be within proximity to influence in this instance.

Drains

The property is served by a domestic drainage system.

Drains should be checked routinely to ensure they are operating satisfactorily, as a precautionary measure.

Summary and Conclusions

We have advised the policyholder, we consider the damage to the ground floor hall wall which is also recorded to the room through the affected wall to the hall and beyond to the hall gas meter cupboard and front right room is likely due to subsidence.

The neighbouring weeping willow is within proximity to influence as like the ash tree and the bush to below the front window, assuming the supporting ground is determined to be of a shrinkable clay.

Presently, there does not appear to be movement of significance affecting the front elevation in general.

We suspect the hall spine wall is on a shallower foundation to the front elevation, noting the policyholder has advised that the hall floor is formed in concrete. Both noted cracks to the hall and neighbouring room have been crack monitored, although looking at the scribbles – readings, is not clear as to what movement has occurred. This aside, the present damage falls under category 2.

Moving forward, a site investigation is required to the hall concrete floor, circular whole around 100mm diameter through the concrete, which assumes the hall carpet will be pulled back to facilitate the noted site investigation. A further site investigation will be completed at the same time to the front elevation, right hand side of the front entrance. Both site investigations are required to confirm foundation depth, supporting material, level of any desiccation to the presumed clay substrate and essentially obtaining roots to firmly identify the vegetation implicated.

Once we are in receipt of the noted site investigation findings, we must rule out "defective design" i.e. determining the concrete floor supporting the internal spine walls is sufficiently deep to take account of the risk of neighbouring weeping willow and the policyholders ash tree which we note has a TPO.

In the interim, we intend writing to the owner/controller of the weeping willow, placing them on notice of concerns associated with root induced clay shrinkage - subsidence.

In order to determine the extent of any influence from leaking drains and or mains water feed, a CCTV survey of the drains in question and soundness test to the mains water feed will be undertaken along with the clarification of ownership.

Next Steps

- Undertake a site investigation, soundness test and drainage survey of the drains.
- Contact the policyholder with the view to discussing their claim further, confirming the site investigation findings and validity of their subsidence claim.
- Should liability be confirmed the subsidence claim will be subject to a £1,000 excess, whereby an arborist report will then be obtained and period of level monitoring including crack monitoring to determine the nature, extent of movement and indeed is this associated with cyclical movement associated with vegetation.

In brief, this subsidence claim is deferred on the basis, we have some reservations as to the cause of the internal movement and the adequacy of depth to the internal spine wall to the policyholder's hallway and neighbour room.

Our further advice will follow.

Andrew Ferguson

360Globalnet Team