

Address: 4 Teal Drive, Northwood, HA6 2PT

Monitoring Review Report

WHC Reference: WHC-20702
Client: Crawford & Company
Client Reference: 1875934
Report Date: 24th February 2026

The Knowledge to Proceed



Establish Movement

Job Overview

Brief

William Hunt Consulting have been instructed to provide satellite level monitoring for the risk address. We are advised that the property is suffering from the effects of tree root induced clay shrinkage subsidence. Similarly, we assume that site investigations have established the property to be founded on shrinkable clay soil and roots have been detected in the soils at or below foundation level. The data obtained will provide further evidence to support such claims.

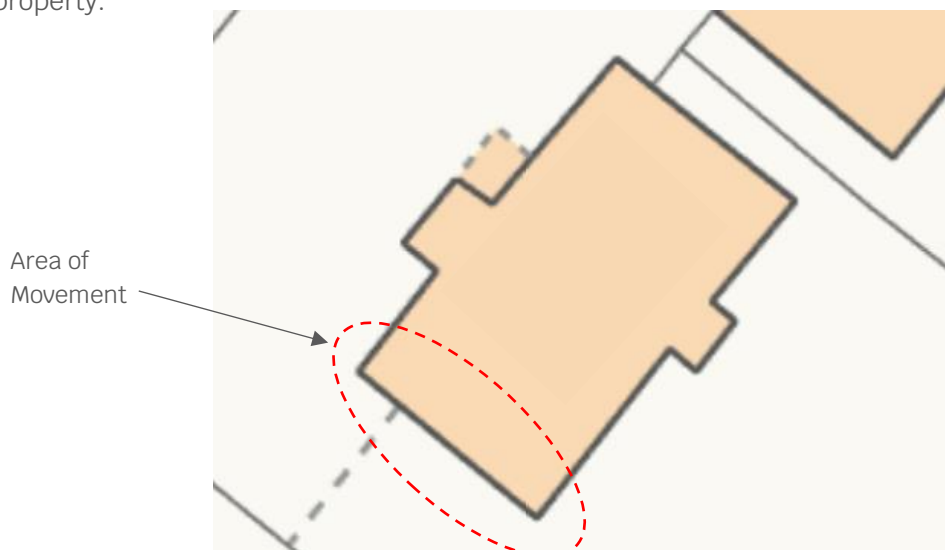
Site Information

Property Description

The property comprises of a three-storey detached building, with traditional 9” cavity brick external wall construction surmounted by a pitched, timber / tiled roof. The site occupies a lower position relative to the adjacent road.

Damage Description

We understand that the main area of damage primarily concerns the right-hand elevation of the property.



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Satellite Monitoring Data & Graphs

Figure (i) – Site plan denoting areas of varying movement
(Darker Red denoting increase in movement)

