About Kier Construction Scotland

Kier Construction Scotland is headquartered in Glasgow with additional local offices in Aberdeen and Inverness. We employ over 1,200 people across the wider Kier Group in Scotland. We continue to develop our business here, with an increase in the breadth and depth of core skills being provided to our growing client base.

We work across a diverse range of sectors including healthcare and education and have a strong track record in the heritage sector. The wider Kier Group has carried out renovation work at some of the UK’s most famous buildings including Buckingham Palace, Hampton Court and the Tower of London as well as overseeing the maintenance of the Royal Opera House in Covent Garden and the Imperial War Museum. In Scotland, we are currently on site with refurbishment works at Aberdeen Music Hall and Edinburgh College of Art as well as having recently been awarded projects for the Citizens Theatre and Burrell Collection.

Overview

Kier was extremely saddened when fire took hold at the Glasgow School of Art in June of this year. We are proud of the work we were undertaking in what is one of Scotland's most iconic buildings and we were almost ready to hand over a restoration of the very highest quality. We have been working to assist the Scottish Fire and Rescue Service with their investigation.

The Mackintosh building restoration project

Following the fire of 23 May 2014, Glasgow School of Art undertook a competitive tender process to appoint a principal contractor for the restoration of the Mackintosh building. An invitation to tender was issued on 16 March 2016. The project scope was to undertake and co-ordinate the faithful restoration and reinstatement of the Mackintosh building. The operational requirements of the project involved leading a broad based construction team covering structural, masonry, roofing, joinery, interior finishes and mechanical and engineering services. The contract was awarded to Kier on 20 June 2016.

Kier started work on site in the summer of 2016. We undertook works to establish the integrity of the Mackintosh building and carried out the restoration and refurbishment of the damaged building. These works included replacing key like-for-like features in the interior including the masonry structure, fixture and fixings and plastered and painted finishes; researching and procuring appropriate materials and products; integrating technical and servicing infrastructure; and improving accessibility to the building.

We provided an experienced site management team to run the programme and budget for the project, including managing subcontractors on site undertaking different aspects of the restoration work, for example external stonework and harling, roofing, painters, flooring specialists, and electricians. Glasgow School of Art also directly contracted with a range of specialist conservators and specialist craftsmen to undertake restoration work.

Work on site was due to complete in 2019. By the time of the fire, the building was largely wind and watertight and the internal works were well underway. Work was ongoing to restore the floors, plastering and painting of ceilings and walls.

Since the fire of 15 June 2018, Kier has been unable to access the site. We are working to assist the Scottish Fire and Rescue Service, Glasgow School of Art and other relevant parties to help determine the cause of the fire.
Thank you for giving Page\Park the opportunity to offer a written submission to the committee in advance of our appearance on the 25th October.

We look forward to answering your questions fully and openly at that meeting, and send this supporting statement as an outline of our historic involvement with the Glasgow School of Art. We are, of course, prepared to expand upon all of the enclosed points and answer any questions the committee wishes to ask.

The catastrophic fire in June 2018, in the context of the previous fire of 2014, was an appalling event which has left our dedicated team of conservation architects completely shattered. We had carried forward lessons from the fire of 2014 to ensure that the restored building would be properly fire protected and we required the contractor to put in place appropriate fire protection measures during the construction process. It is a matter of deep and enduring regret that these measures were unsuccessful and, like the members of this committee and all others in Glasgow, Scotland and beyond who have an interest in this appalling event, we also need to understand precisely what happened and we await the outcome of the investigation by the Scottish Fire and Rescue Service.

Timeline of Page\Park involvement with the Mackintosh Building

Since the early 1990s, Page\Park Architects has been sequentially retained by The Glasgow School of Art (GSA) as conservation architects for the Mackintosh Building. Our involvement over this period can be summarised as follows:

1993

Page\Park was commissioned by GSA to undertake a building fabric condition survey. This arose out of concern that, for many years, the GSA had not received the level of investment required to maintain and properly conserve the Category A listed Mackintosh building.

Following initial survey work, Page\Park Architects prepared a grant application, on behalf of GSA, to The Getty Foundation grant programme to fund a more comprehensive assessment of the Mackintosh Building. Given the international significance of the building that application was successful and, for the first time in several decades, GSA had a detailed overview of the building’s condition, the required conservation and maintenance on a prioritised basis, and an ongoing maintenance schedule.

