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Erddig, Wrexham
Heritage Impact Assessment

For The National Trust



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1.0 Introduction

This application includes the installation of passive fire protection works and the upgrading of the existing Fire Alarm System (FAS). A detailed assessment was carried out by a consultant surveyor, a National Trust surveyor and accredited conservation architect. This concluded that there are currently several breaches in the existing compartmentation lines and the FAS is old and does not comply with current regulations nor meet the requirements of National Trust insurers; all of which present an unacceptable risk to the mansion and its occupants.

This document has been produced to support an application for listed building consent to install a series of passive fire protection interventions across the property and replace the FAS in its entirety with a L1/PI system that is compliant with current regulations. While the guidance of Cadw's 'Heritage Impact Assessment in Wales' has been closely followed, this assessment is also proportionate to the scale and nature of the works being proposed.



Aerial view of Manor House, Google image

2.0 Objectives

When the National Trust first took ownership of Erddig Hall in 1973, a programme of restoration was carried out over four years. However, since then, the property has been maintained in a piecemeal fashion, with repairs and alterations carried out as and when required. The existing FAS has subsequently been insensitively installed, with little regard to the building fabric or historical significance of the property. The present need to replace the existing FAS therefore presents a great opportunity to remove previous interventions that have had a detrimental impact on the character of Erddig Hall and replace these with a comprehensive system that is both compliant with concurrent standards and that will have a far less visual impact on the property. This submission includes a schematic proposal to replace the whole FAS. An initial stage will be to test all of the wiring and if any is suitable to be retained this will be considered in order to minimise the scale of the works. Similarly, low quality and poorly implemented modern interventions will be removed and replaced with passive fire protection systems that are sensitively designed and fully reversible.

By far the most prolific issue across Erddig Hall is small breaches in the compartmentation lines, such as gaps in fire barriers, holes in ceiling lines and unsealed service penetrations. All such breaches would be sealed by a 3rd party accredited contractor in accordance with the National Trust's guidance on Service Penetrations & Hidden Voids (See Appendix A). For the most part, these breaches are small in nature and are located in spaces of lower significance, such as the back rooms of the third floor and roof voids. Their impact on the overall character of Erddig Hall can be considered negligible.

Following an assessment of the historic doors, it was also concluded most offered inadequate fire protection and so widespread upgrading of the doors would be required. However, upon further assessment, it was subsequently found that alterations to the historic doors would be disproportionately invasive and could be mitigated with the introduction of a small number of new fire doors, a new partition wall and a single fire curtain to the bottom of the existing staircase. The new fire curtain, partition wall and fire doors are reversible in nature and have been designed in such a manner that has the least visual impact on the historic character of the property.

The overriding objective with the proposed interventions has been, where possible, to improve the fire protection of the property while at the same time mitigating the visual impact of any such intervention. Regardless, these improvements are critical to the safety and prolonged life of the property, and to make it safe for ongoing use.

3.0 Context

Erddig Hall was constructed 1683-7 by Cheshire mason Thomas Webb for Joshua Edisbury, who became bankrupt shortly after its completion in 1709. In 1721-4, London lawyer John Mellor extended to the north and south, with two-storey wings. Upon his death in 1733, the house was bequeathed to his nephew Simon Yorke. Erddig remained within the Yorke family for 240 years, with each successive owner being named either Simon or Philip. Remodelling of the property was instructed by the Yorke family in 1773-4 by James Wyatt and in 1827-8 by Thomas Hopper.

The nationalisation of the Coal Board in 1947 meant coal was mined from beneath the house and along with serious subsidence, financial troubles saw a rapid decline. Shortly after inheriting Erddig, Philip Yorke III entered into negotiations with the National Trust, which finally took ownership in 1973. Philip died in 1978 as the last Squire of Erddig, however, he lived long enough to see Erddig Hall returned to its former glory following a four-year programme of restoration.

Erddig contains some exceptionally fine neo-classical interiors, such as the magnificent State bedroom with its fragile bed embroidered in Chinese silk and chapel with late 18th century fittings. Other rooms, less ostentatious, are typical of the upstairs-downstairs layout of a great country house. These rooms are very plain and reflect their uses as service accommodation.



Ornate interiors. Including Red Bedroom (Picture) & State Bedroom with its fragile bed embroidered in Chinese silk - currently being conserved



Kitchen

Historical Significance

Erddig is founded on the ancient settlement of Castell-y-Glyn, where a Norman Motte and Bailey overlooked the Afon Ddu and Afon Clywedog. Joshua Edisbury commissioned Thomas Webb to construct Erddig, partially furnish the interior and lay out the gardens in 1683. However shortly after its completion, Edisbury fell into debt and in 1716 ownership of Erddig transferred to his primary creditor, lawyer John Mellor. Mellor was hugely significant to the history of Erddig and added two wings in 1720 to create a suite of 'rooms of parade' along the East Front. These rooms were filled with furnishings of outstanding quality.

Following Mellor's death in 1733, Erddig was inherited by his nephew Simon Yorke, the first in a line of Yokes that would own the property for the next 240 years. Simon's son Philip inherited Erddig in 1767 and started a long association with William Emes, who was commissioned to resolve the flooding of the lower meadows and increase the land value. Philip also remodelled the West Front of the house, redecorating and rearranging many of the principle rooms and introducing yet more fine paintings and furniture. He bought and demolished neighbouring Sontley in order to relocate the estates agricultural operations away from the house. This opened up the river to which local people were invited to walk along and enjoy the Estate.

Simon Yorke II inherited the estate in 1804 and made significant alterations to the interior of the House in 1826. His son, Simon Yorke III was very active with woodland management, felling and replanting trees in the plantations, while also instigating many improvements and modernisations including the construction of Manor Farm.

Ownership transferred to Philip Yorke II in 1894 and marked the beginning of the estates decline. His son Simon Yorke IV inherited the property in 1922, however, following the depression, two world wars and ongoing mining subsidence causing damage to the property, there was very little money available and so no further alterations or improvements were made to Erddig. Philip II's younger brother, Philip III inherited the estate in 1966 and was determined to keep the property and its contents intact. This led to a gradual deterioration of the estate and lengthy negotiations with the National Trust who took possession in 1973 and continue to hold the property today.



Present day image of the front elevation



Present day image of the rear elevation

4.0 Significance

With a continuity of ownership stretching 240 years and the antiquarian interest of the Yorkes, the social history of Erddig is recorded to a level of detail few other country houses can match. Furthermore, the remarkable series of portraits of servants, with associated verses, makes this one of the most fascinating of social stories. The comprehensive records of the estate and close social connections with those who have owned and served under it means Erddig has a high historic and cultural significance.

Erddig has always been significant to the local economy, continuing to employ people, albeit within the tourist rather than service sector. Up to 40 people are employed by the National Trust to manage the property during the visitor season, which as a major tourist destination, sees some 80,000 visitors every year. In addition, the estate is also utilised by thousands of people for walking, orienteering, road racing, hot air ballooning, cycling and countless other recreational pursuits; a Country Park open from dawn till dusk as Philip Yorke I had originally intended. The Erddig estates continued influence on the local community and economy further contributes towards its social value and cultural significance.

