

100 Nine Design Limited

Farlane Cottage
Bank Top Road
Draycott in the Clay
Ashbourne
Derbyshire
DE6 5HD



25th November 2021

Ms H Jones
Oak Farm
Drayton Lane
Drayton Bassett
DE78 3EF

Dear Helen

RE PROJECT :- 238/21 PROPOSED BARN CONVERSION

We confirm our recent receipt of the following architect's drawings –

- 8454-01-01 Site Layout Map – dated Nov/21
- 8454-03-01B Proposed Site Plan – dated Nov/21
- 8454-03-02 Proposed Ground Floor Plan – dated Nov/21
- 8454-03-03 Proposed First Floor Plan – dated Nov/21
- 8454-03-04 Proposed Elevation – dated Nov/21
- 8454-03-05 Proposed Elevation – dated Nov/21
- 8454-03-06 Proposed Garage Plan and Elevations – dated Nov/21

By - hssp architects
Pera Business Park
Nottingham Road
Melton Mowbrey
LE13 0PB

Inspection of the above indicates proposals to upgrade the interior and provide extensions to an existing agricultural building.

The existing building comprises a mix of concrete and steel portal frames and we confirm these structures were inspected and recorded in a report prepared by ourselves dated 11/11/21.

Within this report we showed that the existing construction is in a good structural condition and is capable of conversion without significant structural alteration. The barn is of a high quality standard for a steel/block barn construction.

S.A. Jordan, Bsc. CEng. M.I. Struct E.
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It is noted that the current proposal includes for a roof covering of "Profiled Sheet Steel/Zinc Insulated Roof Sheeting", we have assessed this type of construction to have a weight in the order of 0.115 Kn/m^2 .

The existing roof covering to which our previous report stated is "Asbestos Cement", which we consider to weigh some 0.150 Kn/m^2 – which is heavier than the proposed and we therefore state this type of roof covering in lieu of the existing is consider acceptable

However, if the Asbestos Sheeting is to remain and be over clad with the proposed Metal sheets, we again refer to our report (dated 11/11/21) and note that the effect of such over cladding would increase the overall roof loading by some 14%.

Inspection of our previously presented calculations concludes that this extra loading can be safely applied, without any detrimental effect on the proposals.

Examination of the architect's drawings indicates the separating of the internal space with a division/party wall, we have assessed this using the following applied loadings:-

Ceilings ---Dead @ 0.25 Kn/m^2
Ceilings ---Super @ 0.25 Kn/m^2
Walling ---Dead @ 3.50 Kn/m^2
Flooring---Dead @ 1.50 Kn/m^2
Flooring---Super@ 1.25 Kn/m^2

Summing the above and multiplying by the relevant areas gives a load of 39.85 Kn/m Run

We have stated the existing slab is of a good and consistent quality, hence assuming it is of a nominal 150mm thick unreinforced concrete with a minimum of 150mm hardcore sub-grade, this provides a spread onto the underlying ground of some 1035mm, which equates to a Applied Ground Pressure beneath the wall of some 38.5 Kn/m^2 .

The foundation checks and visual assessment of the existing ground (viewed via a trial pit excavation) showed adequacy with a maximum permitted Safe Bearing Pressure of 110 Kn/m^2 , hence we consider that building the proposed party wall off the existing is satisfactory.

In conclusion, our opinion is that the current proposals will not structurally interfere with the existing constructions, nor will the provision of modest external extensions.

Yours Faithfully



S.A.Jordan BSc (Hons) C.Eng M.I.Struct.E