INTERNATIONAL CONSERVATION CASE STUDIES

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Foreword

The ICOMOS Education and Training Guidelines determines that the object of conservation is to prolong the life of the built cultural heritage and to clarify its artistic and historic pedigree without loss of authenticity or meaning. They also state conservation is an aesthetic, technical and craft activity, based on humanistic and scientific studies, and methodical research that respects cultural context.

This welcome volume of 12 international case studies readily shows how all the ICOMOS requirements can be effectively honoured. Collectively, they cover conservation philosophy, significance, value, technology, setting, specialisms, and historic developments. Their breadth and diversity reveal how seeking all available information and working with others can aid apposite judgement and decision-making within their cultural prerequisites.

As an inspiration to others, the cases reveal informed professionals who, guided by relevant charters and philosophies, oversee, record, and archive multidisciplinary endeavours. This, in addition to offering guidance on management and maintenance involved in achieving the long-term well-being of a seemingly disparate and diverse well-illustrated set of exemplars.

Yet a commonality runs through the adopted approaches, equally demonstrating the applicability of having the international ICOMOS Guidelines to work from. Such a baseline also underpins the importance and relevance of the RIBA Conservation Accreditation Register to enable all architects upskill their conservation expertise.

Ingval Maxwell OBE DADun FRIBA FRIAS FSAScot
Chair, Council on Training in Architectural Conservation (COTAC) and the Edinburgh Group; Moderator, RIBA Conservation Accreditation Moderating Panel; Member RIBA Conservation Group.

As a former conservation architect I warmly welcome this collection of case studies showcasing the many ways in which accredited conservation architects can support and add value to projects across the globe.

Looking after people's heritage is a privilege, requiring knowledge, understanding and judgement. These are the skills that accredited professionals offer to their clients, and why they can be trusted to carry out conservation projects with sensitivity and respect. Accredited professionals being a deep appreciation of the complex relationships between materials, culture, history and context to their work as well as an understanding of the range of philosophical approaches that can be taken, from preservation through conservation to restoration. They are able to guide clients on their unique journeys, helping to identify the most appropriate approach for each project, and bringing a 'toolbox' of skills, expertise and experience that can be deployed to ensure the proper care and conservation of our fragile cultural heritage.

Every project offers different challenges but choosing an accredited architect is the one way that a client can be certain that their project is in a safe pair of hands.

Sara Crofts BArch(Hons) MSc IHBC FRSA
Chief Executive of Icon (the Institute of Conservation) and a council member of Europa Nostra. She was previously an active trustee of the Friends of the Georgian Society of Jamaica, working to preserve Jamaica's vulnerable 18th century heritage.

The General Assembly of the International Council on Monuments and Sites (ICOMOS), adopted in 1993 the Guidelines to promote the establishment of standards for education and training in the conservation of historic buildings and areas, towns, archaeological sites and cultural landscapes. Sir Bernard Feilden, who famously said: "become a good architect first, and then become a good conservation architect", drafted the text. He was by then ending his twenty-years' lecturing at the International Centre for the Study of Preservation and Restoration of Cultural Property (ICCROM) in Rome, where he also served four years as director. The Guidelines encapsulate the extraordinary environment and expertise of an international group of architects and other professionals reflecting on and practising conservation for decades. The starting point was conservation as "a cultural, artistic, technical and craft activity based on humanistic and scientific studies and systematic research." The Guidelines were conceived as a reference for institutions to develop training programs to define appropriate standards

and criteria for specific regional, cultural and technical requirements. They also recognise the importance of collaboration, good communication and coordinated action for good practice. An excellent example of the continuous relevance of the Guidelines for international practice today, is their use as criteria for RIBA accreditation in conservation.

Dr Cristina Gonzalez-Longo RIBA SCA RIAS FHEA FRSA.
Director: MSc in Architectural Design for the Conservation of Built Heritage, University of Strathclyde. President of ICOMOS International Scientific Committee in Education and Training (CIF). RIBA Assessment Panel member

This elegantly presented document shows how the RIBA Conservation Accreditation facilitates architects to apply their trade and knowledge to a wide range of buildings, using the ICOMOS guidelines as a foundation in respect of the diverse cultural context.

As a RIBA Specialist Conservation Architect, I have been particularly inspired by the ability of the architects showcased to fully appreciate how relevant is the cultural, historical and social importance of the buildings at the centre of their work to the local environment.

The broad spectrum of projects exemplified in this document is itself testament to the global outreach of the RIBA Conservation accreditation and comprehensively illustrates the relevance and versatility of its registrants.

I was also impressed by the progressive nature of the RIBA conservation architects approach to conservation. Moreover, how their work has influenced clients, the end users and most notably authorities of distant countries, where the science of conservation is not as advanced and established as our own.

Valeria Passetti FRIBA SCA IHBC
ICOMOS-UK Trustee, RIBA Vice President Membership,
RIBA Board Trustee and Council Member 2017-2021.


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CASE STUDY 1 | HAITI 1

Iron Market, Port-au-Prince, Haiti

Katherine Watts RIBA SCA
Location: Port-au-Prince, Haiti
Scope: Conservation strategy, repair and design proposals, site inspections and advice
Timeline: 2010-2011
Team: Katherine Watts, John McAslan, Pauline Nee

Built in 1891, the Iron Market was one of Haiti's most important civic landmarks. Severely damaged by a 2008 fire and the 2010 earthquake, the Market structure was conserved and rebuilt by John McAslan + Partners. It was reopened by President Bill Clinton in 2011, exactly one year after the earthquake.

