

SFK CONSULTING

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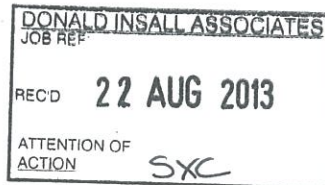
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Dear Anthony

27 JOHN STREET – STRUCTURAL ENGINEERING OUTLINE FOR PLANNING CONSENT

From a structural perspective the main component of the proposed work relates to the extension of the existing basement rearwards so as to encompass the area between the rear wall of No.27 John Street up to and under the modern mews building of No.21 John's Mews. Currently this area is largely an area of hard-standing and was presumably at one time a garden.

No.27 John Street is a typical Georgian terrace town-house of brick wall construction with timber beams and floor joists and at least partially rebuilt. It can be seen that various alterations have occurred historically, some in the latter half of the 20th Century. A key early stage in the works will be to open up areas of the building in order to identify the degree of restraint added to the rear elevation during its rebuilding. Nevertheless, the depth and position of the proposed basement extension allows enough room for load spread from the assumed profile of the existing foundations which therefore limits or negates the need for underpinning it.

No substantial structural works are proposed within No. 27 John Street. Secondary works associated with the tie restraint of the rear wall will be carried out if required post investigation.

No.21 John's Mews is a relatively modern mid to late 20th century building of steel and/or concrete framed construction, probably partially hybridised with masonry supporting elements. It may be expected to be comparatively robust.

The introduction of the extended basement under this building (No.21 John's Mews) along with some reshaping of the internal superstructure layout will necessitate underpinning which, subject to investigations, are expected to be of traditional mass concrete introduced sequentially in the traditional way with the excavated area formed and then lined with reinforced concrete walls, cavity drains etc. Temporary foundations within the footprint of the building may be needed during these works and it is possible that the best method for forming these would be with the use of mini or micro-piles. If so, these would be bored so as to limit vibration through the ground. Following investigative opening up works a plan of the

structural arrangement of the building will be produced "as existing". From this a carefully considered series of temporary works will be installed to allow sequential removal of load bearing columns/walls and replacement with beams, columns and, where necessary, localised enhancements to existing foundations. Exiting drains within the site will need to be re-laid.

The area between the two structures is currently ground level hard-standing. The northern boundary is defined by a brick garden wall which can simply be underpinned in the normal way. The southern boundary is formed by the northern external wall of the adjacent property's extension; a very modern feature for which drawings and details may exist. If there is an existing basement to this building very little work will be required to form the proposed new basement and if not it is likely that such a modern building will be straightforward to underpin in the traditional manner to facilitate the proposed excavation and construction. The walls will be underpinned in bays and, as the excavation is taken down, will be propped to prevent lateral displacement due to the removal of support. The new structure, which will approximate to a concrete box, will then be installed to provide permanent lateral support to the walls as well as full vertical support to the new garden above, which is required to have a minimum of 1000mm soil depth and will aid with the retention of surface runoff.

Key assumptions will be proved by a series of exploratory holes during the design development stage. A formal geotechnical survey also will be carried out to prove the current assumptions relating to the ground and groundwater. The formal survey will be analysed by a specialist geotechnical engineer and a further report produced to confirm the implications of the findings on construction method and long term effects.

The Environmental Agency map does not categorise the flood risk in this area of London. We are not aware of a flood risk from natural causes in this area of London.

The British Geological Survey borehole records, which found perched water at between 3.60m and 5.10m in the vicinity of the property, suggest that there will be no substantial penetration into the groundwater perched above the London clay and therefore limited complication during construction along with limited additional risk of flooding and/or ground water regime change caused to neighbouring buildings by the works. Water levels will nevertheless be monitored by piezometers installed during the detailed ground investigation and read at monthly intervals during the design and tendering periods up until construction commences and, if possible, during the construction period also.

Surrounding structures will be monitored for movement in line with the Party Wall Agreements made before construction commences on site. It is envisaged that this monitoring would continue beyond for up to 6 months beyond completion of the works.

I trust that this addresses the engineering requirements at this stage.

Yours sincerely

Richard Fewtrell

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