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Restoration of the Mac's legacy
Reconstructing the library after the fire in the Glasgow School of Art
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I. Introduction

The fire, which devastated the Glasgow School of Art on the 23rd of May, 2014 badly damage a significant proportion of one of the most famous buildings of Charles Rennie Mackintosh and left many who loved his work bereaved. The School is an architectural masterpiece and is recognised worldwide, however, the loss of the Library particularly troubled many people whom its contents meant so much to. Charles Rennie Mackintosh and the Glasgow School of Art are known today more than ever. Every year, students comes from around the world to be inspired by Scottish pioneer of modern art.¹

There have been many discussions about what should happen to the space now that the Library contents have been completely lost, its mezzanine, columns, carved balusters and motifs have all been destroyed. The Director of the Glasgow School of Art, Tom Inns, has reported that the library will be rebuilt to its original design and the institution is looking to: "build it as closely as possible to Mackintosh’s design." Contemporary features will be included providing necessary usable space for the student community.² The Restoration Committee of The Glasgow School of Art has announced that Page/Park Architects will be the practice in charge of the sensitive project of restoring the fire-damaged building.³

"The team assembled by Page/Park Architects impressed us not only with their deep knowledge of the building, but of the wider work of Charles Rennie Mackintosh" Tom Inns

"They displayed a superb methodology to the task of restoration – in particular their Room by Room analysis of the structure, materiality, craftsmanship and intent of Mackintosh in designing, specifying and overseeing the construction of his masterwork." ⁴ Tom Inns

¹ Nicholas Pevsner, Pioneers of Modern Design (London: Penguin, 1949) 158
Page/Park's approach can be seen as a reflection of the French philosopher's Gaston Bachelard view that:

“One must always maintain one's connection to the past and yet ceaselessly pull away from it. To remain in touch with the past requires a love of memory. To remain in touch with the past requires a constant imaginative effort.”

Gaston Bachelard

This research project examines the extent to which the reconstruction process will allow the Glasgow School of Art's Mackintosh Library to return to its previous design before the fire. It draws upon written texts, photographs and interviews - through a series of reflections upon documentaries, artworks and theoretical sources. It will interrogate the degree to which materials and processes that were used to construct the Library in the last century can still be used today. It will explore the issues of what is possible and what is not possible to do, at this particular moment in time. It begins with a review of debates discussing ideas and concepts for the restoration of the library. It then moves to review what cannot be replaced from the original building due to new regulations, and which materials are no longer accessible, or possibly not permitted to be used anymore. The project then considers how services will have to be installed without an impact on the interior. These considerations will allow a reflection on the restoration of the library, for contemporary needs and visual impact in respect of a faithful reproduction. The research will also compare post-fire reconstruction well that of Windsor Castle, which took place in 1994, following a fire which seriously damaged interior of the Castle.

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1 Chimes Cristina, "Gaston Bachelard: Critic of Science and the Imagination", Routledge (2001)

fig 1.1. Photograph of the central space in the Mackintosh Library
II. The Past and The Present

fig 2.1. Design for Glasgow School of Art: plan of first floor, 1907

On the 23rd May 2014, while students were in the middle of preparing for the most important annual event, the degree show, the fire consumed one of the most recognised libraries in the world at the Glasgow School of Art. The Mackintosh Library burned with all the important historical art collections held within it.

The Mackintosh’s Glasgow School of Art is located in Glasgow City Centre on Renfrew Street. It was built in 1897, in two phases due to restrictions on budget at 14,000 GBP. During the first phase, between 1897 to 1899, the eastern and central part of the building

fig 2.2. plan of first floor - Library, 1907
were constructed. Trissecka contained the Museum, the Headmaster's Room and the Board Room. The Library was built between 1907 and 1909 in the second phase based on Mackintosh's designs. His design was based on the drawings made for competition of 1896 for his then employer Honeyman & Keppie. This also construction of all the West Wing and further improvements to the first phase. It was the first time when the library would have its own space.