The project required a multi-disciplinary team including many local artisans and was an extreme test of design, research, materials sourcing and logistics. Key historic details were conserved, where possible, and new elements were engineered to meet current seismic requirements. The restored Iron Market is now a symbol of Haiti's endurance and the long process of the country's physical recovery.

Above: the official inauguration of the restored Market in January 2011

In collaboration with ISPAN – Haiti's heritage guardians – and the Iron Market's Director Jeune Augustin, JMP led a design team that carried out detailed damage assessment, made the remaining structural elements safe, assessed what could be salvaged, and then set out a comprehensive repair and rebuilding strategy. Key issues included structural dismantling, paint analysis and research into original 19th century materials such as the stone flooring, the roof tiles, and the clock – all of which originated in France. The project involved roof and gutter replacements, façade repair, and the reinstatement of the market's brick perimeter walls and floor slabs.

The rebuilding of the Iron Market was the first fully completed restoration of a destroyed landmark building of great symbolic and social value after the 2010 earthquake. A key element in our resurrection strategy was the use of local builders and artisans to complete the building. The renewal scheme involved hundreds of artisans, artists, and general site workers in tasks such as conservation of the ironwork, decorative metalwork, stone dressing, and bricklaying. Many workers learned a new range of skills: conservation techniques, including the salvaging of original brickwork and stone flooring, which will be widely applicable to the rebuilding of Haiti. It was fortunate that there was already a local artisanal tradition of metalworking, and 3mm sheet metal reclaimed from oil drums was hand-worked to produce decorative elements for the new North Market. Laser cutters were purchased and Arts et Artisan, the contracted artists and metalworkers for the reconstruction, trained local metalworkers to use the tools on 1/4 inch steel, which enabled them to enhance their artworks, and gain a valuable new skill that they can use on future reconstruction projects.

Top: early 20th-century photographs of the Market, erected in 1891

Below: the restored building is once again at the heart of social and economic activity in Port-au-Prince and is acting as a catalyst for future regeneration

Above: the remaining historic structure was repaired, with newbuild elements echoing the spirit of the original Right: all materials that could be salvaged were carefully retained and incorporated into the restoration works

Left: local skills were used during the restoration process

CASE STUDY 2 | CHILE 2

Palacio Pereira, Santiago de Chile

Alan Chandler AA Dip. RIBA SCA FHEA
Location: Santiago de Chile
Scope: Conservation strategy, repair advice, site inspections.
Timeline: 2012-2020
Team: Cecila Puga, Paula Velasco, Alberto Moletto, Alan Chandler, Fernando Pérez, and engineer Pedro Bartolomé.

Work on the strategic and tactical stages of the Palacio project, followed by detailed site investigation and specification led to opportunities to open a detailed debate at the highest level around social and philosophical approaches to conservation that is still in a developmental stage in Chile. Conservation can bring a wider social and political dimension to 'cultural value', but who determines the nature of that value and how can buildings, monuments and spaces become part of the fabric of development that defines modern neoliberal societies?

'The object of conservation is to prolong the *life of cultural heritage and, if possible, to clarify the artistic and historical messages therein without the loss of authenticity and meaning. Conservation is a cultural, artistic, technical and craft activity based on humanistic and scientific studies and systematic research. Conservation must respect the cultural context.'* [1]

The wider cultural value ICOMOS claimed for conservation in 1993 is critical as it balances the technical task of the material appropriateness of repair with the social appropriateness of use. What it does not and could not do is to clarify 'cultural context' to which conservation must be subservient. That context shifts radically across the globe, so any approach to context must be explicit in its' understanding in order to evaluate the parameters of a conservation-based approach.

1 ICOMOS Guidelines for Education and Training in the Conservation of Monuments, Ensembles and Sites (1993)

In 2012, the Chilean Government and its Heritage agencies selected this project for an open international competitions as a centrepiece for the Bicentenary of the Chilean Republic, requiring the restoration and conversion of a partly ruined urban Palacio or 'grand house' as the headquarters of the Chilean Council of National Monuments, a gallery, museum, archive, library and public courtyard.

The Palacio is recognised as one of the first truly Chilean houses in a city dominated in the nineteenth century by European copyism, and is a scheduled national monument. Its unique cruciform top-lit arcade established a true break form the formal organisation of the European émigré architects working in the 1900's to establish an identity for an increasingly wealthy Chilean bourgeoise. The importance of the house was emphasised by the fact that the Government, right of centre and 'free-market' in its ideology took the unprecedented step of intervening as its owner was deliberately vandalising the fabric in an attempt to weaken it for the earthquakes to remove its stability and allow wholesale redevelopment of the downtown site.