The River Clwedog and surrounding lands have heavily influenced the prosperity and history of Erddig. William Emes attempted to prevent flooding by changing the course of the river and in so doing, created two levels to the surrounding meadows which increased the value of land. While flooding is still a problem today, the land is fertile and farming has since been successful. Indeed, good relationships have continued with tenant farmers and residential occupants in the houses and cottages of the estate, many of whom are second / third generation and remember the Yorkes in residence.

These close social ties between the estate, its owners and tenants that continue to today, along with the influence it has had on the surrounding landscape, further reinforce the high cultural significance of the Erddig estate.

The Erddig estate is a designed landscape consisting of a cleverly integrated composition of parkland, pleasure grounds, vistas, woodlands, water courses and gardens. Successive generations added to and enhanced rather than changed the works of their predecessors. In doing so, much of the fundamental structure remains in place, with extensive records showing their development overtime. As such, Erddig holds a high historic as well as aesthetic significance.

While the later stages of the Yorke line saw a decline in the fortunes of Erddig, paradoxically it was the lack of resources and the reluctance of Simon Yorke IV to part with anything in the house that saved the house and park from modern, destructive improvements that may have been detrimental to its overall significance. As such, many of Erddig's Neo-classical interiors retain many of their historic fixtures and fittings, including fine examples of 18th century Chinese wallpaper, a chapel with late 18th century fittings and magnificent State bedroom featuring a fragile bed embroidered with Chinese silk. As such, Erddig maintains a high evidential as well as aesthetic / architectural significance.

5.0 Summary of Condition

As with most historic buildings, Erddig was not designed with modern services, indeed when Simon Yorke IV inherited the estate in 1922, he became a recluse with no electricity or telephone installed, instead keeping away from the outside world. Where they have been installed, they rarely fit well with the interior design and quality of the historic fabric. As it currently stands, the later service interventions do not comply with concurrent regulations and an upgrade is well overdue. The items that require upgrading are as follows:

Fire Alarm System (FAS)

The existing fire alarm system is old, noncompliant with current regulations and has a number of known faults. During piecemeal alterations redundant fittings and cabling have been left in place, adding to the visual impact of modern services.

Fire Doors

Following an assessment of the historic doors, it was concluded that most offer little to no protection to the spread of fire. This assessment also revealed incomplete / compromised compartmentation of the property.

Access Hatches

There are a number of access hatches to the third floor and roof void that are damaged and no longer function as required.

Gap Filling

There are various minor gaps within the interior fabric of the building that compromise the fire compartmentation of the interior spaces.

Ceilings / Underside of Staircases

There are a small number of ceilings / underside of staircase that have become unstable / suffered widespread damage. This has substantially compromised there to provide horizontal compartmentalisation to the spread of fire.

Roof Void Fire Barriers

Within the roof void / third floor, the existing fire barriers / lath and plaster partition walls offer little to no protection to the spread of fire due to poor execution / installation or system failure due to the system being beyond its serviceable lifespan / damage.

Security Interventions

The main entrance door to the Western elevation is currently in a poor state of repair, offers little weather protection to the interior and is seized shut. Furthermore, later security bars catch on the inner shutters and prevent them from closing properly.

6.0 Proposals

The proposals have been set out in the schedule of works, detailed drawings and marked-up plans showing the location of each fire protection measure.

Fire Alarm System (FAS)

The proposed works to upgrade the Fire Alarm System and install passive fire protection measures will be undertaken in a sensitive and considered manner. Schematic drawings for the proposed Fire Alarm System have been included within the application, however, due to the nature of the works it is not possible to accurately pinpoint the routing / positioning of cables until a specialist contractor is appointed and works commence onsite. Much of the wiring will be buried in walls and under floorboards and so the routes of the existing cables is not known and decisions about the new cable runs will have to be taken onsite, under the direction of a qualified professional and in close collaboration with Wrexham Borough Council and CADW. It is anticipated that a full test of the existing installation including wiring performance will be undertaken, following which the FAS proposal will be reviewed as to whether piecemeal or overall replacement is required. If this changes the installation proposed compared to the submitted proposal revised FAS drawings will be provided.

The proposed Fire Alarm System is set out in the schematic drawings and specification. Every attempt will be made to avoid causing disruption and / or irreversible damage to the historic fabric. Where floorboards are to be lifted, this should be done with the utmost care so as to avoid irreversible damage. Where cables are to be chased into walls, a neat cut shall be made in the plaster only and following completion of the installation, the wall made good using lime-based

plaster to create a seamless finish. The contractor will be briefed at commencement on the required conservation principles. Regular site inspections will be carried out to monitor the works and discuss any conservation issues that arise during the works. The installation process will be a continuously evolving process, depending on what is uncovered during the course of the works (informed the pre-start testing), and so regular engagement with the design team, Trust, Wrexham Borough Council and CADW will be essential. The contractor will be required to identify any redundant fittings as works commence, so that they can be carefully removed.

Fire Doors

The installation of fire doors is the most visually significant item of work being undertaken. To maintain, or in some instances create, a fire compartment, existing doors will need to be upgraded to achieve a 30-minute fire rating and new 30-minute fire doors installed. Following an assessment of the historic doors, it was concluded that most offer little to no protection to the spread of fire. Where later interventions had been implemented such as the fitting of intumescent sheets and the like, they would still be ineffective in the event of a fire due to the underlying structure of the door. The wholesale upgrading of the historic doors to achieve the required fire compartmentation would have involved very invasive interventions and widespread replacement with modern doors.

A reassessment of the proposed works however found that the most invasive interventions could be mitigated through the precise siting of new fire rated doors in a small number of locations. The new doors will either be fire door blanks or designed to replicate the design of the historic doors, refer drawings and information below.

New door locations include:

- Between the G08 and G17 corridors on ground floor – EH.03
- Between the G22 and KG01 corridors on ground floor – EH.04
- Within the T11 Electrical Cupboard on third floor – EH.07
- Along the T01 Corridor on third floor – EH.08

In addition, the following interventions will also be required:

- Install new partition wall between the G11 Garden Museum and adjacent corridor on Ground Floor – EH.01
- Install a new fire curtain to the bottom of the staircase of the G08 corridor on ground floor. – EH.02
- Replace existing double doors between T01 and T10 corridors on third floor with like for like 30-minute fire rated set of doors. – EH.06
- Rehang the existing door to bottom of Stair V on third floor and install a new 30-minute fire rated door within the existing door reveal. – EH.09
- Rehang the existing door between KG06 and KG08 and install a new 30-minute fire rated door within the existing door reveal within KG08 – EH.10

Minor upgrades to the other historic doors will still be required, however, they will largely consist of installing reversible seals to the perimeter of the door frames. For details refer schedule of works.

Distribution Boards

Existing distribution boards are to be enclosed in 60 minute enclosures. Where possible, proprietary enclosure systems are to be used (in bespoke sizes where required) or alternatively 60 minutes fire rated partitions with access hatches. The locations are indicated on the detail drgs (2300's) and specific installation arrangements can be agreed for each instance.

New Doors

Full details of new doors can be seen on detail drawings 2300's.