"The library has, for the first time in the history of the school, a room especially devoted to it. It is well lighted by those long windows that make a striking feature on the west elevation." Annual Report for 1908 - 1909.

Over the course of the next 100 years a few changes were needed, which allowed it to operate effectively as a working library. Changes which included a new internal stair, librarian's booth, furniture, shelves for books, etc., were made.

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7 Glasgow School of Art, GSAA/GOV/1: Annual Reports <http://www.gsaarchives.net> Accessed 10 January 2016.
8 Chatfield, Duncan, "The Early History and Collections of Glasgow School of Art Library 1845 - 1945". Glasgow School of Art (2016): 6 - copy received before publication from the author
George Rawson in The Glasgow Government School of Design journal of the Scottish Society for Art history describes the History of The Glasgow School of Art. The School was opened on 6th January 1845 and was located on the 12 Ingram Street. The author mentioned that two years later in 1847 the School started to construct their first library for its students. Other Art Schools already had their own libraries, for example, the London School, which had then around eight hundred and fifty books in their collection. The Glasgow School wanted to also establish one, in order to develop, the interests of its students and "critical knowledge of art". The next record about the Art School's library appears in 1885 when the School was placed in the Corporation Buildings. The Minute Book instructed by Governors point to the critical need for the books need to be catalogued. In 1887, the Annual Report shows that the library has already 600 volumes and it had become essential to use the Ladies luncheon room as a reading space. An Annual Report from 1894 notes that a reading room had been created aside with the whole accommodation. During the first phase of the reconstruction mentioned above, between 1897 and 1909, the Library was set up on the first floor of the museum and finally was moved to its final position in the West Wing during the second stage of construction. The original brief from 1896, which was based on the South Kensington System, a system of drawings and instructions from Government School of Art

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13 The South Kensington system was based on The National Course of Instructions. The brief for the Glasgow School of Art was based on this system of instruction.
contained only one note: ‘One School library and reading room with a floor space from 1000 to 1200 sq.ft.’ No other issues were mentioned, not even requirements regarding the light requirements of to the space or other issues, for example the number of seats or a ventilation system. 

The Library is situated on the first floor of the west wing of the building. It measures in plan nine metres square and, it has the same height as the painting studios. The floor with the store room was hanging from beams above the timber posts. The Mezzanine level was surrounding a central room and it was pulled back by around three feet in each of beams which allowed more light to explore the central space. Around the mezzanine were scalloped balusters painted bright colours bringing attention to the structure. The ceiling was constructed in a bold simple grid of timber. Three very tall bay windows provided the light to the interior from the west. Much smaller south facing windows shoot beams of sunlight between the table legs and posts. Artificial lighting was in the form of groups of steel made electric lamps which provided light to the centre of the Library. The Library and its furniture could be seen as an influence on the modern movement but indeed that’s not a design of the modern movement. Furniture in the Library was made with wood. The smaller square tables are the same dark stained Cypress as the periodical desk. The chairs designed for the Library’s interior was a development of the Winsor Chair which was designed for the Dutch Kitchen in 1906. The piece had been refined to appear more elegant. There was an aesthetic limited ornamentation in Mackintosh’s work. Charles Rennie Mackintosh has used the ornamentation to achieve sense of Being in the Library. I fig appear in forms of structural and furniture

2.5. Overhead view inside the Library

14 Chappel, Duncan, The Early History and Collections of Glasgow School of Art Library 1845 - 1945. Glasgow School of Art (2016)
crafting as well as stained glass motifs. Each ornament refers to others and set up a rhythm. The objects designed for the Library of Glasgow School of Art displayed a clear understanding of the library’s requirements and the materials with which they were made.