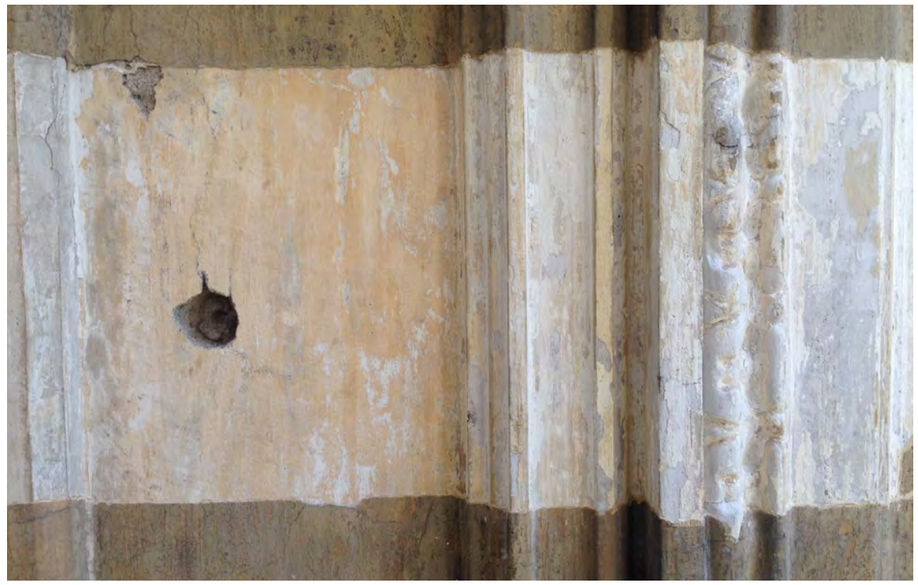
The Palacio Pereira competition required the development of a detailed design for the new element of the site left open by the collapse of a large section of the building during seismic activity and vandalism by its former owner. The competition set out a hierarchy of interventions that were considered acceptable, identified some areas of recent construction that were felt expendable, and a detailed set of new requirements.

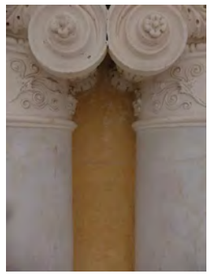
My role was to establish a clear strategic vision for the 'restoration' that demonstrated a knowledge of the frameworks for conservation internationally, and showed how these principles could be utilised for the specific context of the building and the aspirations of the Government and Council of Monuments.

Chilean conservation knowledge is creditable and archaeologically based, focussed on analysis and repair, but struggles with craft deficits and a framework for discussing or managing heritage in relation to economically driven development.

Awareness of these issues became articulated through the Bicentennial competitions, where new directions for the heritage debate were openly sought in order to establish new baselines for heritage management and awareness. Following the public exhibition of the project panels incorporating the conservation strategy at the XVII Architecture Biennale our winning project was were displayed at the Centro Patrimonial Recoleta Dominica, headquarters of the Council of Monuments which would be relocated into the Palacio Pereira upon completion of the work.

Competition image by Puga, Moletto, Velasco





Cleaned test section showing through-colour plasters – the completed cleaning and repair.

A short extract below establishes a clear concern that the condition of the building 'as found' is part of the documentation of Chile's turbulent recent history. This history is conflicting: a Chilean monument with original vestiges of European décor, the semi-industrialised plasterwork and mouldings requiring high levels of craft to repair, the socially and politically damaging Pinochet era preserved the house while the post-Pinochet economic boom delivered crippling damage to the building, inflicted by speculative developers. Such ironies leave marks, therefore the removal of such marks through 'restoration' (which is the normal approach in Chile) was directly addressed in the strategy, using Morris as a demonstration of how material, detail and craft authenticity must be expressed, and must be linked to social concerns.

The Conservation framework established for the competition entry made a series of philosophical assertions that gave priority to Morris's proposition that the historic building is a human document, and the protection and celebration of the traces of its use is equivalent to the protection and celebration of the people who contribute to its ongoing usefulness. Morris once said "give me love and work, nothing else". These simple and essential aspects of humanity sidestep the academic detachment that often informs the conservation work undertaken on our heritage.[2]

The project developed by the team was deliberate in the way new technology and contemporary structural design codes were brought together with the existing brick structure, visible in much or the historic building. The positioning and organisation of the new concrete structure was developed to express the continuity of the original courtyard plan of the house and to acknowledge the value of bare materiality as an expression for the new and the old architecture. Many of the spaces of the Palacio had lost all or most of their plasterwork, these spaces were consolidated as found, providing a set of intermediary spaces between the relatively intact neoclassical façade and main rooms and the new office space to the rear of the plan – using the 'as found' condition of the rooms as the starting point for their use and identity.

My work at the competition stage was to articulate the relation between the new structure and the old, and to establish intelligent servicing strategy to minimise disruption to the existing building by exploiting voids created through dereliction to provide cabling, air conditioning and water/waste services risers and runs. Even lighting strategies were discussed as the competition design was being prepared, ensuring that lighting from lamps or via suspended beams carrying lighting track avoided chasing plaster or brick left exposed within the historic section of the building.

2 Except from the authors Competition strategy

The presumption of the competition brief was the complete restoration of the exterior. Our strategy understood the persistence of this building, surrounded by a constantly changing setting, and a cultural anchor that should display its resilience rather than appear as a perfect facsimile of itself. This understanding of setting was critical in the way the strategy set the tenor of the design development.

Following the winning of the project, I developed a summary strategy document and a series of presentations to members of the government, from the Dibam (Historic Monuments Council), as well as library staff, administration staff and politicians, for whom conservation was a relatively unknown area. I was careful to identify the sources of our conservation strategy, relating our work to extant charters and recent case studies such as the Neues Museum.

