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DE SILVA STRUCTURES
CONSULTING STRUCTURAL ENGINEERS

15th October 2024

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Martin Webb
14 Southwick Street
BN42 4TE

Our Ref: NDS/6701/002

Dear Martin

14 Southwick Street, Southwick, BN42 4TE

I confirm visiting the above property on Friday 4th October 2024 to carry out a structural inspection to report on the additional loading on the rafters from the proposed solar panels as indicated on Feral Studio's drawing 24-106-10.

1.0 It is understood nine solar panels weighing approximately 20Kg per panel are to be added to the roof of 14 Southwick Street. The current roof is a clay tiled roof. The additional dead loading on the roof from the solar panels would be approximately 10% of the total dead load.

2.0 The access hatch to the west high level roof section was removed to expose a number of the original timber rafters and supports. In this area the rafters appeared to be original 100mm x 75mm timber rafters at approximately 375mm centres. The rafters appeared to be in good condition. It was not possible to inspect all the rafters supporting the solar panels on the west side, but there was nothing noted to suggest they may be a different size or in a poorer condition. Calculations undertaken on the rafters assuming they were 100mm x 75mm indicated that in my view the rafters would be adequate to support the additional weight from the proposed single and five solar panels on the upper section.

3.0 The loft access hatch to the lower roof level on the east side was removed to expose the rafters. It was noted the original rafters had been strengthened by the addition of 100mm x 50mm rafters at approximately 375mm centres alongside the existing rafters. On the south side, where the solar panels are going to be placed, the majority of the original rafters were present and new rafters placed alongside the existing to strengthen the roof. Due to the limited access, it was not possible to inspect the rafters at low level, however the lack of a bow in the external roof slope, in my view it makes it likely the new rafters have been placed alongside the existing for the full length. Calculations undertaken on the rafters assuming they were the new 100mm x 50mm rafters at 400 cts, indicated in my view they would be adequate to support the additional loading from the three proposed solar panels.

4.0 In conclusion in my view the existing rafters appear to be adequate to support the additional loading from the proposed solar panels.

I trust this report is satisfactory for your purposes, however, should you have any queries please do not hesitate to contact me.

Yours sincerely

[redacted]

Nigel de Silva
BSc (Hons) C.Eng. M.I.Struct.E.