EH.03

The opening between corridors G08 and G17 on ground floor is a significant breach in one of the main compartments of the property. Therefore, a new fire rated door will be installed within the existing painted timber panel reveal. To lessen its visual impact, the door will be fitted with a hold-open closing device and so will only return to its closed position during closing hours and in the event of an emergency.

The new door will be a simple 6 panelled door, to match surrounding doors. This will allow for it to not be obstructive or distracting when held open (when the hall was in its default state of visitor attraction), but upon closer inspection would be obvious as a new intervention so as not to confuse the historic record.



EH.03

EH.04

The existing door between the ground floor corridors of G22 and KG01 does not offer sufficient protection between the compartments that divide the main mansion with the stable yard / kitchen. Therefore, a new fire rated door with overhead fanlight will be installed within the reveal that divides the two compartments. To lessen the visual impact of the new door, it will be fitted with a hold-open closing device and so will only return to its closed position during closing hours and in the event of an emergency.

The new door will be a simple 6 panelled door, with overhead fanlight to match surrounding doors. This will allow for it to not be obstructive or distracting when held open (when the hall was in its default state of visitor attraction), but upon closer inspection would be obvious as a new intervention so as not to confuse the historic record.



EH.04

EH.07

The historic door of the T11 Electrical Cupboard sits on a compartmentation line, however, it offers very little protection. To avoid causing irreversible damage to the historic door to meet the fire protection requirements, a new fire door blank will be installed in a new partition wall built within the entrance of the T11 Electrical Cupboard. As the historic door of the T11 cupboard will remain shut unless maintenance or repair works are required, there will be very little visual impact on the principle corridor of the third floor.



EH.07

EH.08

The existing opening to the North of the T01 Corridor on Third floor is a significant breach in one of the main compartments of the property.

A new set of timber double fire doors set into a new stud partition will therefore be installed. The new doors will replicate the appearance of the existing glazed double doors to the South of the T01 Corridor.



EH.08

Other Interventions

EH.01

The existing opening between the G11 Garden museum and adjacent corridor on ground floor is a significant breach in one of the main compartments of the property.

New fire rated partition to be installed within existing opening.

The new partition will be decorated to match adjacent walls and will be set within the existing opening, allowing for the existing architrave and lining on the corridor side to remain as existing and a reveal expressing the opening to be left on the garden museum side.



EH.01

EH.02 - Fire Curtain

The opening to the bottom of the staircase to the South of the ground floor G08 corridor is a significant breach in one of the main compartments of the property. The initial proposal considered installing a set of double doors within the G08 corridor, however, this was considered too invasive. Therefore, a new fire curtain is proposed. This will offer the protection required in the event of an emergency, however, during normal operation, will remain hidden within a headbox installed alongside an existing down stand in the ceiling that will lessen its visual impact. Guide rails will run vertically down each side of the opening, however, they will be painted to match the colour of the existing walls to lessen their visual impact.

Alongside the existing architrave of DG 15 there is an existing bell ring pull that connects to an upper floor. In order to retain this, the guide rails for the fire curtain need to be fixed partially over the line of the existing architrave, and remove one section - as shown in drawings.

Alternatives reviewed included:

- Moving the existing bell ring pull - however concerns over it potentially stopping working once moved has meant this solution was eliminated

- If the curtain was positioned further along the corridor it would interrupt the backboard for the servants bells and therefore this solution was eliminated



EH.02

- Position closer to the stair the other side of the ring pull - the curtain needs to continue to the ground in order to be effective and therefore this solution was eliminated

Therefore whilst the proposal will result in the loss of some fabric by altering the architrave, it is considered the least damage to allow the essential fire protection curtain to be installed.



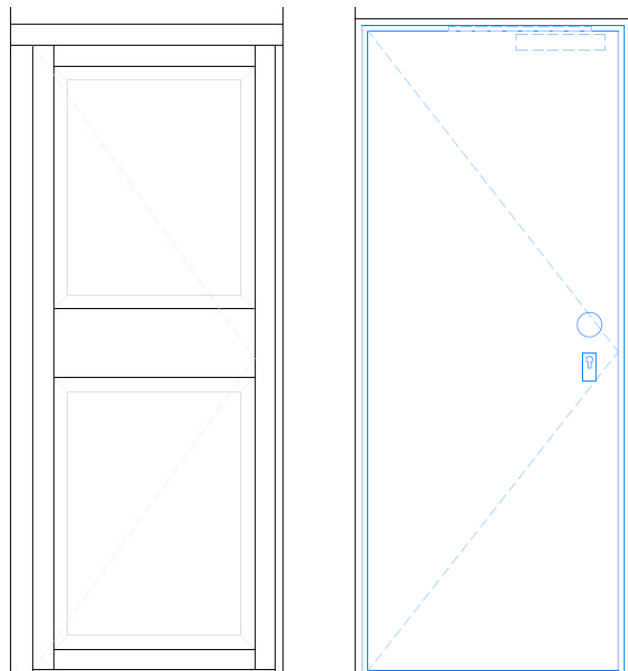
01
0010 As Existing



Visuals showing options of door or fire curtain options.

EH.09 - Replacement Door

The existing timber panel door to the bottom of Stair V on the back of house area of the third floor offers little to no fire protection. Due to the narrowness of the existing stiles, bottom and top rail, it is not possible to upgrade this door without significant alterations to the frame elements. As such, it will be replaced in its entirety with a new fire rated door designed to be as plain and neutral as possible so as not to draw the eye.

