

The following statement is intended to discuss the requested 150mm deep window reveal with the development and the issues associated with its implementation. These issues include thermal efficiency, aesthetics, and practicality. We are proposing to change this to a 100mm reveal with a slimmer window frame than that approved. The result is an overall slimmer window detail that is more in-keeping with the original design intent.

The below photographs illustrate a sample panel that has been built on site using a 100mm reveal, brick soffit and Linar flush sash window (brochure attached). Following which is a more detailed discussion about the issues associated with proceeding with a 150mm reveal and the impact this would have on the scheme as a whole.



Window frame set back with 100mm reveals and 100mm brick soffit



The largest manufactured window sill is 225mm which includes the width of the frame and the brickwork overhang required of 50mm



This is the new Flush fit casement window profile by linier which is slimmer to the one already specified



This image shows the difference in the thickness of the profiles. The smaller window is what is currently specified.

Thermal efficiency

The majority of “standard” new homes are constructed with a masonry cavity construction with a cavity ordinarily between 100 and 150mm to achieve required insulation levels. To minimise thermal bridging at the window reveals there is ordinarily a cavity closer that spans the width to maintain the insulation level. The window is then fixed with straps back to the inner leaf of blockwork (or timber) and overlaps the outer leaf of brickwork to create a seal, or is fitted behind the brickwork to create a weather check. This standard construction allows for a window reveal up to the depth of the brickwork, which is 102.5mm. See below extracts from Kingspan (leading insulation provider) and Premier Guarantee who are one of the leading building warranty providers.

If we were to adopt a 150mm reveal the size of the cavity closer would be reduced to 50mm, thus reducing the insulation levels and thermal efficiency.

