

W G Hall Associates

Structural Engineer and Surveyor

19 Margaret Avenue Shenfield Brentwood Essex CM15 8RF

T: 01277 221295 **M:** 07734 342740 **E:** billhall19@btinternet.com

Ko and Partners Architect
Unit 6, 1-3 Upper Richmond Road
London
SW15 2RF

WGH/C150
23rd May 2013

Dear Ming

Re: 41 Fortress Road London NW5
Structural Feasibly Report – Planning

General

We refer to your instruction, on behalf of the client Leycam Limited, to prepare a feasibly report to assist your planning application for the proposed redevelopment of the above.

The proposed works are to convert, demolish and extend the existing building to the rear to provide 9 separate flats, as shown on architect's drawings 394/A/001 – 008 inclusive.

It is a requirement to retain the existing facade.

Existing building, and surrounding properties.

The existing building is shown on survey drawings carried out by KND Surveys Limited.

The property consist of a 3 storey building including the lower ground floor below pavement level, built we estimate circa 1900's. A flat roof 3 storey extension has been added some many years ago.

The building is generally independent of adjoining properties save for a small first floor level side projection abutting No 43.

The general topography of the site slopes gradually down from right to left, but steeply from front to back. Hence the natural existence of the lower ground floor level. However beyond the small rear garden the site drops down via a boundary retaining wall all most a full storey height.

The property to the left hand side as front facing, is a 5/6 storey modern development which has taken advantage of the slope to include a rear basement level, as we propose. Some details of the building construction have been made available to us via preliminary drawings within the Party Wall Award agreement between the two owners.

The property to the right hand side is a 4 storey end of terraced building built we estimate circa 1930's. It appears to have a lower ground floor similar to No 41. A service road, exist to the rear of this terrace. No construction details are known about this property.

No 41 is currently occupied.

Our inspection of the building consisted of a walk through visual examination of the lower ground floor level and rear garden, together with all elevations from ground level vantage points.

Whilst in general the building appears reasonably sound the front gable wall, in particular, above eaves level is severely out of plumb. Tie bars have been introduced to attempt to stabilize the wall.

A limited site investigation at this stage was undertaken to establish foundation details to No 43 and the rear extension, and soil conditions generally. Refer to Soil Investigation (Eastern) Limited report dated 4th February 2013.

The collected information is assembled together on our drawings C150/SK1 to 3. Refer also to photographs 1 to 4 inclusive.

Access

Due to the retention of the façade access for the works is very restricted.

It is envisaged that access from the front of the site can be available via a temporary ramp down into the side passage way. Also ,subject to agreement with the adjoining owners to the rear of the site, from the service road after removal of the garden boundary wall. At a much later stage once the rear portion of the site has been lowered it may be possible to arrange access via the rear adjoining property owners.

Foundation and ground support proposals

Given the restricted access only small machinery is envisaged possible.

For the new foundation to the rear it is proposed to adopt a similar approach as used on the adjoining property No 39, that is, a raft foundation. The front building will be underpinned as necessary. A movement joint arrangement will need to be incorporated to allow differential movement to take place between to two different foundations.

Adjacent owners foundations are to be underpinned as required to lower the site. Temporary horizontal propping is to be installed until the permanent supports are in place.

From the trial pit investigation no ground water was found to be present, and given the natural slope away from the proposed excavations no ground water control issues are envisaged.

Excavation arising's are envisaged to be transported to the front of the site into skips , regularly replaced to avoid overfilling. Pavement/road surfaces will be clean of any debris or mud from the site.

Refer to drawings C150/SK4 to 7 inclusive showing construction proposals. All subject to design.

Superstructure

Superstructure construction is envisaged to be conventional masonry walling, timber floors, and timber pitched roof.

Façade Retention

To ensure the stability of the existing structure within a building site will require very careful consideration.

At this stage it is envisaged to remove the windows / doors and erect a temporary "bird cage" scaffold inside the front portion of the building horizontally connected to the walls to be retained. A temporary roof could also be made available over.

Given the poor condition of the roof gable wall and the vulnerability of the chimney stacks it is considered safer to remove down to eaves level. Bricks and any special features will be carefully taken down to allow like for like reconstruction.

General sequence of build

- 1) Install "birdcage" scaffold.
- 2) Take down gable and chimneys.
- 3) Install temporary access routes.
- 4) Demolish by hand top down rear portion buildings, and grub up foundations.
- 5) Underpin across the site.
- 6) Build up new rear wall to front portion and connect to scaffold. This front portion becomes a very stable box section.
- 7) Underpin adjoining owners foundations, providing propping as necessary.
- 8) Construct new rear raft foundation, working around ramp to service yard.
- 9) Construct new link footings and cantilevered framework.
- 10) Construct retaining walls to adjoining owners structures.
- 11) Construct new rear superstructure.
- 12) Construct new front superstructure from top downwards removing scaffold as works progresses.
- 13) Remove all temporary accesses and make good.

Conclusion

We consider the proposals to be structurally feasible but given the retention of the façade very challenging and time consuming.

The above is all subject to further investigation, access and party wall agreement, and the rigour of design.

We trust this report is sufficient for your current needs.

Should you have any query please telephone me

Yours Faithfully

WGHan

W G Hall
For W G Hall Associates

Enclosures:

Drawings C150/SK1A, 2, 3A, 4, 5, 6, and 7 inclusive

Photographs 1 to 4 inclusive

cc Leycam Ltd Mr M Tabarrok plus enc.



Photo 1



Photo 2



Photo 3



Photo 4