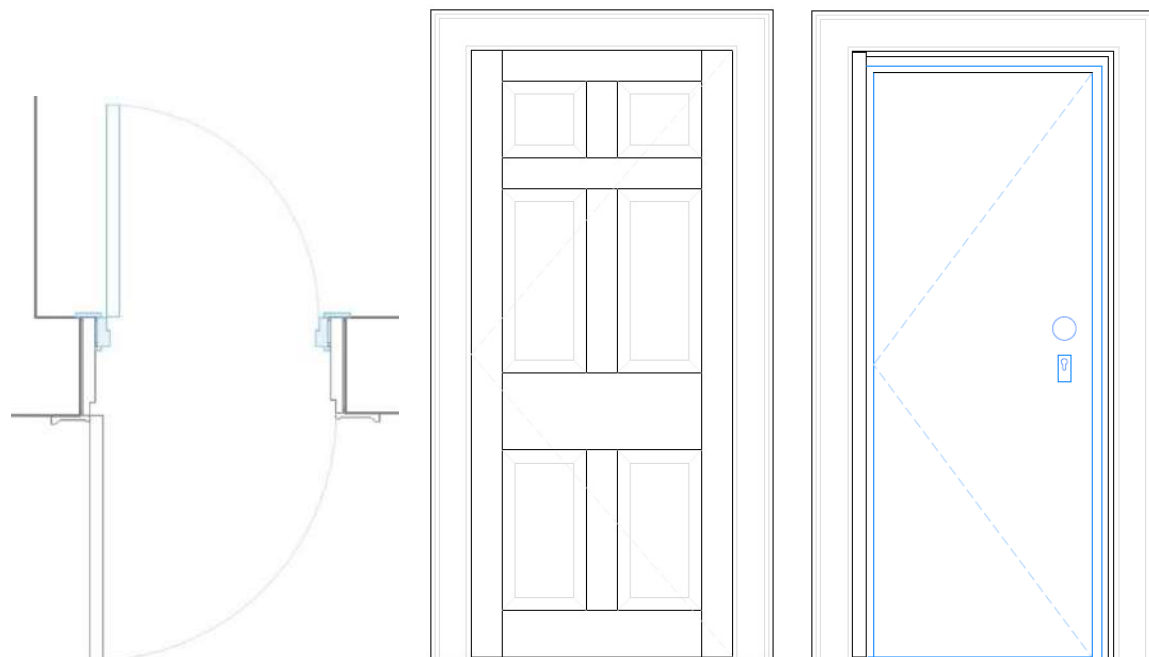


EH.09 Existing elevation

EH.09 Proposed elevation

EH.10 - Replacement Door

The main electrical intake for the property is located within KG08, however, at present the existing door is too thin and fragile to afford 30-minute fire protection, let alone the required 60-minutes. The existing door will therefore be rehung to open into the adjacent corridor and a new 60-minute fire door installed within the existing door reveal. This will provide the required fire protection while allowing the historic door to remain in-place. The new door will be as plain and neutral as possible so as not to draw the eye.



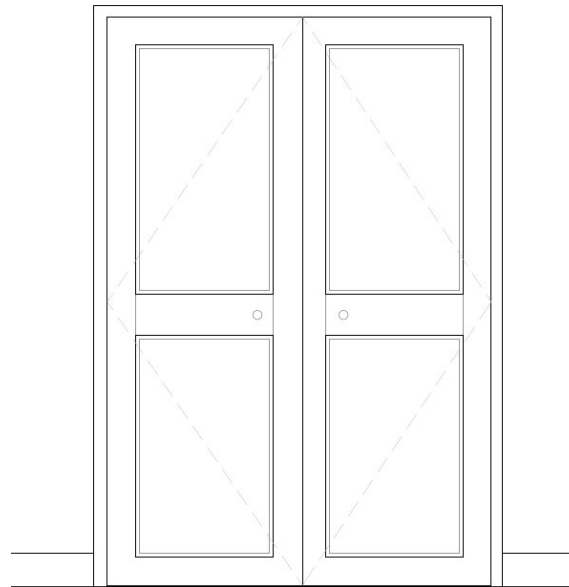
EH.10 Proposed rehanging of existing door and installation of new fire door (blue) within existing reveal

EH.10 Elevation from KG06 corridor when existing door is shut, i.e., no visual impact

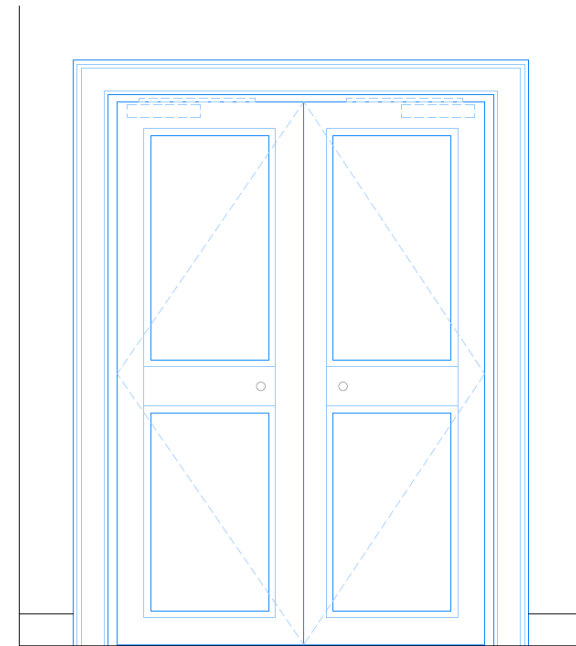
EH.10 Elevation from KG06 corridor when existing door is open, i.e. when entering room only

EH.06 - Replacement Doors

The existing double doors that sit between the corridors of T01 and T10 and the glazed panes have at some point been overlaid with intumescent card. This is a good example where previous upgrades have had a detrimental visual impact on the space, while at the same time failed to provide adequate fire protection, because the stiles and rails are too narrow to avoid distortion. There is also a sizable gap between the door leafs and frame. The existing doors will therefore be carefully removed and replaced with a new set of fire rated double doors. The new doors will be designed to replicate as closely as possible the existing doors, albeit with slightly wider rails and stiles to avoid distortion and new architraves to the North side of the door to match the profile of the existing architraves seen on the South side of the door. The door set will be relocated within the corridor to line up with the proposed compartmentation lines.



EH.06 Existing Elevation



EH.06 Proposed Elevation

Access Hatches

Where the existing access hatches to the third floor and roof void are damaged and no longer function as required, timber batons will be screwed to the face of the existing fireline board to protect the edges from further damage. Any missing boarding will be filled with a boarding to match. Where the existing combined intumescent and cold smoke seals prevent the access hatch from closing correctly, they will be replaced with new intumescent strips and the existing self-closing device adjusted to allow the access hatch to close correctly without bouncing off the stops.

Gap Filling

The 3rd party accredited contractor will undertake a full survey to assess all service penetrations, gaps and holes and carry out all necessary fire stopping works in accordance with the National Trust guidance on Service Penetrations & Hidden Voids and to an agreed sample.

Distribution Boards

Existing distribution boards are to be enclosed in 60 minute enclosures. Where possible, proprietary enclosure systems are to be used (in bespoke sizes where required) or alternatively 60 minutes fire rated partitions with access hatches. The locations are indicated on the detail drgs (2300's) and specific installation arrangements can be agreed for each instance.

Ceilings / Underside of Staircases

Where the historic lath and plaster ceilings have become unstable / suffered widespread damaged, the damaged sections will be carefully removed back to a stable line. Any damaged / missing laths will be replaced with riven oak laths and a 3-coat lime plaster finish applied to the entirety of the ceiling (ensuring any gaps or holes are sealed and a minimum thickness of 25mm is maintained, not including the laths or plaster nibs). Upon completion, the ceiling will be redecorated to match the original colour.

The T11 Electrical Cupboard is a back-of-house area and so the existing ceiling will instead be consolidated by installing Masterboard to the underside and sealing the perimeter with an intumescent mastic. Similarly, the T07 Cupboard is also a back-of-house area and so the underside of the adjoining staircase will be lined with a fireline board and plaster skim. Upon completion, the ceiling will be redecorated to match the original colour using a breathable paint system.



Examples of proprietary distribution board enclosures.

Roof Void Fire Barriers

Within the roof void, the compromised later addition mineral wool insulation partition between RV01 and T03 will need to be removed and replaced with fully reversible ridged ablative batts installed between the joists / studs and sealed around their edges with intumescent mastic. Similarly, the incomplete / poorly executed lath and plaster partition to the staircase walls will need to be protected with ablative batts sealed around their edges with intumescent mastic.