The result was a fully crafted work of art. The new Mackintosh library was without doubt a great accomplishment. However, it was necessary to equip it with various elements to make it more user friendly. On the 29th of September 1909, a librarian’s office was requested and later during the winter because of lack of heating students could not remain in the library.15

The Mackintosh Library was the greatest work, the most patinated and captured the atmosphere of a time of use. Masterpiece of Mackintosh has been appreciated by many people, Howarth describes library as:

"an exotic apartment" in which "the exciting verticals, the subtle harmonies of light . and above all, the unrelieved sombre tones of the woodwork, engender a peculiar atmosphere of suspense and of mystery".16, James Macaulay commented it:

"The Library of the Glasgow School of Art is not only an aesthetic experience but the translation of philosophical thought into three dimensions". Howarth

Throughout the years, diverse uses of the space have caused different damage resulting in the change of several interior elements for new ones. In time, the library’s collections increased, making it essential to equip it with new shelves. To facilitate the transport of books and make moving around the room easier, a set of stairs was introduced between the main floor and the mezzanine floor. The Library has always functioned as a working library. It was a place of learning, supporting teaching and provided spaces for study and research. Over time, the Library also functioned in other ways, for example as a tourist destination and for various teaching events 17 like teaching acoustics, digital performances and poetry meetings. Many students had been using the library as a quite place for study,

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17 Stevenson, Alice and Chappell, Duncan, “The Mackintosh Library: An Active Learning Space"
replacing in this way the social and noisy studio in which they spend most of their time. However, the time, which library was available for its students use was limited. It was appropriate to limit the access because of the historical importance of the Library and its heritage status.

Nevertheless, the space was dynamic and hosted various events and many important people, artists and architects enjoyed it’s unique interior. One of the most interesting events was the “Artistic Dress Tableaux Vivants” activities of students led by Robyne Calvert. A group of artists had been exploring various kinds of ‘artistic dress’ in the years between 19th and early 20th century. “From the Pre-Raphaelites to the Symbolism in Poland to the Kunstkleid from Vienna” - Participants investigated what influenced the artists and designers had on creating the fashion of the time. The class explored and worked on historic fashion movements and tried to find out what Artistic Dress could mean. For example they expressed and displayed different kind of controversial “punk” or recreated Berlin’s club Eldorado which had his golden age in sexual freedom and social liberty times of 1920’s. Another interesting tableaux distinctive and artistic dress within “Silver Factory” by Andy Worhol which was mostly focused on the Avant-Garde and nonconformist style of members such as Edie Sedfwick, Billy Name, Gerard Malanga and Andy Worhol himself. Students made some research and justified their choices by writing an essay and portfolio of their process of work in the project.

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18 Chappel, Duncan, The Early History and Collections of Glasgow School of Art Library 1845 - 1945. Glasgow School of Art (2016)

https://artisticdress.wordpress.com/2013/11/22/tableaux-vivants-redux/
Another artistic performance took a part in 2014 when students on the Digital Culture undergraduate programme set a project to point a digital interference in special historical heritage spaces like the Mackintosh Library. Project required all three years of students to work together on a projection mapping artwork. Students were unburdened by some investigations of services and the necessity for a solution, the aim is to explore phenomenological being of place. Examined existence of the Mackintosh Library, day by day for the whole week. Finally, they showed in their site-specific project how by using special projected light it can be possible to explore the space's unique character.

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Ill. Case study

Conversations about what should happen in the West Wing where the library is located have been intense. There was a debate at Glasgow Queen's Cross Church about what should happen to the space, should it be reinvented or restored. For some people rebuilding the Library represents a lost opportunity to create a brand new interior. By exploring the opinions of those people with a clear connection to the building it is possible to comprehend how the Library have been important to them. Mackintosh enthusiast - David Mullane, believes the Library to be a 'magical forest like space'. He argued at the event "Reinstate or Reinvent" that further restoration could be 'backward looking' intended to be for tourists not for students.