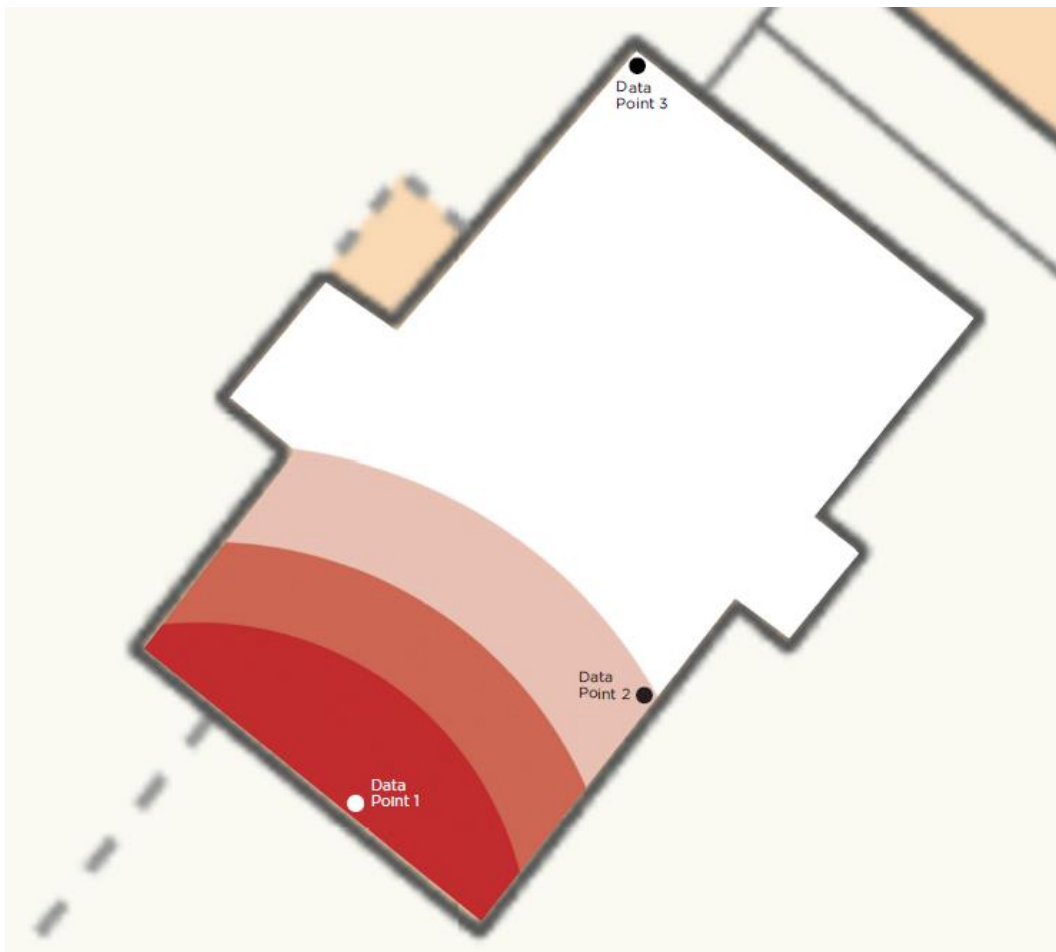


Figure (ii) – Satellite monitoring data, dated from 7th June 2021 to 16th November 2025

	Point 1	Point 2	Point 3
07/06/2021	0.00	0.00	0.00
01/08/2021	-0.59	-0.39	-0.06
06/10/2021	-0.45	-0.35	-0.02
30/11/2021	0.37	0.16	0.00
24/01/2022	1.50	1.01	0.34
30/03/2022	0.56	0.83	0.22
25/05/2022	0.11	0.61	-0.10
30/07/2022	-3.75	-0.25	-0.17
23/09/2022	-6.64	-1.36	-0.27
28/11/2022	-5.68	-1.27	-0.15
22/01/2023	-3.85	-0.43	0.02
29/03/2023	-2.96	-0.02	-0.02
23/05/2023	-3.40	-0.16	-0.12
28/07/2023	-5.53	-0.87	-0.16
21/09/2023	-7.49	-1.94	-0.31
26/11/2023	-6.60	-0.97	-0.22
09/01/2024	-5.69	-0.03	-0.07
15/03/2024	-3.82	0.17	0.07
20/05/2024	-5.28	-0.47	-0.01
31/07/2024	-6.70	-1.48	-0.15
05/10/2024	-6.00	-0.56	0.07
29/11/2024	-2.98	0.55	0.24
23/01/2025	-1.56	1.73	0.28
19/03/2025	-0.71	1.97	0.31
13/05/2025	-5.88	0.78	0.15
18/07/2025	-2.28	1.67	-0.03
23/09/2025	-0.42	1.98	-0.32
16/11/2025	2.41	2.75	-0.06

