

JOB NO: SDS 187
DATE: 16 Jun 2017
REF: SDS 187 LETTER 01

Dear Gene,

Description of works

28 Burghley Road is a four story mid-terrace property in the Kentish Town area of London, UK.

The existing building is built of traditional solid brickwork and timber stud walls and timber suspended floors. The original structure has been altered over the years with the addition of a loft space and of an outrigger extension from ground floor above.

The current structure comprises timber floor joists spanning onto load bearing walls from ground floor to the loft level. The span direction of the timber floors is predominantly front to back in all the levels. The loft conversion undertaken introduced steel elements to support the roof and dormers. The outrigger extension is supported on load bearing walls and steps outwards from first floor and above. This step is supported on a cantilever RC slab.

The proposed works comprise the extension of the lower ground floor area to the rear to accommodate more living space, the removal of the internal timber stud wall that supports the stairs wall and the alteration of the configuration of the external stairs to the front of the house. The new flat roof the rear extension will also be used as a terrace and therefore was designed to accommodate living space loads.

The new rear extension involves the removal of the original back wall of the house and the outrigger walls at lower ground floor level. To reinstate the vertical support and lateral stability previously provided by the masonry walls, two new steel box-frames are proposed to be installed in the alignments of the original back wall of the house and the new rear of the back extension. A series of new steel beams it is also proposed to be installed to support the outrigger walls at ground floor level and to frame the new flat roof floor. Where new steel beams frame onto existing brickwork walls, new concrete padstones were designed considering a reduced bearing capacity of the existing brickwork. The new extension roof will be constructed using timber joists. The vertical support of the stairway wall at ground floor level is provided by a new steel beam that will span between the new box-frame and a new steel post hidden within the thickness of the spine wall. A new mass concrete pad footing has been designed to account for the reaction on the base of the steel post. The re-configuration of the external stairs to the front involves the construction of new retaining walls to accommodate the change in retaining levels. These retaining walls are proposed to be propped by the new the ground bearing slab and the half landing of the stairs. They have therefore been designed as cantilevers or fixed-pinned walls. It is of note that these fall onto the Category 0 of the "Design manual for roads and bridges" and therefore an Approval in Principle (AIP) document is not required.

Yours sincerely,

For and behalf of SD Structures,

Ruben Correia MSc BSc Hons