24/07/2017

James Little
The Cool Basement Company
50b Chiswick High Road
London
W4 1SZ

RE: Proposed Development, 3 Trinity Close, London NW3

Dear James:

Further to our recent correspondence and discussion please find below our report in relation to the trial pit excavation at 3 Trinity Close, London NW3 (the Site).

Background

The site currently comprises a two storey end of terrace property and it is proposed to construct a single storey basement beneath the footprint of the property.

It is understood that as part of the party wall agreement pre-construction investigation works were recommended. The following extract was provided to inform the required scope of works for the assessment:

3.1. Pre-construction investigation

Two elements of pre-construction investigation should be carried out before construction begins.

1. The groundwater level should be measured in the standpipe in BH1, to confirm existing groundwater level.
2. A trial pit should be dug (e.g. using a mini-excavator):
   - The trial pit should be located away from existing structures and away from the proposed underpins.
   - Ideally the trial pit should be dug in two stages. The first stage would be to excavate down to just above groundwater level (as determined in point 1 above); there is no expectation of groundwater-induced instability in this section. The second stage is to excavate below groundwater level to a total depth of 3.5 mbgl.
   - The trial pit should be left open for 24 hours and any groundwater inflow and associated instability noted. If the trial pit is stable this confirms that sump pumping is appropriate. If significant zones of instability occur in silty or sandy zones then this indicates that wellpoint dewatering will be required.
   - The trial pit should be backfilled on completion.

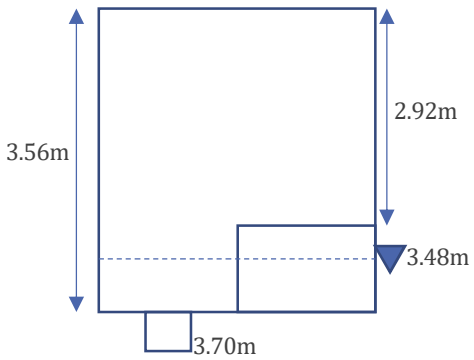
Summary of Works Completed

As per the requirements outlined above, a site visit was conducted on 11th July 2017 and a groundwater level of 3.19m below ground level (bgl) was recorded in the monitoring well located in the car park / courtyard area using a contact dip meter.

This groundwater level was then used as the basis for the excavation of a trial pit within the property, but away from the existing structure, party wall and foundations.

Due to the internal location of the trial pit it was excavated by hand digging methods between 13th and 20th July 2017 (excluding weekends) and supported using wooden shoring. At approximately 2.92m bgl the trial pit was 'stepped out' to enable excavation without shoring. The trial pit was then extended to approximately 3.56m bgl and small sump progressed in the base of the excavation to a depth of approximately 3.70m bgl.

A schematic section of the trial pit is provided below, with a photographic record appended:



The personnel that undertook the excavation works reported that the walls of the trial pit remained stable during excavation.

Following excavation, the exposed section of the trial pit was left for 24 hours to observe any groundwater ingress and/or instability of side walls.

After this period, a second site visit was conducted on 21st July 2017 and a groundwater level of 3.48m bgl was recorded in the trial pit. There was no evidence of collapse or instability in the sides of the pit visible above the groundwater. However, in order to assess the entire exposed section, the groundwater was pumped out using a sump pump. No evidence of collapse or instability was observed in the exposed section of the trial pit.

Although not required as part of the pre-construction works, following sump pumping the groundwater was observed to recover to a depth of approximately 3.67m bgl over the period of approximately 9am to 4pm. In addition, the groundwater level within the monitoring well was also measured at approximately 2.95m bgl.

Closing Remarks

It is understood that the proposed depth of excavation for the basement development will be approximately 3.10m bgl. Based on the observations within the trial pit, this excavation depth will not be below the groundwater level recorded and groundwater ingress should be controllable by pumping from sumps. Observations during the site visit and discussions with site personnel suggest that the trial pit remained stable during excavation and when left open.

I trust the above is of use. However, if you require any further information then please feel free to contact me at your convenience.

Sincerely,

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Photographic Record

Plate 1: Trial Pit with groundwater visible.

Plate 2: Trial pit following pumping out of groundwater.

LMB

Ground Investigation
Land Contamination
Hydrogeology
Engineering Geology

Photographic Record

Project: 3 Trinity Close

Plates 1 & 2