The media attention that our project received allowed for a discussion on the cultural relevance of heritage beyond the closed doors of government. The opportunity to identify the social value of conservation to a wide public audience is essential. Heritage is not simply a matter for governments, they are merely the vehicle for the proper custodianship of what must be social property. If people identify with, use and give value to historic buildings and spaces, their relevance is assured. If people do not understand that value, historic buildings are simply a collection of more or less well preserved mausoleums for academic scholars.

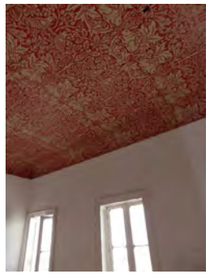
Specification for the Restoration of the Palacio Pereira

Working with Pedro Bartolome, a senior structural engineer experienced in masonry performance in highly seismic regions, we discussed the priorities for the work, the process of design elaboration for a complex, multi programme institution taking a year to define, yet the immediate threat to the building from earthquakes remained high. A series of recommendations to secure the connections between cross walls and the façade (deliberately broken by the previous owner), be reinstated in compatible masonry with matching lime based mortar (determined by sample analysis). This approach was new to the authorities, for whom a building of this scale would normally require concrete reinforcement, or be retained as a façade with a structural concrete frame within. The thickness of the walls and their efficiency in resisting seismic action (up until the vandalism) established their efficiency even though they do not comply with current codes. The Engineer and I prepared a strong argument for this strategy questioning the relevance of the structural codes in this case, and this was accepted.

Archaeology and exhibition are only a part of the evaluation of durability, contemporary safety legislation, widely differing environmental requirements and the issue of a severe seismic environment in one of South Americas most polluted inner cities. The conservation strategy responded fully to the idea that heritage is not a fixed timeframe but a continuity of human interaction, and cited Morris's unique proposition that culture, craft (work) and historic built fabric are intimately connected and self supporting.

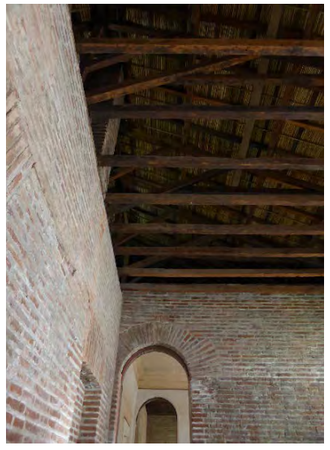
The most powerful design intervention was, for me Cecilia Puga's idea to not replicate missing ornate plaster ceilings, but to utilise a contemporary attitude to pattern to bring the 'splendour' that the original Government brief required. I assisted in obtaining copyright to use a pattern by William Morris ' Brother Rabbit' to both define intricacy, but also as a recognition that Morris defined our conceptual and practical approach to the building.

Ultimately conservation practice is designing for contemporary needs, in a contemporary manner in partnership with craft and the culture of people the building is meant to serve.



Completed interior with Morris's 'Brother Rabbit'

Completed interior with exposed brickwork and roof 'As Found'
Finished plaster repair retaining original detail and reinstating only 'regulating lines'



CASE STUDY 3 | ANTARCTICA 3

Conservation in Antarctica

Janie Price BSc Hons, Dipl Arch, Dip Cons, AABC, RIBA SCA, Kennedy O'Callaghan Architects
Location: 6 sites on the Antarctic peninsula. So far: Horseshoe (Base Y), Stonington (Base E and U.S. Base), Port Lockroy (Base A), Damoy
Scope: Conservation management plans, gazetteers, technical research, briefing the site team for emergency repairs, condition surveys, room data sheets, recording. Enabling site inspection reports by lay visitors. Developing policies and strategies for long-term conservation.
Timeline: Each austral summer, a team of conservation practitioners is "sent south" to survey and repair a Base, under the guidance of the architects, from the comfort of their London office.
Team: Kennedy O'Callaghan Architects, Heritage project manager, client logistics team, artefact conservators, BRE researchers, paint consultants, heritage BIM consultant, British Antarctic Survey3-d imagers and archivists

United Kingdom Antarctic Heritage Trust (UKAHT) is responsible for the conservation of six former British bases on the Antarctic peninsula, that represent the birthplace of British science in Antarctica. The charity's mission is "to help current and future generations discover, understand, value and protect" the bases, on behalf of British Antarctic Survey, for the Foreign Office.

In 2016 the client approached Kennedy O'Callaghan Architects because they had conserved the wartime huts at Bletchley Park with a light touch conservation approach. The brief was to provide conservation advice on the management of the sites in the short-term and long-term. Most of the sites have been derelict since the 1970s, but Port Lockroy is managed as a tourist attraction, museum and post office and some huts continue to be occupied from time to time as emergency shelters and have been maintained, albeit in an ad-hoc manner. Many of the outbuildings had fallen into an advanced state of decay. Some of the sites had been visited rarely and their condition was unknown.

The sites generally consist of a "base hut" in which the scientists "over-wintered", a "gen shed" (for coal-fired generators), a dog shed and pup pens (for breeding working dogs), a balloon shed (for meteorology), a workshop with "chippie store", an emergency store, radio masts, Stevenson's screens, water tanks and some have a boat shed. The landing site can be 1km from the Base across rough terrain and only accessible in summer. Sea ice can make the sites inaccessible and the duration of stay unpredictable.

