

DEVISE ENGINEERS

10B WAVEL MEWS | LONDON | NW6 3AB

Structural Planning Report

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1.0 Introduction

To assist with the planning submission for the proposals to remodel and extend 10B Wavel Mews, Devise Engineers have been asked to review the proposals and assess their impact on the neighbouring properties.

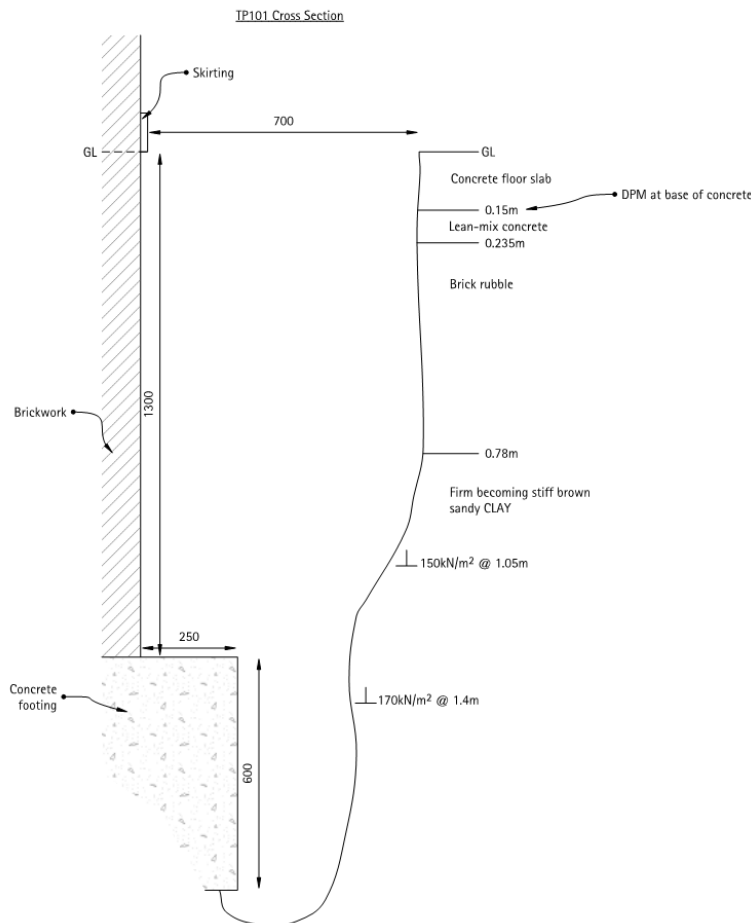
As part of the planning submission a previous scheme for a basement, a Ground Investigation, Basement Impact Assessment (BIA) and Ground Movement Assessment (GMA) were undertaken by Southern Testing. This included the excavation of a number of trial pits, including one to the party wall with 10A Wavel Mews.

Aside from trial pit excavations, no internal opening up works have been carried out within the property.

2.0 Site History and Geology

The British Geological Survey boreholes show the site is underlain by London Clay.

This has been confirmed by the site investigation carried out by Southern Testing, which show the existing shallow foundations generally bearing onto 'slightly silty gravelly clay' above London Clay between 1.2 and 2.45m below ground level.



The section above shows a trial pit undertaken internally beneath the stairs on the party wall shared with 10A Wavel Mews. The base of the footing is 1.9m below ground level.

Ground water was not encountered during the site investigation. However, during later monitoring visits on 21st June 2016 and 5th July 2016, ground water levels were between 0.77m and 1.12m. Southern Testing's report notes that this is 'believed to be perched water within the superficial soils'.

3.0 Existing Construction

The building is a two-storey end of terrace house built around forty years ago, with a single storey garage adjoining the left flank wall. The garage, which was formally owned by another party, has now been purchased by the Client.

The building appears to have been constructed at the same time as the building it adjoins, as well as the adjoining garage.

