



Geotechnical – Geoenvironmental
Structural - Civil

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Peter Corner
Ashmount Management Company Ltd
30 Redington Road
Hampstead
London
NW3 7RB

Our ref. G1615/20B20/AMC1
Your ref. 20th February 2020

Dear Peter,

28 Redington Road - Planning Application 2019/6407/P

Thank you for your instruction, on behalf of Ashmount Management Co. Ltd, to comment briefly on evident potential hazards to 30 Redington Road which this application presents but does not resolve.

Beyond the normal hazards associated with construction, there are currently two matters of concern; they relate to the retaining wall between Nos.28 and 30, and to the proposed method of surface water disposal.

Retaining wall

At the boundary between the two properties, ground level in No.30 is between 2m and 3m lower than in No.28 and the level difference is in the main supported by a retaining wall. An exception occurs where a 3 storey 1930s side extension was built between the flank wall of the house and the retaining wall. Its lowest floor is at basement level, approximately 1m above ground level in No.30, and its external wall was built off the retaining wall.

The Architects' scheme provides for removing the extension and filling behind the wall to provide a side access at external ground level from front to rear of No.28 next to the retaining wall.

This requirement will give rise to greater lateral load upon the retaining wall, both from the additional height of fill and, more importantly, from the much greater force caused during compaction of the fill. Also, removing the vertical load currently exerted upon the wall by the extension wall and floors will tend to lessen the wall's resistance to such loads.

The potential hazard arising from this situation is injury or death or building damage caused by collapse of the retaining wall into the grounds of 30 Redington Road. It has not been meaningfully considered by the application.

Surface water disposal

The natural ground slope in this area falls diagonally from back right to front left of Nos 26 to 30. In 2010, 30 Redington Road suffered damage from groundwater flood; groundwater entered through the back and right hand walls of the lower ground floor hallway.

The SUDS Strategy report within the application makes a very general and loose recommendation for attenuated disposal of surface water by the use of a lined type 3 aggregate sub-base for permeable paved areas from which retained water may be discharged to the existing sewer near the uphill boundary between Nos. 28 and 26.

No attempt has been made to justify this recommendation or to examine and ameliorate the very real risk that such a scheme could:

- (a) Destabilise the retaining wall at the Nos.28 and 30 boundary;
- (b) Increase the probability of groundwater flood at No.30;
- (c) Increase the probability of ground subsidence damage at No.30.

Redington Road cuts across the fall line of the diagonal slope at about 45 degrees. Comparing the ground slope parallel to the road to the front elevation profiles in the application, shows that to develop each of the properties at differing times on ground that was reasonably level across its width, a cut and fill arrangement was required. Ground in No.30 was excavated, while that in No. 28 was raised by filling over perhaps 50% of its width from the boundary. The moderately permeable filled ground rests upon the far less permeable surface of the London Clay, which slopes down and directs any surface water infiltrating the ground towards No.30.

External paved areas in No.28 are currently impermeable and, in contrast to natural gradients, the surface in front of No.28 has been dressed to divert surface water principally towards the boundary with No.26 and the underground drainage system.

The current SUDS intention is for the present surface drainage directions, which are opposite to those of natural drainage through the ground, to be maintained. That would require the liner to be an impervious welded geomembrane which collected water draining through the paving but prevented it from entering the ground below. If the membrane leaked, water would infiltrate the ground and drain towards No.30 instead. Fabricating a large welded membrane is a highly skilled process, and it is never possible to be sure that subsequent construction and compaction of the gravel and paving has been done without rupturing the fabric. Fail/safe measures are required but the need of them has not been recognised by the SUDS report.

A different problem exists where water stored beneath the 12m wide rear patio would be required to drain forward below the 1.2m wide access between the house and retaining wall. Flow restriction, possibility of surface flood in unexceptional weather and impact upon the retaining wall have not been considered.

The feasibility of the SUDS proposal has not been established to even the limited degree required for planning acceptance.

Yours sincerely



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