Figure (iii) – Satellite monitoring data in graphical form

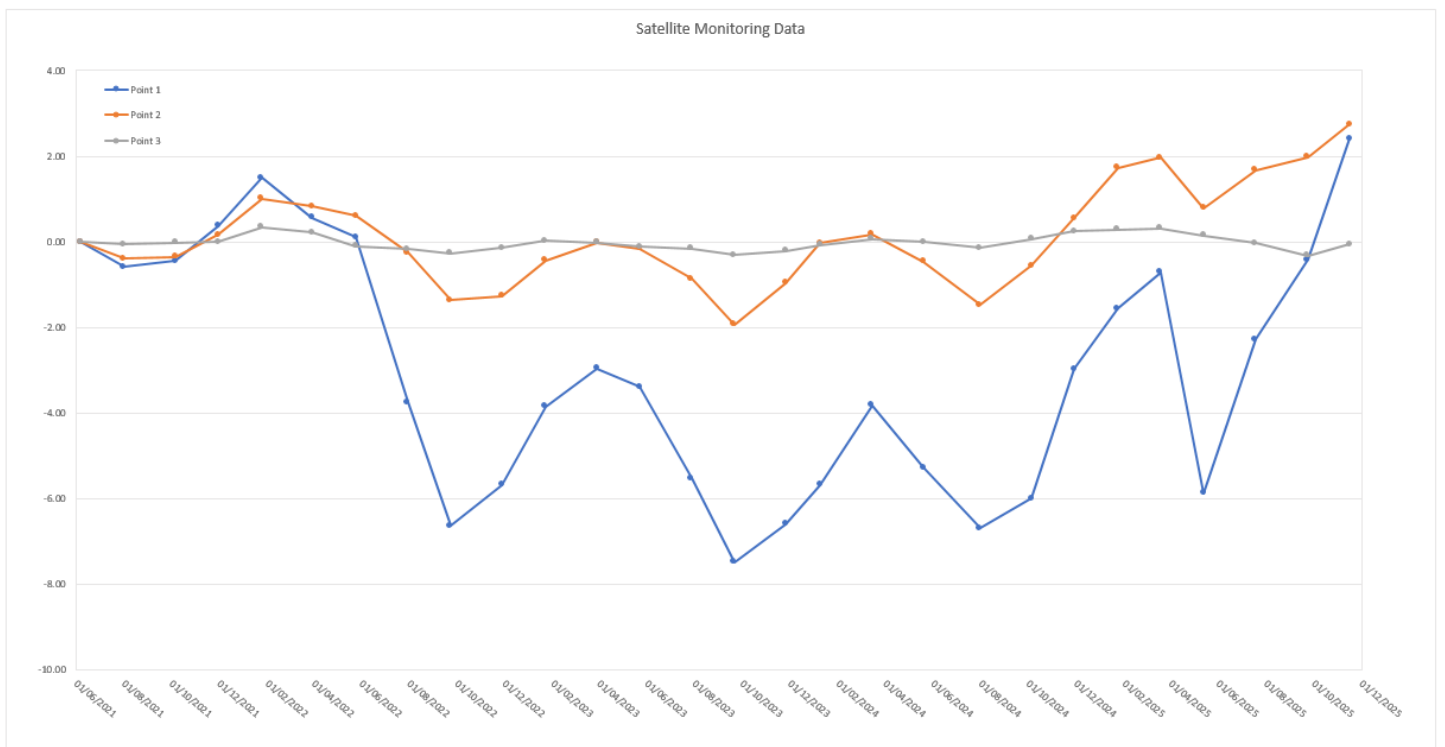
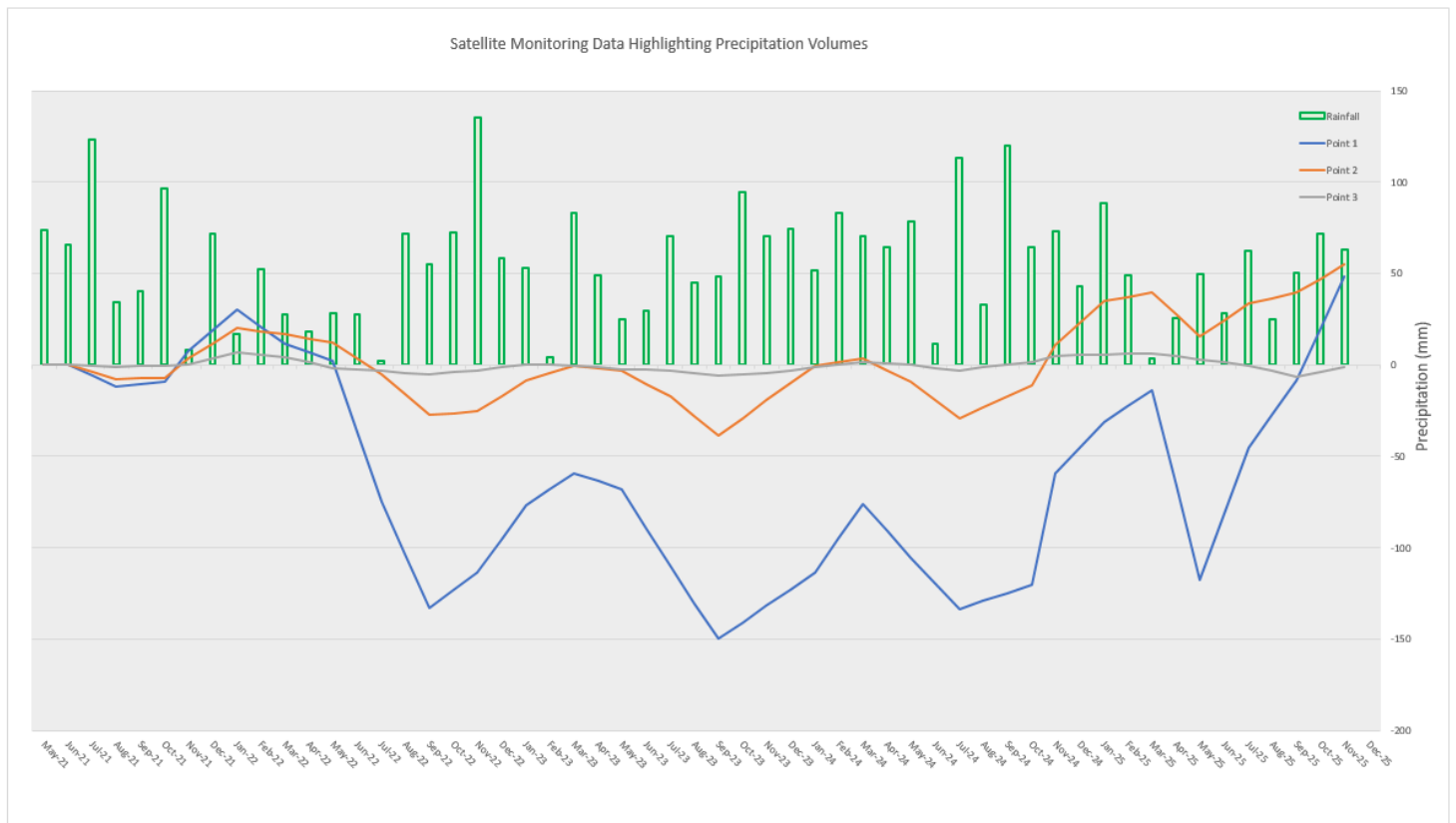