1997 – 1999

GSA decided to embark on a phased programme of repair and conservation works to the building. Over the following years, with funding assistance from Historic Scotland (HS), two major phases of work were undertaken:

- Renewal of original roof coverings (lead and asphalt) and roof glazing on a like-for-like basis and all appropriate repair and conservation work in these areas
- Repair and conservation of external walls (stone and harling), doors and windows

These works ensured the long-term integrity of the external shell of the Mackintosh Building and a planned maintenance programme, written specifically for this historic building, was then implemented by the School of Art.
Beyond this, Page\Park developed a comprehensive Mackintosh Building Conservation & Management Plan in line with the guidance published by both the Heritage Lottery Fund (HLF) and Historic Scotland. This document contained detailed proposals for the repair, conservation and adaptation of the building, including reversing previous insensitive alterations. The document supported successful major grant applications to HLF, HS and other grant bodies.

2006 - 2009

The conservation and management plan led to the establishment of the Mackintosh Conservation & Access Project with the following aims:

- Increase access to enhance the visitor experience and learning
- Improve the care, exhibition and access to the archives and collections
- Meet future visitor demand
- Manage visitor access to a working art school

This project involved conservation works to GSA’s textile, furniture, art on paper, plaster cast and archive collections, together with internal conservation works to the building.

A new Archives and Collections Centre and three environmentally controlled stores to house GSA’s historical records and collections were part of this project. Further works included a new furniture gallery, a new public tour reception and interpretation area at accessible basement level, and upgraded ground floor toilets. There was a full programme of timber and stone repair and conservation works by specialist conservators, restoration of original features, and removal of inappropriate additions.

The nature of the Conservation & Access Project enabled a partial renewal of mechanical and electrical services installations. Where access to run services was taken through existing ducts, these were fire stopped as part of the installation process.

2008

Running concurrently with the Mackintosh Conservation & Access Project, Buro Happold FEDRA were commissioned by GSA to carry out a Property Protection Feasibility Study on the Mackintosh Building. The report stated that installation of comprehensive fire stopping, “would however be virtually impossible given the current structure and the amount of compartmentation and fire stopping which would be required”. The executive summary therefore noted: “The need for an automatic property protection system” given “the high risk nature of the building, and its activities” and a clear recommendation that there was only one solution – a water mist fire suppression system.

Following the issue of the FEDRA report, the GSA convened a workshop with Historic Scotland, Page\Park and FEDRA to share concerns and potential solutions. All present agreed the importance of fire suppression, particularly given the huge investment already committed through the Conservation & Access Project. GSA then embarked on a fundraising campaign, whilst the team explored systems which would be acceptable to the building insurers, and looked at the programming of the works which had to be carried out in a single continuous phase.
Further external fabric works were carried out, including harling repairs and major repairs to the west elevation windows.

The water mist fire suppression system installation was very close to being completed when the May 2014 fire occurred at the west end of the building. Unlike other contract works which were phased to concentrate activity over the quieter summer periods, the installation of the fire suppression system was a single continuous phase of work, reflecting the importance of this installation to GSA.

In the immediate aftermath of the May 2014 fire, Page\Park was closely involved, working with GSA, structural engineers, Historic Scotland, insurers, loss adjusters, Glasgow City Council and others to ensure that all appropriate urgent action was taken to ensure public safety and to protect the Mackintosh Building.

Following a competitive design team selection process run by GSA, Page\Park was appointed as lead designers for the project to restore the fire damaged building.

A parallel series of processes commenced, including preparation of a conservation plan; establishment of a fire strategy for life safety and fabric; the building of a digital Building Information Management (BIM) model of the building; establishment of a programme of works including archaeological and enabling works; first phase roofing and building protection; and then full restoration. We worked closely with the School of Art project team and their external project management team, together with the appointed expert panel, to advise on matters of conservation detail.

