



Party Wall Movement, Monitoring Proposal

Client: **Young Associates**

Project: **106 King Henry's Road, NW3 3SL.**

12 November 2019

Executive Summary

1. Introduction

The purpose of this proposal is to put forward an effective monitoring system that will measure any lateral/vertical movement that demolition, excavation and structural and building works may have on the developed property at **No.106 King Henry's Road** and neighbouring structures at **104-108 King Henry's Road** and **5 Lower Merton Rise**.

2. Instrumentation

3.

3.1. Instruments:

<u>Total station:</u>	Leica TS60	
	Angular Standard Deviation	+/- 0.5" arc
	Distance Standard Deviation	+/- 0.5mm
	Absolute accuracy of horizontal readings	+/- 1mm

Crack Monitoring: TBC

Vibration Monitoring unit: N/A

3.2. Targets external party walls at various heights.

Hi Visibility Reflective targets of size 25mm x 25mm will be installed by means of specialist resin, ensuring they remain in place for the duration of the monitoring period,

Site control will be established on fixed, permanent feature(s), beyond the zone of influence. This will be referenced throughout the monitoring period to ensure consistency of results.



25mm Retro Target Type

4. Location of monitoring targets.

Target locations are approximate and to be installed to ensure adequate line of sight from instrument set up.

Target locations for adjacent properties may be required and to be updated following site visit, determined by suitability of reference control beyond the zone of influence.

*(*Target ID to be confirmed after installation and baseline creation)*

Targets at 104-108 King Henry's Road



Targets to front of 5 Lower Merton Rise



5. Monitoring

4.1. Targets

Local coordinate system will be established, simplifying the report and analysis of any movement that might occur. The party wall will become the base/reference line, i.e. any movement will be reported in three dimensions, N, E, Z relative to this wall.

Readings to targets will be taken in both instrument phases, eliminating trunnion arm and telescope error.

Readings shall be taken at similar times during the day to eliminate temperature fluctuations that may cause contraction/expansion of the structure adversely affecting readings.

The precise target location in plan, (X & Y), also the level Z value is recorded onboard the instrument in CSV format for processing and comparison to baseline.

It is proposed that monitoring is carried out on a frequency as per table below:

Activity	Frequency
Basement Excavation/underpinning and works prior to removal of temporary propping.	Weekly
Works after the removal of temporary propping.(3 Months)	Fortnightly
Works after the removal of temporary propping. (6 Months)	Monthly

4.2. Vibration Monitoring

N/A

5. Reporting

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Raw data is processed and presented in tabular and graphical format into a spreadsheet.
RAW instrument data is recorded and issued only on request.

Reports will clearly show movement of the party wall in the X, Y plane (forward, backward) and height deviation Z.

Information is represented in tabulated columns. Noting:

- Target ID.
- Date of survey.
- Weather Conditions.
- Phase of construction (demolition, piling, etc...).
- Easting's, Northing's and Height.
- Movement from the baseline.

All results including base readings will be issued within 48 hours to the client in PDF format, highlighting movement/settlement.

Trigger values:

GREEN ZONE	AMBER ZONE (TRIGGER VALUE)	RED LIMIT (ACTION VALUE)
< 4 mm	4 – 8 mm	> 8 mm
	<i>All interested parties, including the Adjoining Owner's Surveyor and their Advising Engineer shall be informed and further actions immediately agreed between the Two Surveyors and forthwith implemented by the building owner and her contractors.</i>	<i>All interested parties, including the Adjoining Owner's Surveyor and their checking engineer shall be informed. The works will then stop (if applicable) and site made safe to the satisfaction of the Two Surveyors. Two of the three surveyors reserve the right to then enter into an addendum Award, setting out whether or not the Building Owner's works can re-commence, and if so additional precautions or modifications to the proposals.</i>

* Deviation is measured in 1mm accuracy.