Construction appears to comprise a concrete ground bearing ground floor slab and a timber first floor, though span directions have yet to be determined. Both the subject building and the adjoining garage have a timber flat roof.



The parapet at roof level appears to indicate that the wall construction comprises solid 230mm thick load bearing masonry. Internal walls are a thought to be a mixture of loadbearing masonry and timber stud construction.

Trial pits have confirmed the walls bear on to shallow mass concrete strip footings.

The overall stability of the building relies on the cellular nature of the walls and the diaphragm action of floors.

The existing structure is in a good state of repair with no indication of movement such as deformation or cracking of the mortar joints.

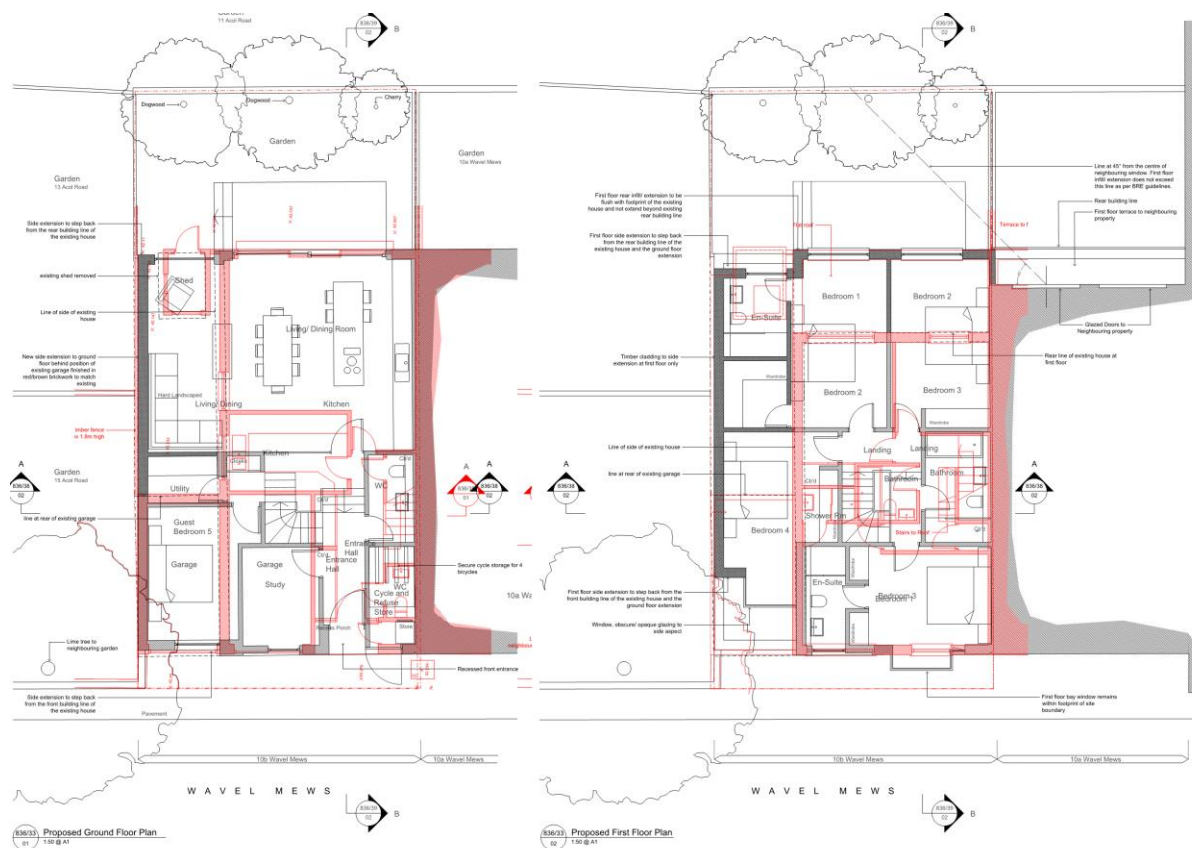
Similarly, at the time of inspection, 10a Wavel Mews which shares the party wall and foundation, did not appear to show indication of significant building movements.