Security Interventions

The main entrance door to the Western elevation is currently in a poor state of repair, offers little weather protection to the interior and is seized shut. Furthermore, latter addition security bars catch on the inner shutters and prevent them from closing properly. So as not to compromise the security of Erddig, the security bars will be reinstalled in a new position that will be agreed once works commence onsite.

7.0 Justification

All the works discussed in this statement and detailed in the application drawings are necessary for the safety of the visiting public and members of staff / volunteers and the protection and long-term prosperity of the fabric of Erddig.

The existing situation is unsatisfactory, in regards to fire protection, the visual impact of later interventions and the subsequent impact on the historical, cultural and architectural significance of Erddig. The works will be pre-planned and proceed under the direction of a conservation professional.

While there will be some very minor damage caused to the historic fabric, this will be insignificant when compared to the resulting benefit to the wider community of maintaining Erddig open to the public and allowing the cultural impact of the estate to continue unabated. Therefore, on balance, the proposed works will have a significantly positive impact on the ongoing conservation of Erddig.

Appendix I

Erddig

A Grade I Listed Building
in Marchwiel, Carmarthenshire
Source ID: 1533

Location: Situated c3km W of Marchwiel, reached from a series of by-roads running E from the A483. Set within an extremely fine landscaped park of C17 and C18 character.

History

Plas Original house built for Joshua Edisbury by Thomas Webb, freemason of Middlewich, Cheshire in 1683. In 1716 the house was acquired by John Meller of London who extended it, probably in two close but separate building campaigns, by adding double wings to each side. In 1733 the house passed to the Yorke family and in the 1770s a major phase of alteration was undertaken. The brick W front was remodelled and faced in stone by local architects J & W Turner working to a design attributed to James Wyatt; some interior rooms were remodelled at the same time using craftsmen associated with Wyatt. The lay-out has not been substantially changed since then and the retention of many of the earlier features reflects the antiquarian and genealogical interests of the Yorke family. The house was acquired by the National Trust in 1973 and a major phase of restoration was carried out during the 1970s by Robert Heaton of the Anthony Clark Partnership.

Exterior

East front: Red brick with stone dressings and string courses, slate roof hipped to central block, stone chimneys. 2 storeys with basement and attic. Windows are generally 12-pane sashes with casements to the basement. Near-symmetrical elevation which consists of central 9 window block with central pedimented entrance with steps leading up to it, above is a window with a stone architrave, and stone balustrading in the parapet. There is a range of 7 dormer windows in the steeply pitched roof. This block is flanked by 2-window wings with stone quoins, stone plinth to these and central block. Outermost 3-window wings of brick of slightly different colour have sashes to first floor, ground floor left side has a range of 3 bullseye windows with 9-pane sashes below, right hand range ground floor relates to the chapel and has a single bullseye window with a square-headed window beneath it on each side of a tall central arched window. The window levels do not match the inner wings.

W front refaced in ashlar in severe late C18 Neoclassical style; ashlar plinth, 3 storeys. Upper 2 storeys have 12-pane sash windows, ground floor 9-pane sashes. Central projecting 9-window pedimented block flanked by 6-window ranges; the central block has central entrance with doorcase with attached Ionic columns. Perron stone stairs with cast-iron swept handrail. The left hand return side has an entrance with stone doorcase.

Interior

The present arrangements originated with the late C18 remodelling though many rooms, particularly those on the W side retain earlier panelling. Patent decorative tin ceilings were introduced to some rooms as a fire precaution in the early C20. The ground floor has a suite of rooms on the W side consisting of entrance hall and drawing room both decorated in late C18 Neoclassical style with plaster friezes by Joseph Rose & Co and chimneypieces by John Devall the younger. Library to the N. Entrance hall leads to main staircase on left and back stair to right. Rooms on the E side consist of an oak-panelled saloon; the dining room to S contains a decorative scheme by Thomas Hopper in 1826 containing Doric screens with scagliola columns and a severe Greek Revival coffered ceiling. 2 rooms to the N of the saloon are known as the Tapestry Room and Chinese Room. The latter has roundels of rare C18 Chinese handpainted wallpaper affixed to the walls. This room leads to the family pew in the chapel. Change of level down to the chapel which has furnishings of various C18 dates, some brought from elsewhere. The walls are decorated with a stencilled scheme of 1907-9. Of the windows two are C18 windows by Joshua Price incorporating medieval glass which were brought from Wimpole Hall, Cambridgeshire in the early C20. Upper floor consists of suites of bedrooms on each side of a central long gallery which runs EW giving views of the formal gardens to the E and landscape park to W. The state bedroom on the N side has hand-painted Chinese wallpaper of late C18 date. To the S nurseries now staff accommodation, to the N a suite of family rooms now used for storage and offices. One of these has a fragment of wallpaper designed by Walter Crane. The attic has servants bedrooms.

The basement level has rooms off a long corridor and preserves an axis with family rooms to the N and service rooms to the S. The entrance from the W forecourt leads to a former billiard room known as the Tribes Room which was decorated late C18 with coats of arms of noble Welsh families. Other rooms include the butler's pantry with C18 fittings and fixtures, and the servants hall. Rooms in the S wing include accommodation for the housekeeper and agent. The kitchen range is separately listed.

Topmost floor under oak trussed roof with morticed principals (for purlins of former roof with dormers); remarkable bedroom retains deep Georgian bed recess with wide, flattened and keyblocked arch.

Stone flagged basement retains vaulted cellars, strong room and slate shelving to wine store.

Appendix II

NT Guidance: Service Penetration

Planning Policy and Guidance

The Ancient Monuments and Archaeological Areas Act 1979, Planning (Listed Buildings and Conservation Areas) Act 1990 and Historic Environment (Wales) Act 2016

The Act is legislative basis for decision making on applications that relate to the historic environment.

Sections 16 of the Planning (Listed Buildings and Conservation Areas) Act 1990 states that:

in considering whether to grant permission for development which affects a listed building or its setting, the local planning authority, or as the case may be the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses.

National Planning Policy for Wales (PPW) (2018)

The Planning Act introduced a statutory purpose for the planning system. Any statutory body carrying out a planning function must exercise those functions in accordance with the principles of sustainable development as defined in the Well-being of Future Generations Act. The planning system is central to achieving sustainable development in Wales. It provides the legislative and policy framework to manage the use and development of land in the public interest so that it contributes positively to the achievement of the well-being goals.

The primary objective of PPW is to ensure that the planning system contributes towards the delivery of

sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015 and other key legislation. A well functioning planning system is fundamental for sustainable development and achieving sustainable places.

Assessing the Sustainable Benefits of Development
Planning authorities should ensure that social, economic, environmental and cultural benefits are considered in the decision-making process and assessed in accordance with the five ways of working to ensure a balanced assessment is carried out to implement the well being of Future Generations Act and the Sustainable Development Principle. There may be occasions when one benefit of a development proposal or site allocation outweighs others, and in such cases robust evidence should be presented to support these decisions, whilst seeking to maximise contributions against all the well-being goals.