Figure (iv) – Rainfall Chart for London - 2021 to 2025

Total Precipitation (mm) for London - 2021 to 2025

97.7	40.1	21.5	2.8	73.8	65.4	123.3	34.5	40.5	96.8	8.0	72.0
Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
2021											
16.8	52.4	27.4	18.0	28.4	27.8	2.3	71.5	55.2	72.3	135.4	58.1
Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
2022											
52.8	3.9	83.1	49.2	25.2	29.9	70.6	45.2	48.5	94.2	70.1	74.4
Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
2023											
51.4	83.1	70.1	64.5	78.6	11.8	113.0	33.1	120.1	64.6	73.1	43.0
Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
2024											
88.5	49.0	3.8	25.7	49.6	28.4	62.2	25.0	50.3	71.7	62.7	
Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
2025											

Figure (v) – Precipitation Plotted Against Satellite Monitoring Readings



Summary of Findings

The pattern of movement recorded at the property address of 4 Teal Drive, Northwood, HA6 2PT, are consistent with a building suffering from the effects of tree root induced clay shrinkage subsidence (TRICCS). Upward movement was recorded commencing October 2021 through to February 2022 which is consistent with the increase in precipitation as shown within Figure (iv) on page 6 of this report in July 2021 where 123.3mm of rainfall was recorded, together with October 2021 recorded as 96.8mm. Further upward movement was recorded commencing October 2022, September 2023 and October 2024 which is in line with the increase in rainfall commencing as shown within Figure (iv).

Downward movement of the property was recorded within the satellite monitoring data from February to October 2022, together with April to September 2023 and March to October 2024 due to a reduction in rainfall during these periods.

Note – The reflection points taken at roof level may suppress the full extent of foundation, although follow the same pattern of movement.

Satellite Monitoring – What is InSar / How Does it Work

InSAR can monitor ground movement without the need for any instruments or physical attendance at the subject property and can therefore replace terrestrial monitoring in some cases. In the context of subsidence claims, we can use InSAR to show a pattern of movement in a building in the months pre-dating an insurance claim notification.

Synthetic Aperture Radar (SAR) systems operate with a side-looking geometry and illuminate the Earth with a series of microwave pulses. As the spacecraft moves, sending pulse transmissions, the SAR detects echoes of previous pulses, scattered from the Earth. The raw data collected by the SAR is then focused to form an image. This is achieved in the direction, perpendicular to the direction of travel, through knowledge of the time delay, and in the flight direction through combinations of echoes from multiple locations to synthesize a large antenna aperture. A complex set of algorithmic calculations are then applied to the raw data to correct atmospheric distortions which provide the results, shown in figures (ii) and (iii).

Verification of the process of developing InSAR where changes in building geometry can be monitored from space and compared to terrestrial levelling measurements on an in-depth study, has been carried out by University of Leeds resulting in the production of a White Paper headed 'Monitoring Ground Movement from Space for the Property Insurance & Subsidence Industry'.

Understanding Data Comparison

The results provided by satellite monitoring data are, by design, broadly correlated to provide evidential proof of the influence of surrounding vegetation on the stability of a reflection point. Accepting that the magnitude of movement is unlikely to match exactly, that at foundation, by virtue of the buffering and latency effects of the building cracking, corbelling and finally yielding at the roof line, the pattern of timing of movement is broadly the same.

The increased frequency of results also shows the buildings response to periods of rainfall during the summer with minor upward blips, broadly mirroring the more macro indicators such as Morecs which responds similarly to periods of precipitation during a wider drought period.

Figures provided within the graph are to be read as accumulative readings and not as a direct comparison with level monitoring data, as indicated on Figure (vi) below.

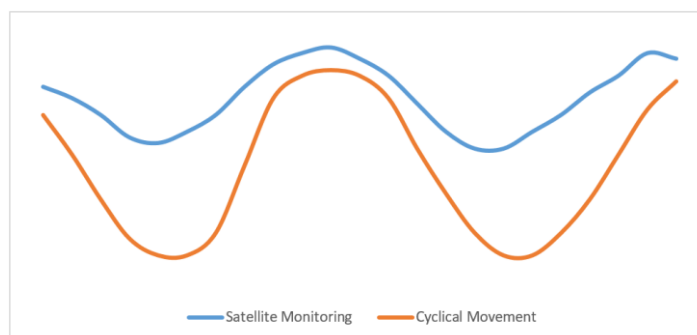


Figure (vi) – Relationship between satellite and level monitoring data

Contact us

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