

14A Hampstead Hill Gardens London

Structural Monitoring Specification

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Job Number: **28806**
Document Reference:

Rev	Date	Notes
-	June 2023	For information

C15

Monitoring

TO BE READ WITH PRELIMINARIES/ GENERAL CONDITIONS.

NOTE : This Specification is in NBS format but is not an NBS Specification

GENERAL

100N COMMENCEMENT CONDITION SURVEY OF EXISTING BUILDINGS AND STRUCTURES:

- **Scope:** Front, rear and party wall elevations of neighbouring buildings at 12 and 14 Hampstead Hill Gardens. Note: this specification does not cover monitoring of Network Rail assets which is covered through a separate agreement.
- **Before starting work:** Survey the existing structure; make a record of damaged or defective areas with supporting photographs.
- **Record:** the location, extent and magnitude of cracks, spalling, indications of movement, previous repairs, modifications and other irregularities of the fabric.
- **Information supplied:** Existing survey drawings.
 - Notify the CA if there are any anomalies in information.
- **Report:** Submit for comment. Include recommendations for:
 - Monitoring of crack widths.

110N VISUAL MONITORING OF EXISTING BUILDINGS/ STRUCTURES DURING CONSTRUCTION:

- **Scope:** Front, rear and party wall elevations of neighbouring buildings at 12 and 14 Hampstead Hill Gardens.
- Visually inspect buildings/ structures for signs of movement, cracking or other indications of distress.
- **Frequency:** To be carried out daily during the main structural works and thereafter until completion of the project.
- Record the date and time of inspections.
- If movement, cracking or other signs of distress are noted take supporting photographs for comparison with the commencement condition survey and inform the CA within 1 working day.

120N CRACK MONITORING OF EXISTING BUILDINGS/ STRUCTURES:

- **Scope:** Front, rear and party wall elevations of neighbouring buildings at 12 and 14 Hampstead Hill Gardens.
- **Method:** Use micrometer measurements between 3 studs glued to wall adjacent to crack

- For new or extending cracks: Mark extent and record date. Report to the CA within 3 working days and make proposals for additional monitoring points.
- Frequency: To be carried out weekly during the main structural works and monthly thereafter until completion of the project.
- Continue monitoring until cracks are made good.

130N MOVEMENT MONITORING:

- To be carried out by a specialist using electronic monitoring of targets fixed in locations at locations to be agreed with the party wall surveyors.
- Accuracy of reading: +/- 2 mm
- Report: Report to include:
 - Location of targets.
 - Results given in tabular and graphical form for vertical and horizontal movements against time. The graph axis should be linear and clearly labelled together with units. The axis scales are to be kept constant for all reports. The trigger and action values should be plotted on the graph for reference.
 - Notes on construction activity taking place and photographs of the work progress both general to each survey location and of the overall works on site. The locations of the photographs should be kept constant where possible and agreed with the Contractor before works begin.
 - A note of any difficulties in taking the readings or damage to the instrumentation and survey points.
 - Weather conditions
 - Surveyor responsible for the survey
- Submit results to the CA, principal contractor, structural engineer and party wall surveyors within 2 days of measurements being carried out, or if movement to action values occurs submit results immediately.
- Critical movements:

Limit for movement compared to baseline datum of:	Vertical Displacement mm:		Lateral Displacement mm:	
	Trigger Value	Action Value:	Trigger Value	Action Value:
All monitoring points	10	15	10	15

- Precautions: Take as follows if movements reach critical values:
- Trigger: Contractor to report on site activities that have caused the recorded movements and anticipated forthcoming activities that may cause further movement. Contractor, Temporary Works Designer and Engineer assess the need to carry out any additional works or adjust the

planned work sequence to prevent action values being reached. Inform all Parties of the result of the review and of any agreed additional works or adjustment to the planned work sequence.

- **Action:** Stop work as soon as practicable until all Parties agree on the action to take.

140N FREQUENCY OF MOVEMENT MONITORING:

- For survey points on: **neighbouring buildings**

Initial readings:	Start readings as soon as survey points have been established and carry out at least 6 monitoring visits evenly spaced over two months before any structural work begins
During wall construction:	Weekly
During basement excavation:	Weekly
Construction of basement up to ground floor slab inclusive, temporary propping removed:	Weekly
During remainder of major structural works:	Fortnightly
During remainder of construction programme:	Fortnightly for a further six visits, thereafter monthly until permission to stop monitoring is given.
Final readings:	One set after a further 6 months.

- Increase frequency of readings:
 - If movements are accelerating.
 - If the trend of movements changes unexpectedly.