
The Mackintosh Conservation & Access Project

The Importance of Fire Suppression

A Paper by Glasgow School of Art
In association with
Page \ Park Architects

Introduction and Background

The context for this paper is the major Conservation & Access Project currently entering its third phase at The Mackintosh Building – recognised as Charles Rennie Mackintosh's Masterpiece, category 'A' listed and of international significance. The project is being promoted by Glasgow School of Art (GSA) as owner of the building and is focused on ensuring the long term integrity of the Building, its Archive and its Collections with major funding and technical support from Historic Scotland and the Heritage Lottery Fund.

In seeking to reverse previous alterations in accordance with the aspirations of the Conservation Plan for the building, significant work has been undertaken in relation to issues of fire risk within the building and the measures which would be appropriate to manage that risk to ensure the safety of people but also to protect the integrity of the building and its unique contents.

As the vulnerability of the building has become increasingly clear through the professional engagement of fire engineering consultants (FEDRA Buro Happold), Glasgow School of Art have taken a responsible position in moving towards considering implementation of a fire suppression system which provides a balance between protecting the building in the case of an outbreak of fire and ensuring the integrity of the valuable contents including unique and sensitive original artworks, paper archive, a priceless furniture collection and other material.

As part of this process, GSA arranged a workshop with its own staff, Page \ Park Architects, FEDRA Buro Happold and senior Historic Scotland staff (representing Inspectorate, Grants and TCG divisions) to share the concerns and potential solutions. That was an extremely useful workshop with all present agreeing from their own perspectives the importance of fire suppression, particularly given the huge investment already committed through the Conservation & Access Project.

As a follow-up to that workshop, GSA sought formal advice from Historic Scotland on the potential for grant support for the installation of an appropriate fire suppression system – in this case water mist suppression minimising potential damage to contents and requiring smaller and more discreet pipework. Historic Scotland have responded advising that, while they are supportive of the project and its objectives, it, "... unfortunately does not fall within the scope of the Building Repair Grant Scheme".

The purpose of this paper is not to challenge that statement or to try to find a way round the established guidelines but to raise this as a matter of policy for consideration by Historic Scotland and Scottish Ministers. This is the context of Historic Scotland being able to grant aid heating installations (as they have done at the Mackintosh Building) where it can be demonstrated that the provision of appropriate and adequate heating is important in ensuring long term integrity of buildings and their contents.

This is being raised as a matter of principle rather than specifically in relation to Glasgow School of Art as we believe that, in many cases, the risk of fire poses a much greater threat to some of Scotland's most important buildings than an inadequate heating system. It is hoped that this issue can be considered at a policy level. That said, the Mackintosh Building as one of Scotland's most important buildings with Archive and Collection contents that are of incredible monetary and intrinsic value provides an excellent case study to illustrate the need for consideration.

Significance of Glasgow School of Art

The purpose of this report is not to provide a detailed demonstration of the significance of the Mackintosh Building. That will already be well-recognised by all parties and is covered in detail in the Conservation Plan prepared by Page \ Park Architects as part of the current Conservation & Access Project. Suffice to say that, on an international level, this is probably the best-known building in Scotland for its architectural, cultural and artistic significance. In recent weeks it has been voted in the RIBA 'Stirling of Stirling' poll as the most significant building in Britain over the past 175 years – one of many, many accolades.

The Reality on the Ground

The Mackintosh Building internal structure is effectively timber throughout with some limited areas of concrete flooring at lower levels. The original heating system (which was pioneering at the time and lends even more weight to the significance of the building) utilised timber ducts extending vertically through the building at all levels and at regular intervals across the plan. By definition as a working art school, the building contains a wide range of flammable artists materials in addition to internationally important paper archives and Mackintosh furniture.

The main stair is timber and while various attempts have been made over the years to effect compartmentation of the building in discussion with the Fire Officer, the reality is that it is virtually impossible to achieve meaningful compartmentation. Doors have been added into corridors and other measures have

been taken (some of which are intrusive in relation to the architectural integrity of the interior) to try to improve the situation however the reality is that timber ducts, timber panelling, voids and various other combustible elements run through and past these efforts at compartmentation.

Added to all of that is the very large number of students who access the building on a daily basis working creatively with a wide range of materials in studio spaces where floors over the years have been saturated with paint, linseed oil, etc. from spillages. This is not intended to paint an alarmist picture – it is simply the reality.

Glasgow School of Art have a rigorous building management framework in place including 24 hour staffed security within the Mackintosh Building and therefore seek to manage the situation as far as is possible. In recent years there have been incidences of fire (for example, caused by oily rags in a wastebin) but fortunately these have been picked up and dealt with quickly through the monitoring systems already in place, including CCTV.

A much more detailed review of the current situation is included within the feasibility study developed by FEDRA Buro Happold fire engineers on behalf of Glasgow School of Art. That report takes account of the very particular circumstances and the need to ensure that any installation has minimal impact on the historic building fabric of the Mackintosh Building. One of the potential benefits of a fire suppression system is the opportunity to reverse previous intrusive alterations (in line with the Conservation Plan) including the doors which intrude within the main circulation spaces – for many years an aspiration of GSA.

Why Should a Change in Policy be Considered?

The consequences of having a less-than-ideal heating system within the Mackintosh Building can be managed – and indeed have been over many years until the current project. The consequences of a significant fire in the Mackintosh building would be a disaster, arguably on the level of Uppark and Windsor Castle – nationally important buildings with significant collections. It is in this context that it is felt appropriate to raise with Historic Scotland and Scottish Ministers the current policy of grant-eligibility under the Building Repair Grant Scheme. In essence, it is argued that grant aiding fire suppression systems in particular circumstances is much more important than grant aiding new heating installations.

We are aware of the work undertaken by Historic Scotland's TCRC division and now TCG, including detailed work and publication on fire in historic buildings. In view of all of that research and technical awareness, it does seem inconsistent that fire suppression systems addressing what is *the* major risk to some of our most important buildings and collections cannot be grant-aided, even though this can be achieved for heating systems.

It is suggested that one way forward may be for the Mackintosh Building to be considered as a model or case study with policy consideration being the underlying objective in terms of how Historic Scotland's limited resources can best be applied in relation to our national built and cultural heritage. Glasgow School of Art and their professional advisers would be more than willing to collaborate on such a project on the basis that this is a matter of national importance and not just specific to GSA's Mackintosh Building.

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