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13th October 2016

Ref: **14051** – Yew Gardens, Waterloo: Parapet stability.

Dear James

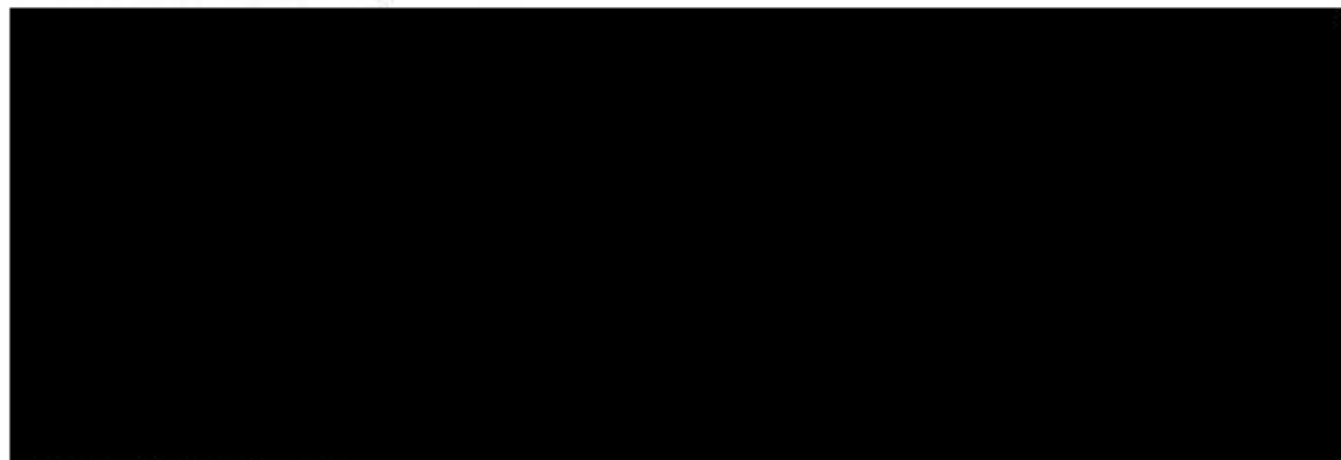
Following the query received by Redrow Homes from Winchester Council, regarding the stability of a free standing masonry parapet over the main entrance to flats Block B, I confirm the requested design/stability checks are complete as requested. Please find the structural calculations enclosed.

The first set of calculations carried out were on a freestanding parapet feature of equivalent dimensions to those indicated on the Tetlow King elevation drawing P.176-181.e1 rev A. These calculations demonstrated the parapet only had approximately twenty percent of the required capacity and thus did not have sufficient strength to meet current masonry design standards, potentially becoming unstable. A further set of calculations were produced to determine the maximum height of parapet that could safely be constructed to resist the wind suctions likely to be experienced. Calculations for both of these scenarios are enclosed. Please note that snow drifting was also an issue, in addition to the wind loads, for the original, higher, parapet. (Not so for the reduced height parapet). Snow load calculations were not carried out as they were deemed superfluous. Calculations were produced in accordance with current British Standards and using market leading masonry design software.

It was calculated that the maximum height of unrestrained masonry parapet was 525mm above a line of support, which in this case is the wall plate height. One of the limiting factors in the calculations is the presence of the structural opening below the line of support.

Should you require any further information or wish to discuss please don't hesitate to contact me.

Yours sincerely



Jon Hughes
B.Eng (hons)

Encs: Calculations x1