10108APH6
28th July 2023

Mr N. Richings
Facilities & Office Projects Manager
Alliance Pharma plc & Alliance Pharmaceuticals Ltd
Avonbridge House
Bath Road
Chippenham
Wiltshire
SN15 2BB

Dear Nigel,

Re. Proposed Attic Conversion, Avonbridge House, Chippenham

Further to my inspection of the roof structure of Avonbridge House from the attic above the south west end of the building, we have carried out an analysis of the structural elements including the primary trusses that support the purlins and 'common' rafters. The analysis was required as there are proposed changes to the roof covering including installing photovoltaic (pv) solar panels on the south facing roof and introduction of rooflights.

Based on the specification of the pv panels that we have been given, these will be installed by removing the existing roof tiles in specific areas and fixing a support frame directly to the rafters through the roof membrane into which the pv panels will be fitted. The advantage of this type of system is that there is effectively no significant change to the loading, i.e. substitute roof tile for pv panel.

Additionally, rooflights are proposed but again there will be no significant change to the loading on the roof structure. 'Common' rafters will need to be removed but the rooflights will be supported by introducing trimming and multiple rafters either side. The exact design will depend on the specification of the particular rooflight.

The results of our analysis found that no change to the primary structure is required because of the proposed changes. However, we did find that the existing 'lower' purlins that span between the roof trusses are undersized and we recommend strengthening by installing a steel plate to one side of the purlin. This will be required to all 'lower' purlins and on both sides of the roof. I have enclosed a drawing showing the proposed strengthening.

I hope that the above is clear but if you do have any queries, please do not hesitate to contact me.

Yours sincerely
For and on Behalf of Structural Solutions,

[redacted]

Mark Mitchell BSc CEng MICE | Director

CC Paul Montague – AlderKing
Spencer Black – Designscape Architects
Martyn Hind – AMH Projects