The bases were built in phases from 1944 to 1975, adapted and sometimes moved from one site to another, so piecing together their history was like a complex jigsaw.

The plan is to assess each site, amass survey data, carry out condition surveys, emergency repairs, develop policies, and plan the implementation stage to ensure the sites, artefacts, stories and historic environment will be preserved for future generations.

Base Y (Horseshoe Island) was the pilot project in 2016, where a team of four undertook measured and condition surveys, photogrammetry and emergency repairs. The six weeks on site required a 3-month expedition. The following year a team of six visited Base E (Stonington), a larger and more complex site. Next were Base A (Port Lockroy) and Damoy. The 2020-21 expeditions were cancelled due to Covid. Over the coming years surveys will be undertaken at the remaining sites and the implementation plan will begin.

Research

British Antarctic Survey's archive has annual reports since the 1930s, photographs, negatives, film, objects, drawings and oral history records, but much was uncatalogued and some of the information was censored by the foreign office. The Bolton and Paul archive in Norwich held information about the prefabricated huts. ICOMOS articles provided contact details for research on Antarctic mould, climate and materials analysis. The New Zealand Antarctic Heritage Trust lends experience from their conservation of Scott's hut and other sites in the Ross Sea.

Significance

The bases have rich historical, cultural and intangible significance. They were strategically important nationalistic symbols as well as scientific bases.

Construction

The huts were prefabricated, assembled by the scientists and adapted in phases from 1944-1994. Most huts are constructed on concrete footings with a timber frame clad in timber, with tarred felt roofs held down with guy wires supported on cairns. Facades were painted or creosoted. Base E has a 2-storey steel frame with plywood cladding. The sites relied on all the outbuildings functioning independently and the buildings were separated to reduce risk of fire.

Site Surveys

Each site has a unique climate and landscape. The working season is short due to logistical restrictions imposed by snow, sea ice, melt water and wildlife. The site team for Base Y provided panoramas and photogrammetry which was processed by British Antarctic Survey's Mapping and Geographic Information Centre, which the architect developed into a Sketch-up model. Base A and E have had laser and drone surveys and the point cloud data is being developed for audience engagement, with grant funding. http://ukaht.org/latest-news/2020/new-project-will-bring-antarctic-heritage-to-life/

Causes of decay

The remoteness, dereliction, lack of maintenance and extreme weather have led to damage by wind, snow ingress, ice build-up and ice abrasion. Visitors have caused damage and condensation. Ice build-up from artefacts stored under the huts has led to mould. Huts have been propped where they have failed. One hut on the American base is entirely filled with ice. The 2-storey hut at Base E has a catwalk at first floor level, which traps snow and poor detailing led to saturation of the facades, water ingress and collapsed asbestos flues.

Strategy

Each site is being surveyed and appraised so that appropriate conservation can be implemented over the coming years. Emergency repairs are carried out with meticulous recording and investigation on site, so that appropriate materials can be obtained, and future works can be planned in the UK. Antarctic environmental protocols are embraced. The conservation strategy is based on ICOMOS and UNESCO guidance, the Burra charter and the Australian "Significance 2.0" guidance for artefact conservation.

Preparation

Technical research, materials analysis and site trials will determine what materials and working methods are appropriate. The architects prepared drawings, schedules and templates using the Uniclass system to ensure a common approach to documenting each site, with any gaps in knowledge identified in red, for the site team to annotate. Documents are iterative and updated each season. Suppliers have assisted research and donated materials for trials of roofing felt, bitumen and paint to test suitability for application in the cold climate.

Conservation Management Plans

The CMPs and gazetteers incorporate archival images, together with the architects' significance and chronology diagrams. Significance was assessed in accordance with Historic England's 2008 'Conservation Principles Policies and Guidance for the Sustainable management of the Historic Environment'.

The Conservation Review Panel

In 2019 a Conservation Panel was established as a professional advisory group to provide expert advice in support of the Antarctic Peninsula Heritage Conservation Programme. They review strategy, programme, policy, methodology and documentation on a macro and micro level. The panel includes the heritage project manager-cum-carpenter, conservation architect, artefact conservator, logistics expert, a representative from Historic England and trustees.

Team

The team includes project manager, artefact conservators, heritage BIM consultant, asbestos consultant, British Antarctic Survey's geomatic imaging team, ecologists and archivists, members of New Zealand Antarctic Heritage Trust, Scott Polar Research Institute, and IAATO, a member organization that advocates safe and environmentally responsible private-sector travel to the Antarctic. Site samples were scoped by BRE materials scientists and paint consultants. The site teams include international conservation multi-skilled practitioners, many of whom have extensive experience in Antarctica.

Progress

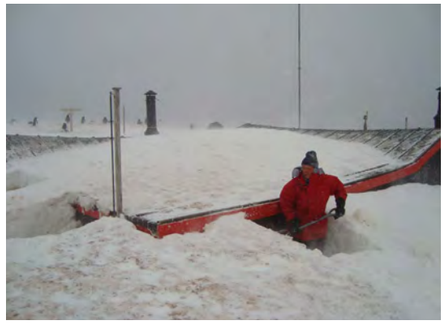
The archivist has catalogued the data from site surveys and emergency repairs.at four sites so far. A conservation implementation plan has been drafted for Base Y,including a Visitor Experience Proposal. Field seasons will resume in 2023.