Following a review of the events of the fire and a continuous process of working with the insurers and wider expertise, the main fire safety upgrades for the building were proposed as follows:

- Enhance the existing compartmentation
- Put in place a comprehensive provision for fire stopping and cavity barriers in the building
- Provide L1 fire alarm coverage with voice alarm in the building for the earliest warning of fire outbreak
- Provide automatic smoke and heat exhaust ventilation systems to provide a path for the smoke to be exhausted out of the building
- Provide an enhanced automatic, low-pressure mist fire suppression system

It was also agreed to bring those areas of the building not directly damaged by the fire up to a standard which would be consistent across the whole building. This work included enhancing doors and glazed screens in corridor areas which contributed to the compartmentation of the building.

While major works had been undertaken in various phases over a 20-year period, as referred to above, the situation after May 2014 was different as the building was non-operational and vacant. This allowed full consideration of issues which could only be addressed in part in previous work programmes. This
included the full fire-stopping of ducts, upgrading fire resistance of building elements and comprehensive renewal of building services - heating, ventilation, lighting and alarm systems.

2015 -2016

The Page\Park design team prepared tender documentation for the reconstruction works, including the previously agreed fire safety upgrades. The tender documentation placed a responsibility on the contractor to prepare a detailed fire safety plan to protect personnel and building fabric in the event of a fire during the construction works.

The team applied for and received Planning, Listed Building and Building Warrant consents for the proposed works.

Where possible, and without impacting detrimentally on the detail and aesthetics of the original design, the proposals added areas of insulation at roof level to improve the thermal efficiency of the building. Without exception, the use of insulation in the building complied with all regulatory and legal standards.

2016

GSA appointed Taylor and Fraser Ltd building contractors in the aftermath of the fire to make the site secure, manage the clear out works, install a temporary protective roof enclosure, install protective services and manage health and safety. Once this was complete, the reconstruction works started in July 2016 when Kier Scotland was appointed by GSA after a competitive process.

At the commencement of the works, Kier Construction prepared and issued a Fire and Emergency Plan. This plan was extensively consulted upon and updated, taking into account comments received from the GSA, design team, fire consultants, health and safety advisers, Building Control and Scottish Fire and Rescue Service.

At monthly intervals throughout the construction works, the contractor issued reports which included fire and safety sections confirming that fire measures were being tested and monitored regularly. These reports were tabled at monthly progress meetings convened by the project manager and attended by the client, design team and the contractor.

During the course of the works, the project managers, design team and clerk of works were on site on a regular basis for weekly site visits, attending technical meetings, mechanical and electrical services meetings and monthly progress meetings. Visits were also made by the health and safety advisers who carried out regular site walk rounds and site audits.

2016 - 2017

First phase works to the west wing began, including reconstruction of stonework, roofs and glazing destroyed in the 2014 fire. Ongoing design work was undertaken by the contractor’s specialist sub-contractors of fire detection and suppression systems.

2017 - 2018

This period saw the main phase of work to the whole building, including installation of mechanical and electrical works that encompassed fire related systems. The reconstruction of fire damaged interiors took place, including the library which had been constructed off site.
2018

At the time of the fire, the reconstruction and conservation works were well advanced, with completion due in early 2019. Glasgow City Council Building Control had visited the site on a number of occasions; works to the building envelope were drawing to completion; and internal conservation works were well advanced with the library fit out well underway by specialist crafts workers. The installation of the fire-mist suppression system and air aspirating smoke detection system, as well as mechanical and electrical installation, were proceeding in accordance with the agreed plans and programme, under the management of the contractor.

Post 2018 Fire

In the immediate aftermath of the fire, Page\Park has contributed to discussions with GSA, structural engineers, Historic Environment Scotland, Glasgow City Council and others to ensure that all appropriate urgent action was taken to ensure public safety whilst retaining as much as possible of the Mackintosh Building.

Page\Park has been intimately involved with this internationally significant building over a period of some 25 years, and what occurred is a matter of deep distress to us, as of course it is to many others. From 2014 to the time of the second fire, Page\Park developed a Conservation Framework which, as well as addressing complex issues in terms of conservation practice, also contains a level of digital information and 3-D modelling of the building, which is of a scope and level of detail unprecedented in such situations where fire has significantly damaged an important historic building. We hope that this can form a valuable resource for any future rebuild project.

We remain committed to the building, and trust that our evidence, both written and oral, is testament to that enduring relationship.

Page/Park
17th October 2018