23 Danuta A Nitecki describes similarly the Association of College and Research Libraries’ guide according to space of a library which says that equipment in the library should be adequate and functional. 24 In suggestion on Davied Mullane

![Fig. 3.1 Interior Students project for the Library space](image)

23 David Mullane, Reinstate or Reinvent, debate at the Mackintosh Church (25/09/2014)

24 Nitecki, ‘Space Assessment as a Venue for Defining the Academic Library’ pp 35
the Mackintosh Library should be restored in a contemporary reinterpretation or maybe like a response to the Library before the fire. Professor of Architecture Alan Dunlop has similar belief:

“There is a debate going on about what should be done and I am worried at the moment - I think rebuilding it would just be just a replica of Mackintosh, and I am sure you could do it, but the best thing would to have a new idea, something new which is worthy of the Mackintosh Building.”  

Alan Dunlop

Professor Dunlop is of the opinion that the school ought to launch a worldwide competition to find a contemporary architect who could create a modern space in the new library.

“I know people will be naturally wary of this, but if we get the right architect it can be done thoughtfully,” says Alan Dunlop

Historian and conservationist, Micheal Davies, disagreed with both. The Library in terms of materiality was gone but something close to the previous design could be made in its place; “successive generations will still be able to experience it and be inspired”. Luckily not like in the “House of Art Lover” we know how it looked.

Fig. 3.1 Interior Students project for the Library space like before.

However, speculations about what should or should not be done with the Library were also made by Interior Design students lead by the Head of the Interior Design at the Glasgow School of Art: Patrick Macklin. He believes the Mackintosh Library should be Fig. 3.2 Interior Students project for the Library work of interior design, not art and it is an interior contained; It can exist without the exact building and be placed

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elsewhere. In Macklin opinion interior can be separated from exterior and the reproduction would just imitate the previous interior. It would lose the imperfections of the craftsmanship which made the Library original. It was not an active space and it could not adapt to the contemporary needs. Students were challenged to make proposals for the Library space as it offers the option to create its interior. The students given the background of the project by the Mackintosh Curator and Archive Assistant who works for GSA Archives and Collections Centre. Thanks to the talk students knew the role of the archives in the restoration process of Mac Building, and some of the issues that the recovery of the Library will face. It created questions around the few adaptations which were made during the 100 years of use the Library including the staircase and furniture.

The design in which the Library has arranged to the requirements of students and staff while still being functional create the idea on an authentic malleable transformation. Interior Design students showed their initial proposals, as well as their final results which were really original and interesting. Some of students examined “why was the Library designed at the place?” and “why should we add further lighting to the library?” meanwhile others had the intention of perserving the memory of the place, while at the same time being able to make it functional. Many of the proposals were particularly interesting because of their proposeal innovation. For example by exploring the idea of a non-physical memorial, one of students conclude that smell can be as effective as visual. The result of their unconventional proposal was a “scent installation”.

Fig. 3.2 Interior Students project for the Library - ‘scent istalation’
Fig. 3.3 Interior Design Students project for the Library
IV. Working towards the future

When a historic building has been damaged by fire, the question is not if, but when and how, it will rise from the ashes to its previous glory, preferably in the same form on perhaps 'reinvented' for today's needs. Windsor Castle, a 19th-century building, had been devastated by a fire and then restored mostly back to its original form. The quality of this restoration required the input of quality of skilled craftsmen who were able to undertake an appropriate restoration work.

![Image of a model of a building](image)

**Fig. 4.1 Part of the physical model of the Library produced by Page/Park**

During November 1992 a destructive fire burnt of a considerable part of Windsor Castle. About 100 rooms, 7,000 square metres cause area were destroyed in the fire. The was possibly conservation works that were currently underway on the Castle. The Castle is the oldest occupied castle in the world and it is the official residence of the Queen. Archeologists excavated the remains of the Castle's destructions. On the 7th of June 1994, the details of a restoration project were announced and Donald Insall Associates Architects was appointed by the Royal Household to take charge of the restoration. More than a half of the destroyed and

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damaged rooms, including the Octagon and State dining rooms were to be restored to the original design. A new design was proposed in St George's Hall for the ceiling and the East Screen as well as the Stuart and Holbein Rooms and also the Queen's Private Chapel. Nevertheless, only several rooms including Queen's Private Chapel were to be restored in a contemporary way.

