29 Prince of Wales Road

Party Walls Movement Monitoring Notes

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Quality management

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Client	Nicole Verity and Nadav Kander
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Prepared By	Savvas Costantinou
Checked By	Ay Rungchaiporn

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PARTY WALL MOVEMENT MONITORING

In order to monitor any movement to the structure during the works at 29 Prince of Wales Road, it is proposed that any monitoring of movement should take the form of targets set up on the wall with levels read from a fixed station. The fixed stations should be in suitable locations away from the area of the works so as not to be affected by any local ground movements. Refer to Figure 01 for suggested locations (exact locations to be agreed on site with the Contractor and Fluid Structures (and the Party Wall Surveyors, if applicable). During excavation, targets should be set up near the front and rear of the length of Party Walls to ascertain whether any vertical movements are in the wall occurring. It is suggested that the monitoring is carried out as follows;

- Initial visit for set up and datum readings, prior to any substructure works being carried out. The initial readings should be taken over a period of several weeks, at least, before construction work starts on the basement.
- Weekly visits from initial installation of monitoring to start of underpinning.
- At least weekly during the underpinning and fortnightly during construction of new basement until ground floor slab is tied into retaining walls.
- Monthly visits during the remaining construction time thereafter until 3 months after the completion of the superstructure.

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 un-rendered.

Movements to be recorded should include:

- Displacements (x/y/z directions)
- Verticality/tilt
- Width of existing cracks (where present)

All readings are to be forwarded by the Contractor to the Project Team on a regular basis together with a covering statement commenting on any issues that arise.

It is proposed that the **trigger** and **action** levels for lateral movement of the retained walls are set at **H/800** and **H/600** respectively. For total vertical movements, the structural threshold values of 5mm trigger and 10mm action level would be appropriate.

- An amber (trigger) level reading would allow structural alteration works to continue on site, but the Contractor's Temporary Works Engineer would be required to visit site within a period of 24 hours to assess the situation and to report back to the Structural Engineer with their proposals accordingly.
- A red (action) level reading would result in works on site being stopped (subject to ensuring that the building is made safe with any required temporary works put in place). The Contractor's Temporary Works Engineer will again need to visit site within a period of 24 hours and advise on the situation and what action to take. No work is to re-start on site until a proposal has been agreed and accepted by all parties.

Please note that these threshold levels are based on structural criteria and not from the point of view of finishes (i.e. cracking to plaster or internal finishes may occur below amber trigger level), however, these are considered to be practical levels of movement within which a competent Contractor should be able to undertake the works. The

trigger and action levels are to be discussed and agreed upon between the Contractor, Fluid Structures, and the relevant Party Wall Surveyors, prior to commencing of the works.

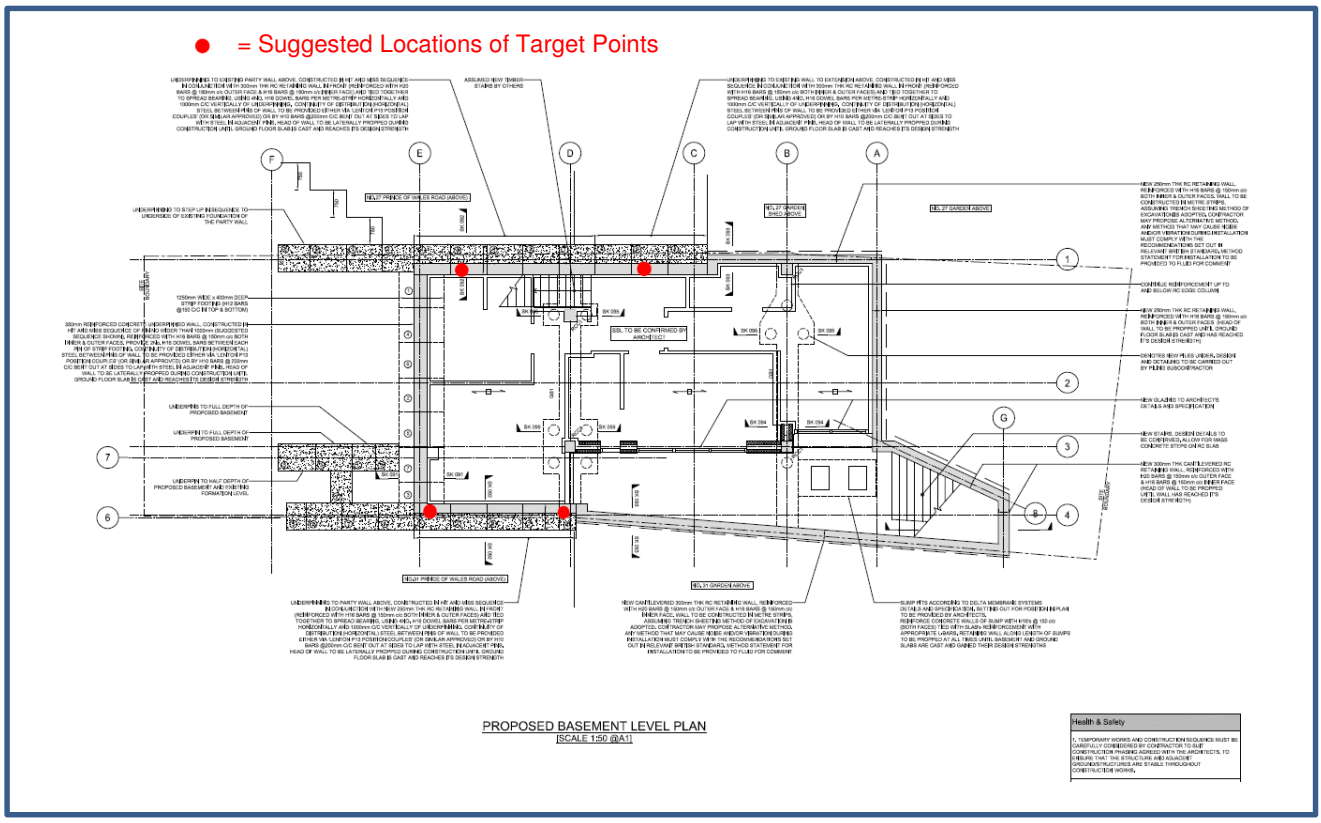

Figure 1: Suggested Locations of Target Points

Fluid Structural Engineers
2nd Floor
21 St George's Road
London, SE1 6ES

t: 020 7820 7766
f: 020 7582 7848
e: david@fluidstructures.com
w: www.fluidstructures.com