Conclusion

it is a pleasure to be part of a committed team who is passionate about conserving the historic bases in Antarctica. With adequate planning, it is possible to work remotely, with the aid of a point cloud model and a great team.

Intangible significance

By serendipity I learnt that "ME" on the back of a photo of Base Y in 1956, was Malcolm Evans, a family friend from Australia. We exchanged emails and his diaries have now been transcribed and his artefacts will be returned to Horseshoe, to facilitate interpretation, as was his dying wish.



CASE STUDY 4 | ST HELENA 4

St Helena Island projects

Deniz Beck RIBA CA
Location: Jamestown and Mundens, St Helena Island, South Atlantic Ocean
Scope: Masterplan, Adaptive reuse, feasibility studies
Timeline: March – September 2012
Team: Deniz Beck, Sam Brooks, Peter Keenan

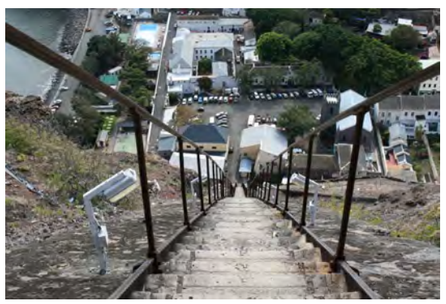
Brief history

Saint Helena was first discovered by the Portuguese in 1502. Claiming to be Britain's second oldest colony, after Bermuda, this is one of the most remote settlements in the world and was for several centuries of vital strategic importance to ships sailing to Europe from Asia and South Africa. Since the early 19th century, the British occasionally used the island as a place of exile, most notably for Napoleon Bonaparte, and over 5,000 Boer prisoners.

Project background

As part of their new strategic vision for the island, the government of Saint Helena set up a working group tasked with developing their tourism sector in 2013 in preparation of the opening of the Island's first commercial airport three years later. Identifying historic areas and buildings in and around the capital Jamestown as existing or potential visitor attractions, Enterprise St Helena (ESH) subsequently invited UK-based architects to devise a series of development proposals. PLC Architects were commissioned to prepare the necessary concepts and development visions, and after being appointed Project Architect Deniz Beck visited the island in August of 2012.

St Helena intended to define itself as a destination for high-quality eco-tourism that aimed to accommodate limited numbers of big spending visitors. The proposed schemes utilised existing historic buildings and spaces to compliment this concept, and after conducting option appraisals on behalf of our client the following projects were selected as likely to attract investment to the Island.



Adaptive reuse of former houses in Main Street, Jamestown

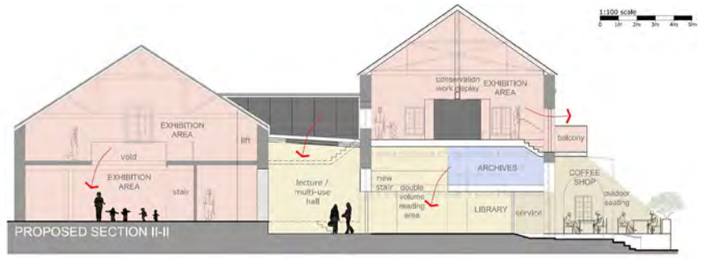
In 1974, the British government commissioned Hugh Crallan to draw up an illustrated list of scheduled buildings of historical and architectural interest in St Helena, to assist in advising the Governor about suitable preservation legislation. The built form of lower Jamestown from this period was largely intact in 2012, and the adaptive reuse of key buildings offered an opportunity to redress poor alterations and unsuitable modern features, such as the casement windows that replaced many former sliding sash units. These collections of houses constituted fine examples of local Georgian architecture, and following the end of their use by the local government as offices, they presented the opportunity to contribute in new ways to the local economy.

Historical use consisted of shops at ground level with residential space above for the shop owner and large storage space with poor-quality accommodation for the workers at the rear. This layout afforded only a single attractive aspect, typical for properties in this area, and the proximity of these buildings to the main square and seafront suggested the potential for a hotel conversion. Our scheme utilised a contemporary language employing natural finishes and locally-sourced materials, and aimed aim to provide high-quality accommodation for tourists keen to experience a piece of the island's architectural heritage.

St Helena Museum extension and public square

The existing museum building was in need of modernisation, with most of their collection held in storage and no space for educational facilities. Our proposal was to combine a collection of associated buildings with a modern extension into a tourism hub that could share and celebrate the Island's rich history with a new generation of Islanders and visitors. The design process included an extensive programme of stakeholder consultation as the island's residents (known as 'Saints') are understandably proud of their heritage and very protective of how their story would be told.

A new educational centre was proposed for the existing museum building and adjacent disused store, and included a new landscaping scheme for the exterior to better integrate the new facilitites with the main square. The extension would extend over the existing adjacent building to allow direct access to nearby sea views, and would house a dedicated restaurant serving the new centre.



Mundens – fortifications

St Helena was settled by the East India Company in 1659, and although the tiny Fort of St. John was initially deemed sufficient to defend its settlements, following the Dutch invasion of 1673 it was decided that additional batteries should be built across the island. At first comprising just two guns, Mundens Battery was greatly expanded under the instruction of Governor Roberts in 1708 and works were completed shortly after in December 1710.