These decisions created some controversy, with some architects being of the opinion that there was a lost opportunity for contemporary design. According to the rich history of the building and some of the surviving fabric, architects believed that the new work had to be principally Gothic. For example, the state dining room gilded sideboard, designed by Augustus Pugin in the 19th century and made of rosewood and oak had to be reproduced by N.E.J Stevenson working with only a few descriptions and photographs. The Queen approved the new designs for the Private Chapel and for St George's Hall a year after the restoration company was appointed a Hammer beam ceiling in St George's Hall seemed to be the best solution after some of 19th century interventions. The Old Private Chapel where the fire was started was changed to the Lantern Lobby. This space involved eight grand oak columns which are in the central feature, including an Engel wing design within the scheme. In the rebuilding were used the highest level of craftsmanship and grade of materials. The result is an innovative and original design. Restoration of the Windsor is recognized as successful and after all the process the Castle has been used more for entertainment of foreign guests and there has been debate of changing Buckingham Palaces function and transform it into a another kind of venue.

In Glasgow, the plans to rebuild the Library which was 'Mackintosh's masterpiece' created high expectations from the entire architecture community. Mackintosh was known as person a with huge technological knowledge and with passion for creation. The architects Page/Park Fig. have been charged with the
undertaking of the restoration, are determined to recreate the library as faithfully as it was before the fire.

"It's like dealing with a precious text," said David Page of Page/Park Architects. "This was Mackintosh speaking to the world. Now we need to piece his message back together."

Thanks to a very detailed documentation, consisting of sets of measured drawings and photographs, different avenues can be followed to restore the Library. In a positive way, the fire uncovered some secrets about materials that were used in the construction before, for example the fact that the columns were suppose to be made with Kauri pine, a cheap ballast material from New Zealand.27

Page/Park architects' aim is to bring back the Library as close as possible to its original design through a meticulous reconstruction process, and by following six steps.

Fig. 4.3 The space of the Mac Library after the fire

First, they will undertake a detailed in-depth research of the development of the design from the original 1897 drawings to the final designs of 1910. This will include an analysis of the historical development of the space by looking in particular at each element with reference to other works of Mackintosh, such as The and Oak Room, Ingram Street tea Rooms. Secondly, they will complete an assessment of the physical evidence, meaning a thorough examination of the timber elements remaining after the fire by checking their sizes and construction. Thirdly, they will build a model of the timber component in 3d program. Fourthly, they will produce a physical model in the 1:10 scale. Fifthly, a review of the results produced until then will be undertaken with the Expert Panel and involving timber conservation experts. Sixthly, the prototyping of the relevant elements will be done in the 1:1 scale.

Fig. 4.4 radiators with peeling paint

The restoration company works with the specialists to build the library as authentic possible. However, procurement of the timber in the required sizes can be challenging. Another key task is matching the finishes; timber, which was used in the Library, is of very light colour therefore the right colour of the timber finish will crucial.
"We have to build up from the base blocks – strip it back and then allow the clutter to develop. We shouldn’t force it into the image that we remember."

David Page

Due to the irregular meaning of the room the Company tries to reconstruct all structure on like for like basis but with looking on the original design from 1910, rather than what was in the building before the fire. The Library that people can remember is not the ‘authentic’ one. This includes neglecting the internal stairs which were added in 1946 fn Minute Book in the reconstruction process. The aim of the Page/Park architects is to make the building compliant with the regulations wherever they will introduce new material as well as improving the access. Nevertheless, they will acknowledge the importance of original fabrics and keep it intact wherever possible. Conversation with the Page/Park Architects have realised some new discoveries in the subject of the restoration.

