The Battersea Power Station Puzzle

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For those who don't know London, Battersea Power Station is a London landmark beside Chelsea Bridge and the Thames. This was (is??) the world's (or Europe's?) biggest brick building, using 61M bricks. Battersea A was built in 1929-1935. Battersea B was built in 1937-1953. The final result is a massive rectangular building with four massive chimneys, at the four corners of the rectangular building, which are visible from

The chimneys are 337ft high. Battersea A closed in 1975. Battersea B closed on 31 Oct 1983. A friend recently described it as looking like a dead table.

The chimneys are basically at the corners of a rectangle, whose long sides run approximately North-South. The dimensions are approximately 50 x 160 m. The problem arises because one sees the chimneys on the skyline as one drives into London from the west and one notices that the relative positions of the chimneys shift as one drives along the north side of the Thames.

It appears to me that there will be some point where th chimneys will appear regularly spaced along the skyline. Is this true? If so, where does one have to be to see this effect? For consistency, let us label the four chimneys as A, B, C, D, going clockwise from A at the SW corner which we take as the origin of a coordinate system. So A is at (0, 0), B is at (0, 160), C at (50, 160), D at (50, 0). John Sharp has found a site which does architectural views and has sent the view below, but there are no dimensions given.

View from Wandsworth Road rail station overbridge.

I posed this problem at various meetings over the last few years and it appeared in the Open University mathematics society's journal a few years ago. I posed it to Prof. Simon Salomon, of King's College London, and his colleagues John Armstrong and John Silvester, who are geometers and they found it interesting enough to study and they have essentially solved it.

The desired points lie on conic sections!