Key factors in the assessment process include:

Social Considerations

- who are the interested and affected people and communities;
- how does the proposal change a persons way of life, which can include: – how people live, for example how they get around and access services; – how people work, for example access to adequate employment; – how people socialise, for example access to recreation activities; and – how people interact with one another on a daily basis
- who will benefit and suffer any impacts from the proposal;

- what are the short and long-term consequences of the proposal on a community, including its composition, cohesion, character, how it functions and its sense of place; and
- how does the proposal support development of more equal and more cohesive communities.

Economic Considerations

- the numbers and types of long term jobs expected to be created or retained;
- whether, and how far, the development will help redress economic disadvantage or support regeneration priorities, for example by enhancing local employment opportunities or upgrading the environment;
- the contribution the development would make to achieving wider strategies, for example the growth or regeneration of certain areas;
- the contribution this economic activity will have to wider policy goals; and
- how the proposal would support the achievement of a more prosperous, low carbon, innovative and resource efficient Wales.

Cultural Considerations

- how far the proposal supports the conditions that allow for the use of the Welsh language;
- whether or not the development protects areas and assets of cultural and historic significance;
- have cultural considerations and their relationships with the tourism industry been appropriately maximised;

- if the proposal protects areas known for their cultural value in terms of music, literature, sport and the arts; and
- vibrant cultural experiences.

Environmental Considerations

- will important features of the natural and built environment be protected and enhanced;
- are the environmental impacts of development on health and amenity limited to acceptable levels and the resilience of ecosystems improved;
- is environmental protection for people and natural resources, property and infrastructure maximised and environmental risks prevented or appropriately managed;
- will high standards of restoration, remediation, decommissioning and beneficial after uses be achieved;
- will the depletion of non-renewable resources be minimised, waste prevented and the efficient and most appropriate use of materials made and re-use and recycling promoted;
- will the causes and impacts of climate change be fully taken into account through location, design, build, operation, decommissioning and restoration; and
- does it support decarbonisation and the transition to a low carbon economy.

When considering planning applications, planning authorities should seek the views of all relevant local authority departments and external specialist public bodies, particularly those with responsibility for Economic Development, Housing, Transport, Regeneration, Culture, Heritage and Environment/ Biodiversity, as this can assist

in the identification of multiple benefits and an integrated approach to balancing priorities against policy on an individual basis. This will also enable the full range of costs and benefits over the lifetime of development to be taken into account, including those which cannot be easily valued in monetary terms, and considerations relating to timing, risks and uncertainties addressed.

Recognising the Special Characteristics of Places The Historic Environment

The historic environment comprises all the surviving physical elements of previous human activity and illustrates how past generations have shaped the world around us. It is central to Wales's culture and its character, whilst contributing to our sense of place and identity. It enhances our quality of life, adds to regional and local distinctiveness and is an important economic and social asset.

The historic environment is made up of individual historic features which are collectively known as historic assets. Examples of what can constitute an historic asset include:

- Listed buildings;
- Conservation areas;
- Historic assets of special local interest;
- Historic parks and gardens;
- Townscapes;
- Historic Landscapes;
- World Heritage Sites; and
- Archaeological remains (including scheduled monuments).

The ways in which historic assets are identified can vary.

The most important historic assets often have statutory protection or are included in formal registers which identify them as being of special historic interest. Other assets yet to be formally identified could include buried archaeological remains.

Conserving and Enhancing the Historic Environment and its Assets

The Ancient Monuments and Archaeological Areas Act 1979, Planning (Listed Buildings and Conservation Areas) Act 1990 and Historic Environment (Wales) Act 2016 provide the legislative framework for the protection and sustainable management of the historic environment in Wales. PPW provides the national planning policy framework for the consideration of the historic environment and this is supplemented by guidance contained in Technical Advice Note 24: The Historic Environment and Cadw associated best practice guidance on the historic environment.

The planning system must take into account the Welsh Government's objectives to protect, conserve, promote and enhance the historic environment as a resource for the general well-being of present and future generations. The historic environment is a finite, non-renewable and shared resource and a vital and integral part of the historical and cultural identity of Wales. It contributes to economic vitality and culture, civic pride, local distinctiveness and the quality of Welsh life. The historic environment can only be maintained as a resource for future generations if the individual historic assets are protected and conserved.

Cadw's published Conservation Principles highlights the need to base decisions on an understanding of the impact a proposal may have on the significance of an historic asset.

The Welsh Government's specific objectives for the historic environment seek to:

- protect the Outstanding Universal Value of the World Heritage Sites; conserve archaeological remains, both for their own sake and for their role in education, leisure and the economy;
- safeguard the character of historic buildings and manage change so that their special architectural and historic interest is preserved;
- preserve or enhance the character or appearance of conservation areas, whilst the same time helping them remain vibrant and prosperous;
- preserve the special interest of sites on the register of historic parks and gardens; and
- protect areas on the register of historic landscapes in Wales. It is important that the planning system looks to protect, conserve and enhance the significance of historic assets. This will include consideration of the setting of an historic asset which might extend beyond its curtilage. Any change that impacts on an historic asset or its setting should be managed in a sensitive and sustainable way.

It is the responsibility of all those with an interest in the planning system, including planning authorities, applicants, developers and communities, to appropriately care for the historic environment in their area. The protection, conservation and enhancement of historic assets is most effective when it is considered at the earliest stage of plan preparation or when designing proposals new proposals.

Any decisions made through the planning system must fully consider the impact on the historic environment and on the significance and heritage values of individual historic assets and their contribution to the character of place.

Listed Buildings

There should be a general presumption in favour of the preservation or enhancement of a listed building and its setting, which might extend beyond its curtilage. For any development proposal affecting a listed building or its setting, the primary material consideration is the statutory requirement to have special regard to the desirability of preserving the building, its setting or any features of special architectural or historic interest which it possesses.

For listed buildings, the aim should be to find the best way to protect and enhance their special qualities, retaining them in sustainable use. The continuation or reinstatement of the original use should generally be the first option, but not all original uses will now be viable or appropriate.

The application of planning and listed building controls should recognise the need for flexibility where new uses have to be considered in order to secure a building's survival or provide it with a sound economic future.

The demolition of any listed building should be considered as exceptional and require the strongest justification.

Applicants for listed building consent must be able to justify their proposals, show why the alteration or

demolition of a listed building is desirable or necessary and consider the impact of any change upon its significance. This must be included in a heritage impact statement, which will be proportionate both to the significance of the building and to the degree of change proposed.

Technical Advice Notes (TANs)

Planning Policy Wales is supplemented by a series of Technical Advice Notes (TAN). Technical Advice Note 24: The Historic Environment contains detailed guidance on how the planning system considers the historic environment during development plan preparation and decision making on planning and listed building consent applications. TAN 24 replaced some of the Welsh Office Circulars.

Technical Advice Note 24: The Historic Environment Conservation Principles

1.10 The Conservation Principles for the Sustainable Management of the Historic Environment in Wales (Conservation Principles) were published in 2011 and provide the basis upon which Cadw discharges certain statutory duties on behalf of the Welsh Ministers. Conservation Principles should be used by others (including owners, developers and other public bodies) to assess the potential impacts of a development proposal on the significance of any historic asset/assets and to assist in decision making where the historic environment is affected by the planning process.