Dear Natalia,

I would like to ask you for a few more things which appeared during writing my research.

Did you decide what kind of timber are you going to use?
Is it going to be the same one which was used before? If not, why?

Vertical windows which turn up the western elevation were replaced in 1947. Mackintosh had designed horizontal casements with a more Japanese feel – so which is the more “truthful” to restore. Did you made a decision in this case?

Ranald McInnes mentioned once that columns were built with the Kauri pine which was brought back from New Zealand - have you decided yet what kind of material are you going to use instead?

You mentioned before that you are “introducing new material as well as improving access” could you tell me more about it?

From the interview with Alison Stevenson i have learned that part of interior was made with Tulip tree, could you tell me something about it?

I really appreciate your help. Thank you for your time.

Kind Regards,
Sylwia Kowalczyk

Dear Sylwia,

Apologies for a prompt response as I’m extremely busy at the moment.
Regarding your questions:

1. Timber procurement will be a time consuming and difficult task due to the 'non standard' sizes of the timbers (obviously non standard in 2016 not around 1900). Most of the Library was build in Tulipwood and we are aiming to reinstate in this specie. I can confirm that to my knowledge there was no Kauri pine used in the Library or anywhere else in the building.

2. The decision of the metal windows has not been yet concluded. We have prepared a summary of research to the attention of the client together with options for reinstating the windows to the original design or reinstating of what was there before fire. Please note that this is relevant to whole West elevation not only Library windows. This is still being discussed and there is no answer yet.

3. Improving the access referred more to the building as a whole not to the Library. The internal staircase will be removed and the original arrangement will be reinstated that you can see on the original set of drawings dated 1910. Available here: http://www.mackintosh-architecture.gla.ac.uk/catalogue/images/full/d156_047.jpg

I hope that helps.

Best regards,

Natalia Burakowska
Page \ Park Architects

20 James Morrison Street, Glasgow, G1 5PE, United Kingdom
V. Conclusions

This project looks at the history of the construction and evolution of the Mackintosh Library, since 1907 when it was created. It particularly focuses on the current plans to restore its interior after the fire which took place on 23th of May 2014. Windsor Castle’s reconstruction is used to compare the work undertaken now on the Mac Library. Through analysis of documents, archives, interviews, articles and architectural drawings it described how much the restoration process is going to be restored to the original design of Mackintosh. It was reported that the architectural practice Page/Park will lead the process of restoration and they will try to build it as closely as possible to the original design. If we want to make the Library a useable place it should not be exactly like it was before the fire. The company has admitted some of tasks are challenging and time consuming, for example the choice of materials and way which they should undertake to reach the best result. This is similar to Windsor Castle where the restoration team of Royal Household tried to reproduce part of the interior as it was before the fire. Most of it was reproduced to its previous state, however, some of the rooms were restored according to new proposals. Not everyone agrees with Page/Park vision for the new — restored library, for some people it is a lost opportunity to create a modern interior as they thought that Mackintosh may have wished it. This includes some Interior Design master students speculations about what should happen to the Library if they had been in charge of the project. Their projects contained within this project how creatively the space could be adapted.

Fig. 5.1 sunshine light going through the windows

Nevertheless, the fire revealed the fact that the materials that the columns were made were different than it was previously thought. New standards will make the procedure of restoration with the same materials difficult as the ‘non standard’
sizes of the timber had been used to build it. However, this will be supported by the architects referring to other works of Mackintosh’s as the model of his practice. The new service infrastructure will be hidden behind the timber panels so they won’t be visible.
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Fig 2.6. Acoustic classes in Mackintosh Library, photograph received from the private collection of Joanna Crotch, (2016)

Fig. 2.7 Tableaux Vivants in Mackintosh Library, photograph received from the private collection of Robyne Calvert, (2016)

Fig. 2.8 Tableaux Vivants in Mackintosh Library, photograph received from the private collection of Robyne Calvert, (2016)

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