Since being employed as a searchlight station during World War 2 the structure stood derelict, but due to its strategic location on the headland adjacent to and overlooking Jamestown, Mundens was identified as having potential as a new luxury hotel and resort that could exploit both its unique placement and role in the island's cultural history. This potential was somewhat impaired by the local geography that separated Jamestown from the smaller settlement at Rupert's Bay. Our solution involved an innovative approach to new transport links between these two population centres, anchored around Mundens and incorporating its unique views and period features as the principal attraction for visitors to the island.

Figure 1 – Hadzabe Bushman Hut, Tanzania, Gordon Clarke 2012

CASE STUDY 5 | ETHIOPIA, MOROCCO & TANZANIA 5

Conserving African Nomadic Architecture

Gordon Clarke RIBA CA
Location: Ethiopia, Morocco & Tanzania
Scope: Cataloguing and recording, conservation strategy
Timeline: 2011 – 2020
Team: Gordon Clarke, Nadia Clarke

Africa contains a unique cultural environment, one which has hardly been recorded, yet which is disappearing rapidly. Held within a multitude of seemingly similar and unimportant buildings there are traditions of design and adaptation which may go back to the dawn of architecture itself. But neither the people, nor their houses are ever static. How can we conserve these ephemeral architectures, the productions of transitory nomadic peoples whose designs are part of a constantly evolving stream? How do we preserve a design pattern that is created to pass repeatedly between substance and memory, held at one moment in tribal consciousness, and then built afresh at each site? And how do we sustain the complexities of mobile buildings, alternately tied to the backs of camels, then expanded out into space, adapting uniquely to the wind and the sun and the new ground on which they stand?

As conservators, we are mostly dealing with buildings that are already hundreds of years old, their designers long buried. Our work is to hold back the ravages wrought by beetles, fungi and human agencies. However, most nomadic architectures, without constant attention, have lifespans of less than a year. The bushman huts of the Hadzabe, for example (figure 1), are intended for occupation for only six to eight weeks, and while a palm-mat tent in the Afar region (figure 2), might last a few years while occupied and moving, if fixed to one spot, subjected to a desert storm or monsoon, it would disintegrate in a matter of days. For these buildings, moving is conserving, as at one camp a new mat will be woven, and at the next, it will be used to replace a tattered remnant.

Even among the most mobile of African architectures, the black tents of the Sahara (figure 3), the loom is never far away. The tent is slowly replaced from the crown outwards, the newest strips forming the roof, while the older cloth is slowly cast towards the sides in a constant cycle of renewal.

The first thing that becomes apparent when exploring these buildings is that the age of the architecture and the age of the building are completely different. This is rare, for most buildings are an expression of the architectural ideas of their time, frozen relics cast out by an ever-changing architectural continuum, be that vernacular or Classical or oriental. However, these nomadic architectures are alive, not metaphorically, but truly alive. Just as a nest lives within the DNA of the bird that builds it, so these architectures live within a gestalt knowledge system of a community, handed down, often between mother and child, learned from a very early age (figure 4). This anchors the language of architecture as deeply into the human soul as any verbal language.

Figure 2 – Afar Mat Tents, rolled up on a camel and erected in the Danakil Desert. Gordon Clarke, 2019

Figure 3 – The best cloth forms the roof where tensions are greatest. Berber Tent, Morocco. Gordon Clarke, 2016

Like language, living architectures change and adapt. Marriages between tribes lead to the exchange of ideas, religious conversion can completely change the way a space is used, and increasingly the introduction of industrial materials has had very profound effects on the details of construction. Among the Dassenetch, for example, corrugated steel sheets from a recent infrastructure project have been beaten to form new covers for very traditional structures (figure 5). While there may, of course, be moments when the design is at rest for years or even centuries, any new external agency will lead to an inevitable reaction within the architecture.

Conservation in this context moves from an arena of repair technique into a realm of cultural identity. Even placed in a museum, these structures quickly die. They become fixed expressions of a single moment in the flowing cycle of migration and completely divorced from the landscapes into which they are bound (figure 6).

The artefact is not the architecture it is the knowledge, and just as wildlife conservation has moved focus from species to habitats, so these living architectures can only really exist within a cultural habitat. What we are therefore aiming to conserve is not a building, it is a tradition (figure 7).

At its simplest, conservation of these structures is a three-fold process.

Awareness – There is still a lot of work to do to bring these architectures to the attention of specialists, locals, and governments, each of whom need to grasp both the importance of the traditions and also the threats to preservation.

Recording – While not true conservation, recording a detailed snapshot of the buildings, the production techniques, and the cultural environments, is an essential part of preserving the knowledge and skills for possible future reconstruction.

Support – The core of any conservation model is to find ways, unique to each culture, that the traditions can be maintained as living knowledge.

Figure 4 – Children learn to build at the same time that they are learning language. Mursi, Ethiopia. Gordon Clarke 2013

Figure 5 – Traditional and Modern – no living architecture stands still for long

None of these are easy. To raise awareness requires that the community has been accessed and their structures assessed, which given that many are located areas of considerable unrest such as Libya, Nigeria and Somalia, presents risks, especially to the European researcher. To persuade local people that their traditions are of value is also challenging among communities suffering from draught and malnutrition.