Kingspan

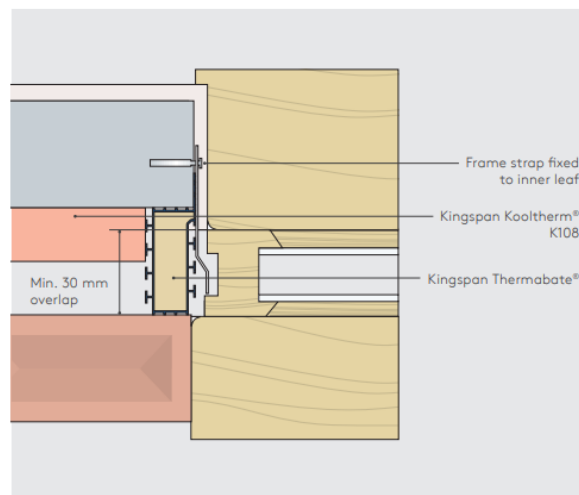


Figure 9: Window Frame Fitted in a Separate Fix to Kingspan Thermabate®

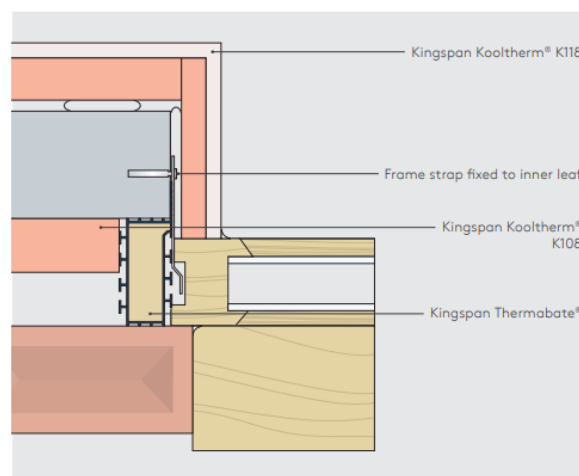
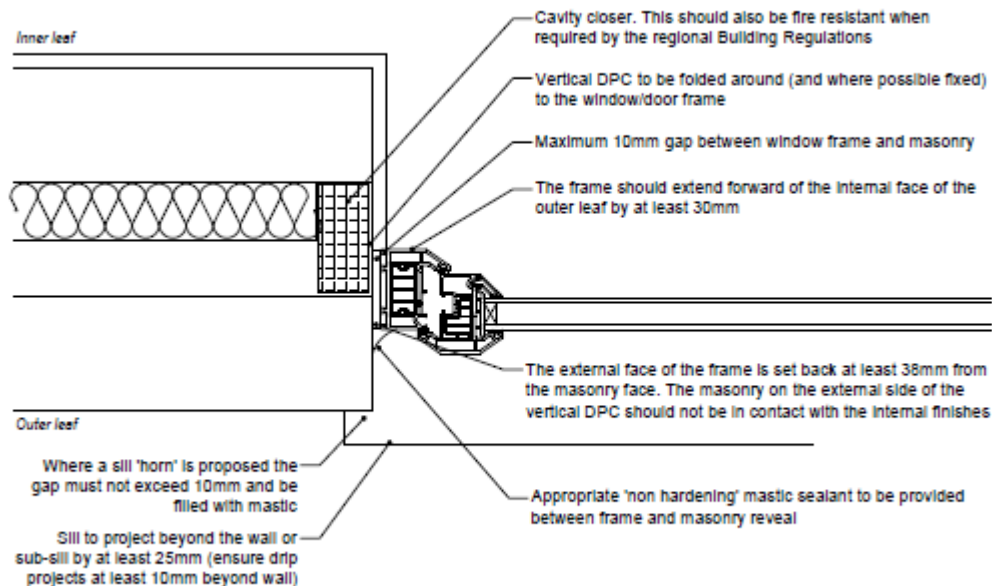


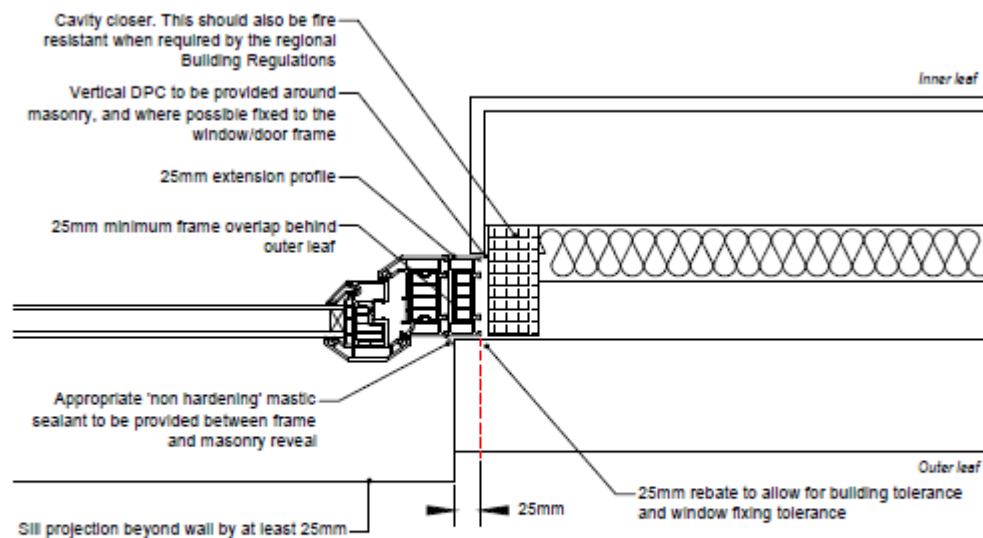
Figure 14: Check Reveal

Premier Building Guarantee

Typical window reveal detail (normal exposure)



