

Our Ref: JM/JM/51649

May 2018

**Movement Monitoring Strategy**  
**For Proposed structural alterations to**  
**Coach House (Proposed Pool) at**  
**4 Keats Grove, Hampstead**  
**London NW3**

**1. Introduction**

Basement works are intended to the above address. To undertake these works, structural works will be undertaken that require party wall awards and a monitoring regime during the course of proposed pool construction works.

**2. Risk assessment**

The purpose of this risk assessment is to consider the impact of the proposed works and how they may impact the east boundary party wall. There are varying levels of inspection that can be undertaken and not all works, soil conditions and properties require the same level of protection.

**3. Indicative Monitoring Level proposed.**

Visual inspection and production of an agreed condition survey by the Joint Party wall surveyors at the beginning and end of the works is a minimum requirement.

A Visual inspection of existing party wall during the works, including inspection of the underpinning scheme to ensure that the temporary works and sequencing is undertaken correctly.

Vertical monitoring movement by standard optical equipment, in combination with lateral movement between walls by laser measurements within new basements greater than 2.5m may be considered.

**4 3. Indicative Scope of monitoring Works**

The works will consider:

- Visual Monitoring of the party wall
- Attachment of Tell tales or Demec Studs to accurately record movement of significant cracks.
- Attachment of levelling targets to monitor settlement, carried out by an independent specialist surveyor.
- The monitoring of the above instrumentation is in accordance with good practice. The number

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and precise locations of instrumentation may change during the works; this shall be subject to agreement with the Principal Contractor (PC) and Party wall surveyors.

- All instruments are to be adequately protected against any damage from construction plant during the construction process. Any damaged instruments are to be immediately replaced or repaired at the contractors own cost.
- Reporting of all data in a manner easily understood by all interested parties.
- Co-ordination of these monitoring works with other site operations to ensure that all instruments can be read and reviewed against specified trigger values both during and post construction.
- Regular site meetings by the Principal Contractor (PC) and the Monitoring Surveyor (MS) to review the data and their implications.
- Review of data by project Structural Engineers during the course of the works.

The Principal Contractor will ensure the following responsibilities are adopted:

- Review of methods of working/operations to limit movements, and
- Implementation of any emergency remedial measures if deemed necessary by the results of the monitoring.

The Monitoring Surveyor shall allow for settlement and crack monitoring measures to be installed and monitored on various parts of the structure described in Table 1 as directed by the PC and Party Wall Surveyor (PWS) for the Client and neighbours where relevant.

Access to all instrumentation or monitoring points for reading shall be the responsibility of the Monitoring Surveyor (MS). The MS shall be in sole charge for ensuring that all instruments or monitoring points can be read at each visit and for reporting of the data in a form to be agreed with the PWS. He shall inform the PC if access is not available to certain instruments and the PC will, wherever possible, arrange for access. He shall immediately report to the PC any damage. The Monitoring Surveyor and the Principal Contractor will be responsible for ensuring that all the instruments that fall under their respective remits as specified are fully operational at all times and any defective or damaged instruments are immediately identified and replaced.

The PC shall be fully responsible for reviewing the monitoring data with the MS, before passing onto the project Structural Engineers, determining its accuracy and assessing whether immediate action is to be taken by him and/or other contractors on site to prevent damage to instrumentation or to ensure safety of the site and personnel. All work shall comply with the relevant legislation, regulations and manufacturer's instructions for installation and monitoring of instrumentation.

### Applicable Standards and References

The following British Standards and civil engineering industry references are applicable to the monitoring of ground movements related to activities on construction works sites:

1. BS 5228: Part 1: 1997 - Noise and Vibration Control on Construction and Open Sites -Part 1.Code of practice for basic information and procedures for noise and vibration control, Second Edition, BSI 1999.
2. BS 5228: Part 2: 1997 - Noise and Vibration Control on Construction and Open Sites -Part 2.Guide to noise and vibration control legislation for construction and demolition including road construction and maintenance, Second Edition, BSI 1997.
3. BS 7385-1: 1990 (ISO 4866:1990) - Evaluation and measurement for vibration in buildings - Part 1: Guide for measurement of vibrations and evaluation of their effects on buildings, First Edition, BSI 1990.
4. BS 7385-2: 1993 - Evaluation and measurement for vibration in buildings - Part 2: Guide to damage levels from ground-borne vibration, First Edition, BSI 1999.
5. CIRIA SP 201 - Response of buildings to excavation-induced ground movements, CIRIA 2001.