



Historic England

Building Services and Emergency Planning Team

Marble Hill House

Report on compartmentation





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BUILDING SERVICES AND EMERGENCY PLANNING TEAM MEMO

Subject: Marble Hill House

To: Ndai Halisch - English Heritage

From: Charlie Harris

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Date: 10/01/2017

I refer to the recent meeting at the above premises to look at the compartmentation issues for the proposed project on installation of a platform lift and maintenance works to the house. This report has not considered compliance to building regulations and to the Fire Safety Order as full application plans not seen.

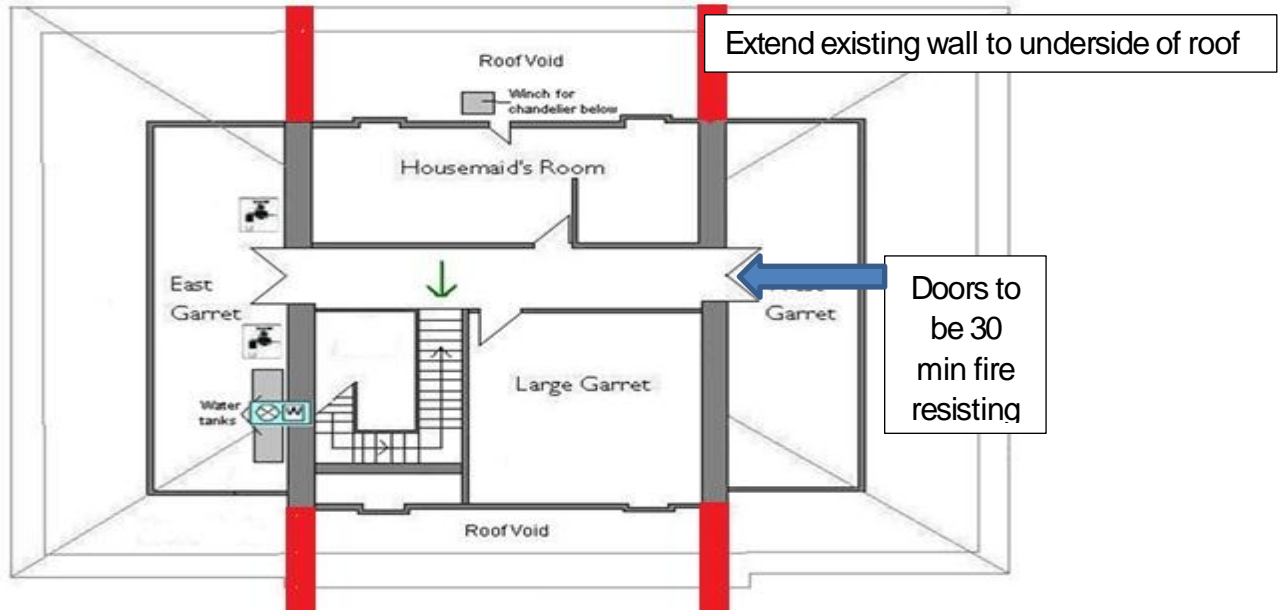
Post-project it is anticipated that the house will be open 5 days per week during summer (Winter opening TBC) (likely following standard Wed-Sun opening although TBC), free flow, with free entry. There will be a minimum of 11 volunteers and 2 staff members required to fully open the house. The ground floor, 1st floor, parts of the 2nd floor and parts of the Garrett rooms will be open. The shop will be removed from the house and will be in the coach house to create a commercial hub away from the historic interiors. Anticipated visitor numbers are 80,000 per year.

Guided tours and private group visits to a maximum of 10 persons will be an additional offering, wedding ceremonies currently stand at approximately 6 per season to a maximum of 50 persons within the house.

The premises is subject to the Fire Safety Order and will require the fire risk assessment to be reviewed in light of the alterations being carried out installing a lift to the first floor and the change of viewing for members of the public. It is understood that this will be carried out by English Heritage.

Compartmentation issues noted at the time of inspection were as follows;

Extending the compartment line to the existing walls to the East and West Garret will afford some level of protection and reduce the compartment sizes on the third floor level considerably. As the roof felt and tiles sit directly onto roof battens and rafters, it will be necessary to ensure that fire spread cannot compromise the adjacent compartment in the event of fire. Fire resistance must be provided either side of the fire wall to ensure that fire spread does not occur. Door leading to the East and West Garret should be 30 min fire resisting.



A common void is present under the middle section of the floor beneath the Garret floor; it appears to be large enough that fire detection would be required for this area under the British Standard for fire alarms. Access for maintenance purposes would be problematic and difficult to maintain. It is recommended that an engineered approach could be taken to consider a form of suppression system as a compensatory feature for the lack of compartmentation with the additional positives of giving the premises greater resilience in the event of fire (property protection). It was also noted that there were penetrations to the ceiling where the chandelier passes through it. A register plate in the large Garret Room should be investigated to ensure that fire has not the ability to pass through any void or duct that may be hidden behind this plate.



The electrical riser, passing vertically through the stone staircase from ground floor to roof Garret level is an area where fire could spread. Wiring should be checked for compliance and any void or duct should be fire stopped as required to prevent fire spread.



The door leading from the stone staircase to adjacent of the Plaid Room on the second floor is not considered to be fire resisting and will be required to be upgraded or replaced, similarly on the first floor to the door from the stone staircase adjacent to the Great Room. All doors on the first floor leading to the main staircase require to be fire resisting.

Ground floor electrical cupboard appears to have little appropriate fire stopping, it could not be ascertained if compartments have been penetrated and fire stopped. It is understood that major works to the electrics are to be included in the project, a check to confirm fire stopping should be undertaken.



The shop book shelf rear wall is not fire resisting and should be upgraded to give 1 hour protection due to the incorporation of the lift platform being introduced. The fire strategy should be revisited to ensure that means of escape for disabled visitors are compliant with the Fire Safety Order.



The stone staircase becomes a critical area for means of escape purposes from the upper floors of Marble Hill House. There are breaches to the compartmentation at ground floor level, mainly due to the heating system passing through the wall. This heating unit should be relocated to the hall or alternatively the grill in the hall should be fitted with an intumescent grill to prevent fire spread. The heating unit is located within a critical stair, if it is to be retained it should be encased within a fire resisting cupboard.



I could not ascertain at the time of the inspection if the cupboard in the disabled toilet leads to a void or duct, likewise to what purpose the grills are for in the floor located in the breakfast parlour.

Other areas noted that the fire risk assessment should review were, door leading to under stairs requiring maintenance to gaps around door. Glazing and upgrade to door leading from entrance hall to main hall with gaps likewise to door to breakfast parlour. The basement has numerous breaches to walls ceilings caused by penetrations by contractors to fit services and electrics.



It should be remembered that a well-constructed lath and plaster ceiling or wall, will offer at least 30 minutes fire resistance when in good condition, it is dependent on the keying being sound and the laths being securely fixed. Every effort should be made to retain the original aspect wherever possible. As sound insulation between floors and walls will be a requirement in most areas, there is an opportunity to upgrade the fire resistance from above between the joists and within the walls. This may require some evasive techniques; however it is clear that some intrusive investigation work will be required to take place to ensure that compartmentation is achievable.

If I can be of any further assistance please do not hesitate to contact me.

Charlie Harris

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