3 May 2017

Planning ref: 2016/5974/P Our ref J15258/ML/Letter2

Ms Erica Jong Erica Jong 48 Fairhazel Gardens London NW6 3SJ



tel email web

Dear Erica.

#### Re: 26 CHRISTCHURCH HILL, LONDON NW3 1LG

We have now reviewed the comments made within the Basement Impact Assessment (BIA) Audit by Campbell Reith (ref: 12466-30, dated December 2016) and this letter accompanies are updated report (ref: J15258 issue 2, dated January 2017) in providing our formal responses, in turn, to each of the points raised and highlighting the relevant sections of our updated report.

### 4.2 Compilation of the Screening and Scoping Elements of the BIA

We confirm that we have carried out the BIA, which has been used to inform the Structural Engineer's Report (SER) by Price and Myers. Due to the proposed scheme being updated, the answers to the screening questions have been reviewed and updated in Section 3.0 on Page 10 of our report. Subsequently, the scoping elements of the BIA have been updated in Section 4.0 on Page 12.

## 4.5 Groundwater monitoring

Further groundwater monitoring results and the results of rising head tests are discussed in greater detail in Section 5.4 of the report.

# 4.6 Use of Permeation Grouting

As above, further information on groundwater is provided in Section 5.4 of our report and expanded upon in Section 8.1. Within that section the use of permeation grouting is discussed and validated, in that the use of permeation grouting within a particular silt layer of the Claygate Member to enable the construction of a second stage of underpinning, in considered to be a suitable and acceptable solution. This coupled with a secant bored piled wall will sufficiently control groundwater to enable the excavation and construction of the basement structure.

# 4.6 and 4.7 Comments Made by Dr Vicki Harding

Further information on the features identified within the objection raised by Dr Harding is presented in Sections 2.2, 2.3, 2.6, 3.0 and 4.0. None of the features identified in Dr Harding's letter are considered to pose a risk to the basement development at this site, nor is the basement development considered to pose a risk to the features. Whilst the information provided on the issues encountered during the basement works at the neighbouring 22 Christchurch Hill is insightful, it does not provide any information on the method of basement design and construction, the level of workmanship or whether or not a site investigation was carried out to inform the design and the works. The fact that groundwater was encountered is not a complete controlling factor to the instability experienced by the property.

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Company Secretary Penny Piddington Whilst we would recommend that further information from the Local Building Control is collated to inform the detail and final design of the basement works, our investigation has identified where groundwater will be encountered and has provided recommendations for suitable retaining wall construction and mitigation measures. We have noted within our report that the basement below the neighbouring No 5 Well Road and the extensive basement below No 24 Well Road, which was constructed on the site of one of the former wells identified by Dr Harding, were all completed successfully.

### 4.8 Tree Root Protection Zone

This is no longer applicable due to the change in the basement layout.

### Hydrogeological Assessment

Further hydrogeological assessment has been undertaken and is detailed in Section 9.1 on page 26 of our report.

# Query 11 Drainage Details in Sunken Courtyard

The following response has been provided by Price and Myers:

The courtyard is set down from the adjacent basement level, and will be drained. If a drainage solution involving a gravity connection from the basement/sunken courtyard to the Public Sewer is used, a non-return valve will be included to reduce the risk of sewer flooding. If a pumped solution is used, the drainage will be pumped to a higher level and then connected to the Public Sewer by gravity. The pumps would have non-return valves on the rising mains. This would reduce the risk of flooding through the drainage connection.

I trust that the above satisfies your current requirements however should you need anything further then do not hesitate to contact us.

Yours sincerely GEOTECHNICAL & ENVIRONMENTAL ASSOCIATES

Matt Legg

Encs