

2nd July 2024

Matthew Ashley
Formation Design and Build
Unit 1
38 Wembley Road
Wembley
HA9 8FJ

Dear Matthew,

**Re: Park Road London
Feasibility Study for Roof Extension
Our Reference: 11104/WP05**

Following our feasibility study of adding an additional storey on to Gransden House, Park Road, we write to confirm the capacity of the existing structure to carry the additional loads and the findings of the Feasibility Study as outlined in our report issue on 4th August 2020.

The superstructure floor construction consists of 200 mm thick hollow-core precast planks supported by traditional loadbearing masonry walls & steel beams where large span open areas are present. There is a transfer at Level 01 supporting masonry walls above, supported by a steel column at Ground Floor. The Ground Floor is constructed of a 150 mm beam & block Jet Floor. The development is founded on 1500 mm deep trench fill foundations. It is proposed to place a single storey lightweight steel frame extension on the roof

The Feasibility Study was based on lightweight finishes of 25kg/m², a further study was carried out using 50kg/m² which would accommodate a sedium roof of 44kg/m² with some allowance for waterproofing. An intensive green roof with 250mm of substrate growing medium would weigh approximately 275kg/m², an increase of 550% over that assumed. It would be expected that a roof finishes of 275kg/m² would be carried by a concrete frame rather than a lightweight steel frame. For comparison, the existing roof was designed for a finishes weight of 80kg/m².

Both studies highlighted that the existing transfer structure at Level 1 is at 96% capacity under existing loads and therefore the new structure needs to span over this area. The study found that two of the foundations are at capacity under the new loads and four foundations would be at 90% capacity, with the heavy roof these would be overloaded.

Yours sincerely,
for Manhire Associates Limited



Anna Beard
Director