Checked rebate window frame detail for areas of severe exposure



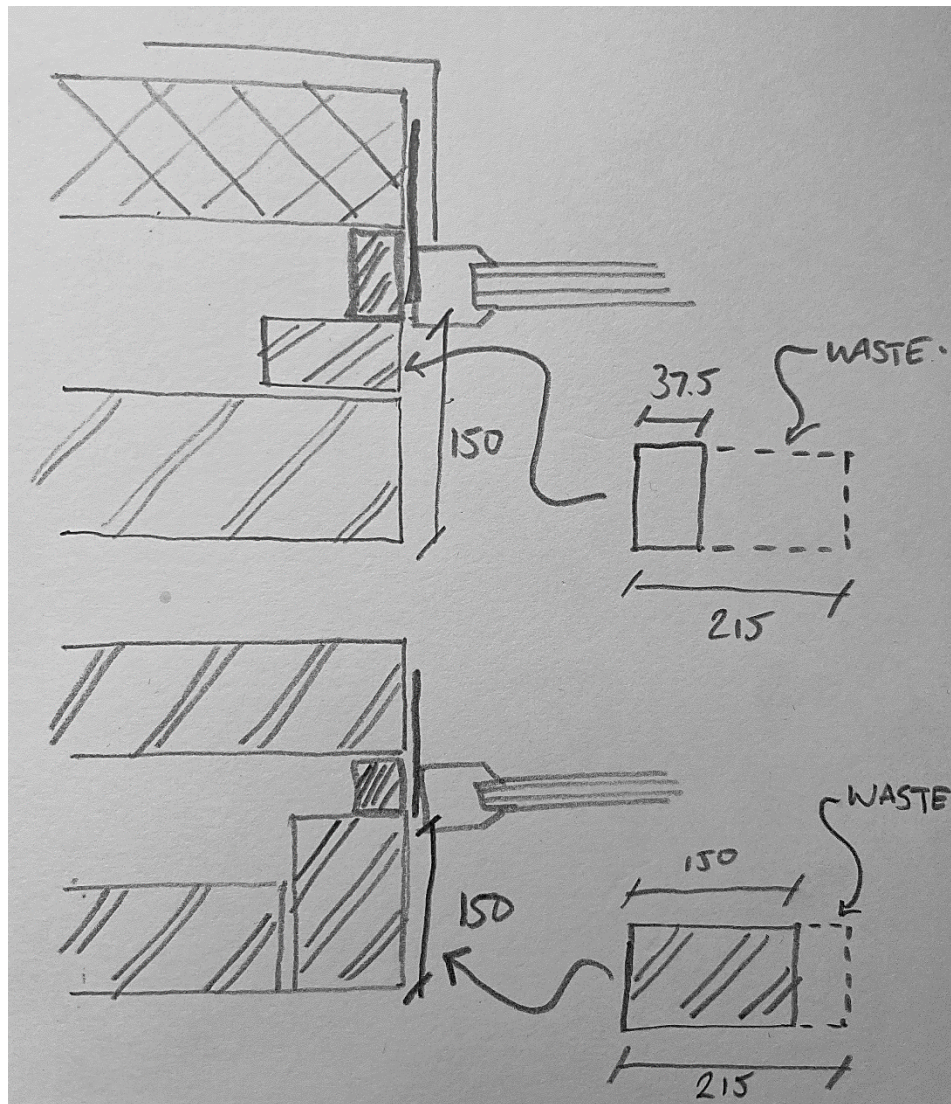
When installing window/door frames in a checked rebate, allow for the frame to be deeper:

- To accommodate the 25mm rebate, and
- To allow for opening lights to open clear of the masonry/render.

Practicality

A standard metric brick is 215 x 102.5mm. Therefore to create a 150mm deep reveal requires an additional brick for every other course. The reveal brick then has to be cut on every course. This exercise is labour intensive and also increases wastage. This situation is also repeated on the

window heads where we have soldier bricks with the brick exposed on the soffit. In this instance we then need to introduce an additional cut brick behind the soldier which creates the same issues as the reveal. On a development of this scale this has an impact on the overall delivery of the scheme.



Aesthetics

In the immediate context the older Edwardian properties have a single brick reveal, with the more moderns properties from 1970/80s having similar. However, it is worth noting that the vast majority of all these properties have had replacement windows fitted that has reduced the reveal depth.

Although a deeper window reveal can give a building more depth and definition, a 150mm deep reveal is not the best option for homes of this scale. This detail is often found on larger scale apartment buildings where the larger facades benefit from the deeper reveal to break up the elevation. Equally these buildings are often externally insulated with a brick slip applied which creates the deeper reveal without reducing the thermal efficiency.

