

"Self-Build-Pro" Dispels The Doom AND Gloom!

"The Great Escape!"

The huge weight reduction gained by converting to timber-frame, combined with the vastly increased resilience to resist settlement/subsidence damage; literally saved this next speculative housing development from financial disaster!

Designed as a traditionally-constructed spec. housing development comprising 15 houses and bungalows; the possibility of the 6 bungalows being changed to timber-frame construction had already been discussed but the architect and the consultant civil engineer both insisted that traditionally designed reinforced concrete rafts with piles underneath would still be required due to the bungalows being sited on an area of 'made-up ground'.

With the development scarcely underway; market pressure started depressing 'selling prices' and because of the high construction costs involved; the developer decided to scrap all 6 bungalows as no longer being financially unviable ~ even so; only developing the houses would mean that the remaining development would struggle to yield a profit at all!

When "Self-Build-Pro" produced the costings for doing the bungalows in timber-frame using a light-weight ring-beam foundation on piles; they showed a huge cost saving ~ but the architect and the consultant civil engineer were adamant that it could not be done and refused to countenance it! It was only after "Self-Build-Pro" pointed out that the NHBC Regional Engineer would accept both the timber-frame superstructures and "ring-beam" foundations, if design warranties were provided, that the consultant civil engineer's objections were finally over-ruled by the developer!

"Self-Build-Pro" prepared the timber-frame design drawings and calculations for Building Regulations compliance and the piling work for the bungalows started on site; but in the absence of revised engineering drawings for the ring-beams, everything was in danger of grinding to a halt again! "Self-Build-Pro" came to the rescue (again) by producing the reinforced concrete ring-beam design and reinforcement specification so that the foundation work could proceed without further delays!



Twenty-five years later ~ the six bungalows are as good as new and there have been **NO** settlement problems whatsoever!



With only two ring-beams left to do; the revised engineering drawings finally appeared ~ showing identical steel reinforcement, etc. The only difference was the consultant civil engineer had designed the ring-beam with a 610 mm overall width; whereas "Self-Build-Pro" had chosen a 460 mm width to minimise the cost of the construction ~ so the 460 mm width continued to be used for the last two bungalow ring-beams as well!

As expected; the NHBC Regional Engineer accepted the respective design warranties without making any objection or raising any queries about the changes.

The timber-frame wall-panels were site-fabricated to "Self-Build-Pro" design and specification and the whole development was successfully completed with the bungalows eventually turning out to have achieved a larger profit-margin than any of the houses!

(NB: Despite ending up designing two different lots of foundations for the bungalows; the consultant civil engineers received a reduced fee based upon the construction cost of the cheaper "ring-beam" ~ in the circumstances; the developer felt under **NO** obligation to pay for the 'abortive' design work for the concrete raft foundations because the consultant civil engineers ~ employed as the structural 'experts' ~ should have been the "ones" suggesting the use of timber-frame and the cheaper "ring-beams" in the first place!)

