The British Museum: Perimeter Properties

Design note to clarify internal door strategy in relation to applications 2015/3203/P & 2015/4344/L

Consented plans (referenced above) acknowledged the removal and addition of a number of internal doors as part of the amended layouts which generally sought to reinstate original volumes by removing a corridor route linking the properties at upper levels. This short explanatory note is intended to clarify the implemented strategy for both existing and new doors and is directly linked to the fire strategy report which has been included as part of this current application. Proposals ensure compliance of the properties in regulatory terms and safeguard both the occupants and historic fabric throughout.

The three alternative strategies have been:

1) Non invasive upgrade of existing doors

2) Replacement of existing doors

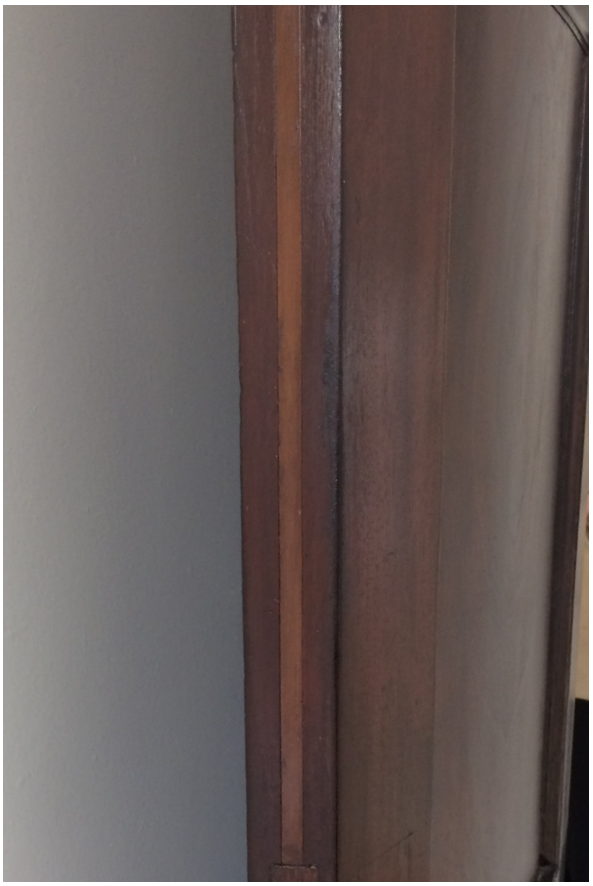
3) New fire doors

These strategies have been recorded in a full door schedule for each property. They are summarised below.

1) Non invasive upgrade of existing doors

Where existing doors require fire protection they already included intumescent seals around perimeter rebates in the door itself or within the frame. To ensure longevity and the sufficient fire resistance, these existing seals have been replaced with combined smoke seal and intumescent strips. The existing rebates have been utilised, mitigating the requirement for any new intrusive alteration.

For a limited number of historic mahogany doors *(total 6no. located off the main stair hall at ground floor entrance level of numbers 8-10 Montague Street)*, additional protection has been provided for the panelled elements which represent a weak point in terms of fire resistance. 'Sealmaster fireface' has been utilised in these instances. This is a product that was developed for English Heritage (Historic England) following a review of fire safety in the wake of the Windsor Castle blaze. Fireface membranes now protect many of the most important historical buildings in the UK.



Example of new combined smoke seal and intumescent strip in existing rebate of existing door

Finished door with sealmaster fireface membrane applied to curved mahongany door panels.

This is a thin membrane, 1.8mm, which is adhered to both sides of the door panels to provide 30 minutes' fire resistance. It contains a thin layer of reinforced intumescent material. During a fire, the intumescent compound swells and chars, insulating the surface of the timber beneath, delaying the effects of heat on the door's integrity. Between the intumescent layer and the timberwork, a specialised woven layer ensures that even if the panel fissures under intense heat, the risk of 'flaming' is avoided. The layer can also be later removed without damaging the existing timber work. It has a birch face ply finish which is stained to match surrounding timberwork. The images right and above right illustrate doors with this product applied. It is a very subtle and reversible means of achieving the required fire resistance.

Finished door with sealmaster fireface membrane applied to flat mahongany door panels.

2) Replacement of existing doors

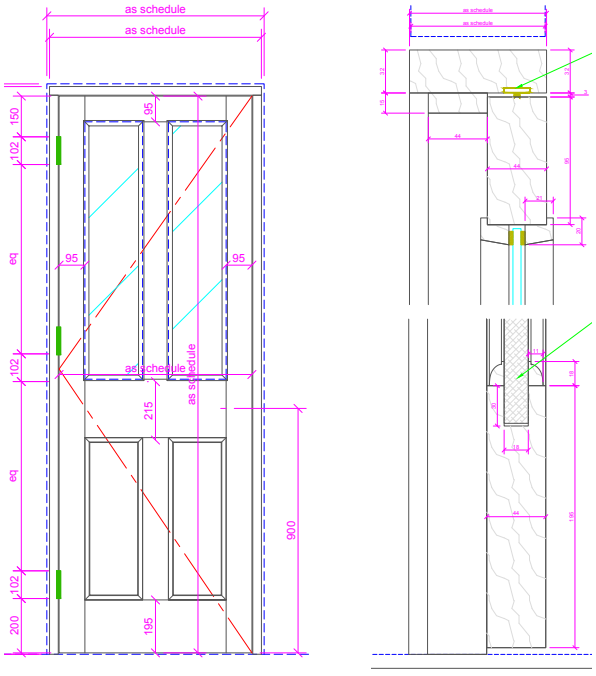
Following a thorough assessment by a fire engineer, a limited number of existing doorsets were considered to be unsuitable for fire protection upgrade. These have been replaced with FD30 fire doors to stylistically match the existing doors that they replace.

This is generally limited to doors under stairs and at the upper levels (lower historic significance) of the properties. These instances are highlighted in blue in the appended door schedules and comprise a very small number of doors at each address.

Example of existing door not suitable for fire protection upgrade. Replaced with new door to match

3) New fire door

Where new doors have been consented as part of the amended layouts in the approved applications, they have been constructed as FD30 fire doors to stylistically match the existing and adjacent. Construction drawings have been developed for each instance by a specialist sub contractor and are based on the existing adjacent situation. New doors are highlighted in yellow in the appended door schedules.



Construction drawings of new fire rated timber door illustrating mouldings to match the existing adjacent