1.11 There are six principles.

1. Historic assets will be managed to sustain their values.
2. Understanding the significance of historic assets is vital.
3. The historic environment is a shared resource.
4. Everyone will be able to participate in sustaining the historic environment.
5. Decisions about change must be reasonable, transparent and consistent.
6. Documenting and learning from decisions is essential.

1.12 Applicants and other organisations are strongly encouraged to make use of these Conservation Principles when considering development proposals and other works to historic assets. It is important for those responsible to understand the heritage values and assess the significance of the historic assets that will be affected. There are four heritage values which need to be understood before the significance of the asset can be assessed.

- Evidential value
- Historical value
- Aesthetic value
- Communal value

An understanding of these values forms the basis of a statement of significance prepared as part of a heritage impact statement.

5 Listed Buildings

5.13 When determining a listed building consent application, the local planning authority should consider the following issues:

- The importance and grade of the building and its intrinsic architectural or historic interest.

The physical features of the building which justify its listing and contribute to its significance, (for example its form and layout, materials, construction and detail) including any features of importance such as the interior, which may have come to light after the building's inclusion on the list.

- The contribution of curtilage and setting to the significance of the building, as well as its contribution to its local scene.
- The impact of the proposed works on the significance of the building.
- The extent to which the proposed works would bring substantial community benefits for example, by contributing to the area's economy or the enhancement of its local environment.

The listing grade may be a material consideration, but is not in itself a reliable guide to the sensitivity of a building to alteration or extension.

For example, many grade II buildings are humble, once common building types, listed precisely because they are relatively unaltered examples of their kind and their special interest can be damaged by inappropriate alteration or extension.

5.14 Many listed buildings can sustain a degree of sensitive alteration and extension to accommodate continuing or new uses. Past changes that reflect the history of use and ownership may themselves be aspects of the special interest of the listed building. When applicants and the local planning authority assess the heritage values and significance of a listed building, which is the subject of a consent application, they must consider the sensitivity of that building to the proposed changes. Sustaining the special interest and significance of a listed building through the process of alteration, extension or re-use is exacting, and should always be based on specialist knowledge and skill in order to realise the benefits that well designed interventions can bring.

Appendix III

Service Penetrations & Hidden Voids

Installations and their impact on the fire performance of buildings

Aim

The aim of this note is to provide practical advice to all persons, including contractors who may need to surface mount, penetrate or breach any form of building material, especially those materials that are there for fire safety protection.

Breaching these building materials and leaving gaps and holes could allow fire and smoke to spread throughout a building, which could compromise the means of escape route and ultimately hinder people escaping.

Penetrating services include pipes, cables, air handling units, data cables etc.).

Attaching cables, pipework or other surface mounted equipment to fire rated building materials could also affect the structural stability or the fire performance of the building material itself.

Changes to the wiring regulations

"on escape routes, all new wiring systems to the surface of walls or the underside of ceilings are to use metal (rather than plastic) to support cables, to prevent their premature collapse in the event of a fire".

Prior to works starting

A detailed survey must be carried out to confirm the exact location and specific areas of all proposed works that involve service penetrations, service mounting and associated equipment. [<Insert link to Contractor Form>](#)

It is important to inspect all existing areas that are likely to have been penetrated by the range of services. New areas that have been selected for cable runs and pipe runs should also be inspected prior to works being carried out and after the works have been completed to ensure they have been completed satisfactorily.

The building materials that are going to be affected by service materials must be assessed for their suitability to support equipment or fixings. The assessment must include how the materials are going to be breached [<Complete Part I & II of Contractor form>](#) and what fire stopping or penetration seals will be used to retain their integrity following completion. [<Complete Part III of Contractor form>](#)

Completion of works

All works must be checked following completion & signed off by a specialist installer (see third party certification, below). [<Complete Part IV of Contractor form>](#)

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Bats

A large proportion of roof spaces in Trust properties are used by bats and careful consideration must be given to this species if undertaking any fire precaution works e.g. when introducing compartment lines in roof spaces, filling gaps and holes from service penetrations etc. Any disturbance to bats or their roosts may require consent from the statutory agency.

Caution must be exercised against fire prevention measures that could block access to roosts for bats. For example, intumescent collars around pipes will not expand unless there is a fire, but a newly installed *unexpanded* collar must not inhibit access where bats had previously been able to fly or crawl through. If it does then an alternative arrangement for the bats will be required, including consent from the statutory agency. Some bats, the two horseshoe bat species, can only fly to roost – they cannot crawl through gaps - so this could be important for some mansions where these bats live.

Appropriate measures must be taken to ensure access for the bats at all times. Bat flaps or doors are likely to be required through fire walls or fire curtains, especially where there are bat roosts and these are best closed by thermal (fusible) link/bimetallic strip type devices. Bat flaps and doors that are held open by an electromagnetic device will close when triggered by the operation of a smoke detector or call point and if this happens then bat flaps or doors will need to be re-opened following testing and servicing of the system, a power cut or fire drill.

Passive Fire Protection (PFP)

Some of the Passive Fire Protection (PFP) elements that are associated with escape routes could be affected by services, such as:

- 1) Lining materials for walls and ceilings on escape routes
- 2) Construction materials of walls, floors and ceilings forming escape routes

1) Lining materials for walls and ceilings on escape routes

Prior to any works starting the surfaces should be inspected to ensure they are in a satisfactory condition with no cracks, gaps or holes. Drilling holes or attaching surface mounted materials can compromise the integrity or weaken the structure and must be carefully checked after completion of works.

2) Construction of fire resisting walls, floors and ceilings forming escape routes

Even in modern buildings (and new builds) it may be necessary to look at the fire-resisting construction used in escape routes or in compartmentation as these may have been altered or compromised.

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Internal layouts may have been changed by relocating, replacing or demolishing internal partitions or rooms and changes may have been made to add new services or re-route existing ones.

For most existing buildings within the National Trust, especially the older heritage buildings and mansion houses, it will be necessary to survey the areas that are affected by **'existing and/or proposed'** service penetrations and to record the findings.

Hidden spaces

If checking the materials and construction of the walls, floors and ceilings that affect escape routes it is critically important that the void spaces (above and below) are checked, including areas above false ceilings to ensure the fire-resisting construction has not been compromised. False ceilings can hide services that have been installed without the making good afterwards.

It is common for void spaces (e.g. garderobes, dumb waiters, lift shafts etc.) and hidden voids (behind walls and under floors) to span the height (or width) of a building from the basement to the roof and allow fire to spread unchecked.

Penetrating services in walls, floors and ceilings forming escape routes

The fire resisting elements (walls, floor and ceilings) that form escape routes are most commonly compromised by the installation of penetrating services, (e.g. pipes, cables, air handling units, data cables etc.).

The cabling (including data cabling), wiring, pipework and ducting routes that breach and penetrate fire resisting walls floors and ceilings, including the void spaces are of particular concern.

If a fire separating element is to be effective then every joint or opening that allows services to pass through the element needs to be adequately protected by sealing or fire stopping so that fire resistance of the element is not compromised or impaired.

