

Flat 8
90 Akerman Road
London SW9 6SN
www.as-d.co.uk
info@as-d.co.uk

Basement impact assessment 38 Dartmouth Park Road, London NW5

This impact assessment is produced for submission to the London Borough of Camden planning department in support of the planning application.

SCOPE OF WORKS

Alterations to existing basement and installation of front lightwell to basement level.

DESCRIPTION OF 38 Dartmouth Park Road, London NW5

The property is a four-storey end of terrace period building, plus a basement. It is of a traditional load bearing masonry wall construction with timber floor decks to all levels and timber rafters to form the roof. The property is in sound condition structurally based on an external non – intrusive visual examination.

SOIL CONDITIONS

Borehole logs from the British Geological Society confirm that the bedrock in the area is generally “London clay”. The proposed lightwell will be designed to limit ground – bearing pressure to 100 KN/m², which we consider to be conservative considering the depth of the existing basement. Based on the borehole logs ground water is expected to be at 10m+ depth, which is well below the depth of the proposed lightwell, hence there will be no impact due to ground water.

CONSTRUCTION SEQUENCE

1. Excavation of the lightwell
2. Soil from the excavation will be moved to the skip placed on the road for disposal.
3. The retaining walls forming the lightwell may require horizontal propping until completion of the base slab.
4. The existing walls of the building over will be temporarily propped using steel beam needles at regular centres, as necessary. Temporary concrete pad foundations may be required beneath the props.
5. New concrete pad foundations and strip foundations will be constructed, where specified on the structural drawings.
6. New steel beams/lintels and columns will be installed, as specified on the structural drawings. These will be supported on the existing walls with concrete padstones, as specified on the structural drawings. The padstones will spread the load on the existing masonry down to acceptable levels.
7. The top of the new steel beams will be dry – packed to the underside of the existing walls above, and the existing walls will be repaired and made good, as required.
8. Horizontal propping, if required by design, will be installed at high level. This will be via a proprietary propping system such as Mabey props or similar.
9. Once the bulk excavation is down to approximately 500mm above the proposed base level, a second level of horizontal props will be installed, if required by design.
10. Excavation will then be carried out down to formation level.
11. The below – slab drainage for foul & ground water, sumps and pumps will then be installed.
The pumps will discharge the foul / ground water into the existing sewer system to the front of the property.
12. The new RC slab (ground – bearing slab) will then be constructed.
13. Once the new basement slab has gained sufficient strength, the horizontal propping across the site will be removed.
14. After the new basement slab has cured, a drained – cavity layer will be laid to the slab and walls.
15. Finally a layer of screed will be laid to form the finished floor.

POTENTIAL IMPACT ON NEIGHBOURING PROPERTIES

The proposed front lightwell will be relatively small in footprint measuring about 1.7 x 3.6m.

The method of construction above reduces the amount of potential ground movement and so minimises the effects of settlement of the adjacent structures.

Expected settlement is zero provided an experienced contractor is appointed who undertakes the works using good practice in accordance with the structural design and follows all agreed method statements, installing all necessary temporary vertical and lateral supports required. In practice some settlement is possible, but this should be no worse than 'aesthetic', according to the BRE's definition. If these conditions are met, any settlement that occurs is likely to be minimal and is likely to be accommodated in the elasticity of the superstructure. This has been borne out in the vast majority of past projects on similar properties.

The design and construction methodology, as described above, deals with the potential risks, and ensures that the excavation and construction of the proposed lightwell will not affect the structural integrity of the property and adjoining properties, especially that there are no changes proposed to the depth/size of the existing basement.

POTENTIAL IMPACT ON EXISTING AND SURROUNDING UTILITIES, INFRASTRUCTURE AND MAN – MADE CAVITIES

Any local services on the property's land will be maintained during construction and re – routed if necessary. The exact location of these services will not be known until the works commence. However, the impact will be negligible as these services will be maintained. If it is necessary to relocate or divert any utilities, the Contractor and Design Team will be under a statutory obligation to notify the utility owner prior to any works. This will be so that they can assess the impact of the works and grant or refuse their approval. There are no known man – made cavities (e.g. tunnels) in the vicinity of the proposed lightwell.

Mostafa Alakrash BSc. Civil Engineering

Director

M: +44 7588693045

F: +44 7053608213