4.0 Proposed Works

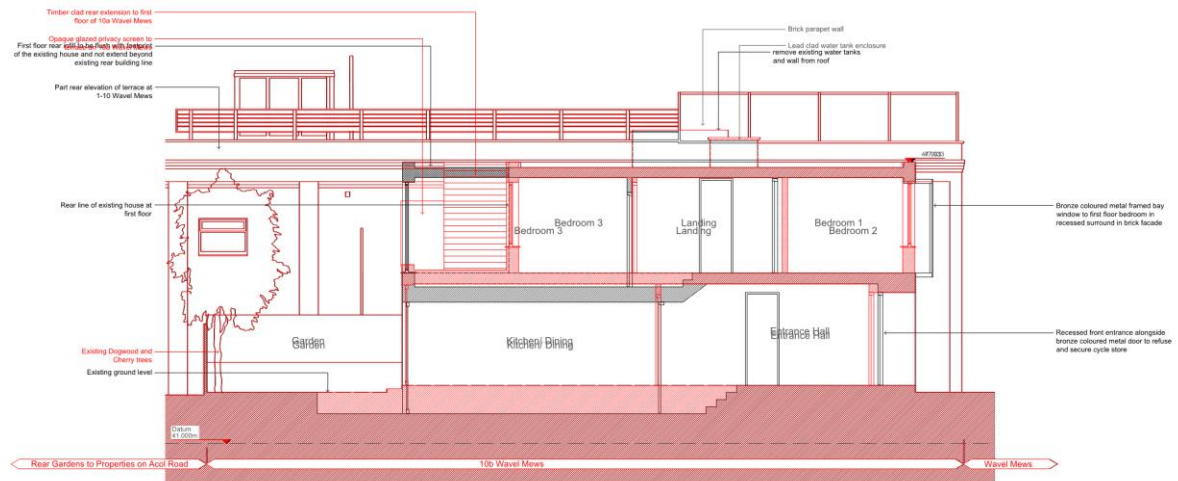
The proposed works include the following:

- Demolition of existing garage
- Demolition of flank wall and construction of new two-storey side extension
- Creation of new bay window to front
- Internal remodelling
- Extending first floor to the rear
- Lowering rear of first floor by c.350mm
- Lowering rear of ground floor by c.700mm

An overlay of the existing layout in red on top of the proposed layout in black for the ground and first floors is shown below.



An overlay of the existing section in red on top of the proposed section in black is shown below.



5.0 Construction Methodology and Impact

Superstructure

The proposed works will involve the demolition of a number of internal walls along with the flank wall of the existing house along with the lowering of floors and a first-floor extension.

Both the permanent and temporary works designs are to be undertaken by a chartered structural engineer to see that the designs are properly considered and that the adjacent properties are safeguarded. Where necessary, temporary waling beams and shoring are to be provided where structure deemed to be providing restraint to the existing party wall is proposed to be removed.

Superstructure

The works involve the construction of new foundation which are to be no deeper than the existing. Therefore they will not be undermined.

The proposals also involved the lowering of the ground floor slab by around 700mm. A trial pit to the party wall indicates foundation depths of 1.7m. As such, excavations can be undertaken without the need for underpinning.

As such provided works are undertaken by a competent contractor with due regard to the permanent and temporary works designs, ground movements are not anticipated to be significant.

The BIA undertaken by Southern Testing indicated that the anticipated level of damage for the previously proposed basement conversion was 'negligible' for all surrounding properties except 10A Wavel Mews which was deemed to be 'very slight'.

Given the proposed works are significantly reduced compared to the previous proposal, the anticipated level of damage will be further reduced.

6.o Summary

Provided the works are undertaken by a competent contractor in accordance with the Structural Engineer's permanent and temporary works designs, the proposed works are not anticipated to result in significant damage to the neighbouring properties.