In new buildings, the Building Regulations address this by requiring the inclusion of suitable fire stopping. However, this can often be compromised by:-

- Use of poor quality products
- Poor quality installation
- Addition, removal or modification of penetrating services after the building is completed without the correct reinstatement of the fire stopping

The issues associated with service penetrations are often not picked up because they are out of sight. Only a regular inspection and maintenance regime will identify the deficient areas, especially in existing buildings. In some cases it is usually the fire risk assessment process that picks this up first.

Support of penetrating services

Penetrating services will need to be supported either side of the wall or floor to ensure that in a fire any drooping or sagging of the service(s) does not damage the penetration seal and thus breach the fire-resisting construction. Cables along escape routes must be secured by metal clips and not plastic.

High Risk Areas

High risk areas listed below require some form of service penetration to connect the services to the utilities such as electricity, water and gas. The service utilities will invariably run through the walls, floors and ceilings that form part of the structure that provides the fire precautions for the high risk rooms (or areas).

When these service penetrations occur they can compromise the fire safety integrity of the structural protection, especially if they are not adequately sealed or fire stopped following the completed works.

Buildings typically contain high risk rooms or areas such as Boiler Rooms, Plant Rooms, Main Electrical Intake Rooms, Server Rooms, Fuel Oil Tank Rooms, Garages and other similar high risk rooms

- These must be enclosed with walls, ceilings, floors and doors having a minimum fire resistance of at least 30 minutes (one hour fire resistance in some circumstances), where they form part of or open into an historic building. *All breaches must be fire stopped or sealed.*

Kitchens

- These must be enclosed with doors, walls and ceilings providing not less than thirty minutes fire resistance. *All breaches must be fire stopped or sealed.*

NOTE: The installation of new electrical circuits or rewiring in historic buildings may (where unavoidable) involve cutting, chasing, notching and the perforation of joists, beams, partitions, walls and ceilings etc., some of which may be fire barriers.

There are some instances where floorboards or seemingly non-structural elements may provide a structural function, and their lifting, cutting or removal could jeopardise structural integrity.

Access to and Use of Buildings

Before any works commence it is essential that the contractor seeks approval from the National Trust Building Surveyor and all works agreed.

The presence of any gaps or holes that pass through walls, floors or ceilings is not acceptable, especially if they are for fire resisting purposes. These areas must be

made good with appropriate tested/certificated products that are compatible with the specific penetration.

It is common for new services to follow existing cable and pipe runs and at the same time make the size of openings bigger to accommodate the additions. Very rarely are the gaps and holes sealed to reduce the size of opening or restore the structural fire safety integrity of the wall, floor or ceiling.

Materials

There are a variety of materials and products available to seal penetrations, including intumescent collars and wraps, fire-resisting mortars, coated mineral fibre batts, fire-resisting pillows etc. You cannot be an expert in each one of these but you should be aware of the limitations of the 'generic' material types. The correct product needs to be selected for the correct application.

The use of 'fire rated' expanded foam as a penetration sealing material is to be avoided as most of these are only tested on 'narrow gap seals' and will not work as a large penetration seal.

Ducts & Dampers

Where air handling ducts (or similar) pass through fire separating elements the integrity of those elements can be maintained by using one of the following methods:

- Protection using fire dampers
- Protection using fire-resistant enclosures
- Protection using fire-resisting ductwork

Cavity barriers

Are used to close a concealed space in a cavity wall, ceiling void or roof space against penetration of smoke or flame or provided to restrict the movement of smoke or flame within such a space. These can easily be compromised by contractors when laying pipework or cabling.

Cavity barriers require special attention because by their very nature they are usually hidden once installed and therefore difficult to inspect after installation. In most applications they would be expected to have 30 minutes integrity and 15 minutes insulation.

You do not need to be an expert in such systems, but do need to be aware if they have been installed in line with (and protecting) escape routes, including those within roof spaces and being aware of damaged or missing cavity barriers.

Fire stopping and penetration seals

Mechanical and electrical services, by necessity, breach fire-resisting construction on escape routes and compartment walls and floors and will allow the passage of smoke and flame if not adequately fire-stopped.

There are a wide range of products that are designed for use as fire-stopping and penetration seals. These include products based on mineral wool, high and low pressure intumescent, mortars, pillows filled with intumescent materials, plugs and blocks, elastomers, putties, foams and mastics.

The selected fire-stopping products must meet the relevant British or European Standards.

The Loss Prevention Council (LPC) red book is one way of finding approved and accredited products and details a number of products and services.

[<Fire stopping and penetration seals for the construction industry \(red book\)>](#)

Third Party Certification

Passive Fire Protection products must be fit for purpose and carefully selected for the specific area that it is to be applied to. It must be properly installed and maintained in accordance with the relevant manufacturer's instructions or a relevant standard. Third party certification schemes for such products and installers are an effective means of providing the fullest possible assurances of quality, reliability and safety.

As a minimum all fire protection products (e.g. fire stopping intumescent mastics and foams etc.) must be third party certified and installed by adequately trained specialist installers. The specialist installers must be third party approved and accredited and can be found on registers such as Fire Accreditation Scheme (FIRAS), [FIRAS](#) The Association for Specialist Fire Protection (ASFP) [ASFP - Passive Fire Protection](#) & International Fire Consultants Certification Ltd (IFC Certification Ltd) [Installer Listing - IFC Certification LTD](#).

All subsequent installations can then be fully certificated to ensure that all products have been selected and installed in accordance with the manufacturer's instructions and technical data sheets.

The certification process is essential to confirm that the insulation and integrity (e.g. fire resistance performance of the 'breached' fire rated material) of the fire resisting element has been re-instated and or maintained and this will apply equally to existing buildings undergoing new works and new builds and will also satisfy any property protection requirements for insurance purposes.

Some of the third party organisations mentioned above can also provide competency based training for organisations (and to individuals) to ensure they are competent to

assess the required fire safety product(s) for the specific application. For example IFCC Ltd can arrange internal or external training. All training is approved and accredited and individuals would be signed off as competent, which would enable them to assess and apply the fire rated materials that they intend to use, including the provision of appropriate certification for the work(s) undertaken.

ASFP do not supply training for individuals, but do supply modular courses aimed at specifiers and contractors and would be suitable for building surveyors etc.

The ASFP only recommends third party installer certification schemes that have been accredited by UKAS. Third party accreditation schemes for passive fire protection products are run by the following organisations. Those listed below are in addition to those listed above.

BM TRADA - go to www.bmtrada.com Tel: 01494 569700.

BRE Certification Ltd - go to www.brecertification.co.uk Tel: 0845 863 0014

FM Approvals go to www.fmapprovals.com Tel: 01753 750 000

Intertek Testing & Certification Limited - go to www.intertek.com Tel: 0161 721 5247

Underwriters Laboratories UK Ltd - go to www.ul.com Tel: 01483 302130

Warrington Certification Ltd (FIRAS) - www.warringtonfire.net Tel: 01925 646 666

Listed Buildings & Conservation

Don't forget to consult with all relevant staff on site to ensure that materials used and procedures followed meet the requirements for the heritage fabric. Always ensure that any necessary listed building consent is obtained and that conservation requirements are taken into account.

Donald Insall Associates