



Built London Limited - Monitoring Survey

29 Prince of Wales Road London. NW5 3LG



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Built London Limited
Unit 2
Providence Yard
Ezra Street
London
E2 7RJ

Attn: Nacho Munoz-Motilla

3rd September 2014
Our Ref: Q013214

Dear Nacho,

Re: Monitoring Works 29 Prince of Wales Road NW5 3LG

We refer to your e-mail on 1 September 2014 and our recent meeting.

Please find below details of our interpretation of your requirements and indicative costing for the survey and monitoring works at the above address.

Scope of work:

Movement Monitoring:-

The requirements are to monitor the internal party walls at ground floor level.

Methodology – Monitoring for Movement:

The specified method is to monitor the buildings during and after the construction phase using a number of strategically placed dedicated monitoring prisms placed internally (see figure 1).

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Figure 1. – Monitoring Prism

Fixing of Prisms:

- A 12mm hole will be drilled to a depth of 75mm approximately.
- A 10mm x 100mm threaded rod will be inserted into the hole and fixed with chemical adhesive.
- Once set, the monitoring prism will be secured with lock nuts and washers and its position fixed in line of sight with the Total Station.

Supplied document reference 23704 recommends distributing the targets on the internal party walls as follows:

- Party wall with adjoining structure – 2 Targets on Ground Floor.
- Party wall adjacent to main door – 2 Targets on Ground Floor.

Site Set Up:

A number of permanent remote Survey control reference stations shall be set up outside the zone of influence by way of ground Survey nails and Retro wall targets.

These will be established along Prince of Wales Road and they will be used to accurately position the Total Station each time a round of results is obtained and for the duration of the monitoring.

The survey control stations used for the duration of the monitoring shall be independently checked prior to carrying out each round of results from the static control targets.



A record of the exact position and location of all the monitoring points shall be issued in AutoCAD for future reference.

Total Station Monitoring:

Initially, base readings will be taken with a high precision Total Station and these readings will form the basis for the comparison of the future monitoring readings. Each time readings are taken weather conditions, temperature and barometric pressure will be recorded on the results spreadsheet.

The subsequent readings will show the difference between the base readings as well as the previous readings. The result presented will indicate how the values relate to any movement of the structure.

The instrument to be used for the survey shall remain unchanged throughout the program with the exception of any calibration, if required.

Process and Presentation of Results:

The information shall be processed and presented in analytical format within 24 hours of the monitoring work being undertaken. This will indicate the X, Y, & Z deviation in millimetres from the base readings and the previous readings.

A result spread sheet with a location plan and will be produced to show the position of the targets and the direction of any movement.

Verticality / Tilt of party walls will also be recorded and monitored by way of comparison of the reading from existing prisms.

Frequency of Monitoring:

The frequency of the monitoring regime below is as specified by Fluid Structures (document ref. 23704) and would need to be agreed with all relevant parties:

Initial installation of monitoring targets to start of underpinning – Weekly

Underpinning – Weekly

During Construction of new basement until ground floor slab is tied to retaining walls – Fortnightly

During the remaining construction thereafter until 3 months after the completion of the structure - Monthly



Should any significant level differences or movements be observed or found in readings, then it is recommended that monitoring is carried out at closer intervals. The frequency should also be increased if movements appear to be accelerating or if the established trend of movements appears to be changing unexpectedly. Additional readings should also be taken after severe storms and after any work which might cause vibration (e.g. piling).

Cracks or other defects that are being monitored will have to be left accessible and remain un-rendered.

Trigger Levels:

Trigger levels as specified in document 23704 to be confirmed) are as follows:

Vertical Movement:

Green: No notification required - works to proceed as planned.

Amber: 5mm movement vertical – Immediately notify the relevant parties and increase frequency of monitoring to a daily basis.

Red: 10mm movement vertical – Stop all works and immediately notify the relevant parties.

A review will be carried out by consulting engineers and contractors and the proposed actions will be submitted to the adjoining owner's surveyor for his reasonable approval prior to recommencing works affecting the party wall.

Lateral Movement:

Green: No notification required - works to proceed as planned.

Amber: 4mm movement lateral – Immediately notify the relevant parties and increase frequency of monitoring to a daily basis.

Red: 6mm movement lateral – Stop all works and immediately notify the relevant parties.

All deviations which fall outside the agreed trigger levels will be highlighted in either Amber or Red on the result sheet.



Costings:

To supply a Survey Team & all necessary equipment to carry out the following:-

- Establish Main Survey Monitoring control stations
- Supply and install 4 No. Monitoring Prisms.
- Carry out initial base readings with Total Station.
- Record by way of drawing the exact position and location of all the monitoring points for future reference.
- Format spreadsheet for presentation of results and reports.

Site Set up and Base readings as above.....£695

Regular Monitoring of targets on site.....£200 per visit

Processing and Presentation of results on spread sheet.....£100 per visit

Supply and install crack monitoring gauges as required.....£30 per gauge

The above prices include the Survey Team; all necessary surveying equipment; Professional Indemnity, consumables; travel; parking; congestion fees etc. but are exclusive of Vat.

We hope that this quotation meets with your approval, and once we receive your official order we shall be able to mobilise our team to set up and commence the monitoring process.

Should you require any further information or need to discuss any aspects of the quotation please let us know.

Yours faithfully

Steve Dann

For and on behalf of
Chanton Group PLC

Steve Dann – Principal Surveyor

C.C. Rupert Chandler – CEO



Notes:

No provision has been allowed for access to install monitoring targets at high level. We have assumed that the client will provide suitable platform for these works.

Chanton have not included for the removal of the targets and making good on completion of the monitoring process.

It is understood that free and uninterrupted access shall be granted to all parts of the site at all times throughout the survey work. Chanton Group shall not be responsible for the contacting of any third party for the purposes of gaining access to all or any part of the site.

Any scaffolding or obstacles erected obscuring the monitoring points shall need to be adjusted to maintain clear line of sight. This shall be the responsibility of the client.

For the purposes of this quotation, retention and main contractors discount do not apply. All works carried out under this quotation are covered by Chanton Group's strict terms and conditions. Any delays or disruptions caused through no fault of Chanton Group shall be charged on a pro rata basis at our standard daily rate.

Please note it is the contractor's responsibility to ensure that the Monitoring Stations and Targets are kept free from damage or movement and protected for the duration of the Monitoring process.

It shall not be the responsibility of Chanton Group PLC to maintain and protect each of the monitoring points throughout the project. In the case of a damaged monitoring point and subsequent replacement the cost shall be considered as an additional monitoring point as stated above. In such a case a note shall be made within the results to indicate the loss of a monitoring point and subsequent replacement.

Replacement or additional targets including setup cost£95