Recording is complicated by the constant shifting of the type. Even the most detailed measured drawings will never capture the total gestalt of the building as contained in the knowledge base of the community. There is a clear need to train local people to record their own architectures, but recording is a highly skilled task, and the etic eye will often pick up details which appear insignificant to a local.

However, by far the greatest challenges exist in creating support environments. Threats come from many different directions: governments and corporations who want the lands that they occupy, missionaries introducing concepts of shame and poverty, the community youth seeing the lights and economic benefits of city life. Unlike a solid heritage, to preserve a living tradition requires a full participation of the local people, and for this they need to see that there is a tangible benefit to their families and communities.

After 15 years, I only just started to scratch the surface of these challenges, and with the skills of a conservation trained architect I have put most of my focus on simply recording and disseminating the studies I have made. To my great surprise over 65 million people from all over the world have now watched videos of these buildings being constructed, and this, if nothing else, serves to demonstrate the immense value of the heritage that is before us. Warmth is the start of all creative processes, and in years to come we hope to create from this a body of conservation that will serve the people of Africa for generations.

Figure 6 – The intimate connections between building, village and landscape are a vital component of 'wild' architectures

Figure 7 – The skills are as important as the building – Dorze Woven Bamboo House, Ethiopia

CASE STUDY 6 | IRELAND 6

Reads Cutlers, Conservation and Refurbishment Works

James Kelly RIAI RIBA SCA
Location: 4 Parliament Street and 3 Crane Lane, Dublin 2, Ireland
Scope: Conservation strategy, and conservation, restoration and refurbishment works as Project Architect under RIBA Work Stages 0 through to 7
Timeline: 2012 - 2018
Team: James Kelly and Katrin Korter

The conservation and restoration of Reads Cutlers, a modest mid 18th century mercantile premises at 4 Parliament Street in central Dublin and a protected structure, was completed in 2018 and is one of the most significant restoration projects in Ireland in recent years.

Read's is Dublin's only intact 18th century retail premises and is a unique survivor, not only in the almost perfectly intact 1760s shop and domestic interiors of the Wide Streets Commissioners building fronting onto Parliament Street but also in the hitherto unrecognised much earlier 17th / 18th century premises fronting onto Crane Lane and absorbed into the mid 18th century alterations.

Established originally on nearby Blind Quay in 1670, Reads moved to 4 Parliament Street in 1762 and traded there until it's final closing in 1988.

Very little commercial material culture in Ireland survives from the 18th century. However, in the case of Reads not only it's built fabric but its internal cabinetry, fixtures and fittings as well as a substantial volume of trade goods of the mid 18th to late 19th century survive.

Brief History:

Parliament Street, designed and laid out to the design of the Wide Streets Commissioners architect: George Semple, in 1761, was opened up by the Wide Street Commissioners in 1762 to provide a suitably grand approach from Essex Bridge to Dublin Castle. Almost all the houses lining the street have undergone considerable change over the past 250-plus years, but this building retains its original appearance both inside and out.

Description:

No. 4 a terraced two-bay five-storey house over shop, is the most intact surviving building on the street and it's built fabric and decorative detail survive throughout, along with it's shop fittings fixtures and contents including its unique 18th century counter tops and display cabinets.

Appointment and Brief:

Kelly and Cogan Architects were appointed to act as conservation architects and design team leaders for the conservation, restoration and refurbishment of the premises in 2012.

Prior to our client's purchase of the building, it had fallen into severe dilapidation and had experienced serious structural destabilisation due to a combination of neglect and ill-considered interventions of the1770s which had removed critical elements of structural support internally in order to aggrandise the retail unit at ground level and to provide a Guild or Meeting Room at first floor.

Strategy:

Our initial strategy was twofold:

1. To address essential weatherproofing and stabilisation of the structure.
2. To research and investigate both the history and construction of the building to enable a thorough conservation process to be initiated.

Dublin City Council's Conservation and Planning Officers were of considerable help in facilitating a flexible approach which enabled much of the critical emergency works to be expedited and the building to be weatherproofed and made safe.

We were also fortunate in having a committed client whose input into recording and research and particularly into the conservation of Reads archival material was invaluable.

Process:

The structural stabilisation of the shop-front and brick facade over included dismantling, conservation and repair of shop-front and fittings, window sashes over, brick repair, and re-pointing in lime to match original Wide Streets Commissioners intentions, the removal of decayed cill timbers, at base of shop-front, the structural tying in of brick facade to ensure the cellular integrity of the structure was retained, and the repair and strengthening of shop-front bressumer beam.

Historic research was carried out by Kelly and Cogan Architects, Simon Moore Cutlery

Historian and Peter Walsh Archivist and comprised a full survey, history of the building, its role and that of the Read family in the cultural life of the City.

It included research into the role of the Read family in the cutlery trade in Ireland, the range of goods produced by the family, a history of the shop and a record of goods produced as well as compilation of a genealogy of the Read Family in Ireland and primary auditing and archival categorisation of the surviving Trade Goods on the premises including all surviving trade goods, account books, trade cards, tools and equipment.

While carrying out this work a very large quantity of Read's 18th and 19th century trade goods were found on site. Approximately 11,500 items were found from cutlery to swords, but the largest quantity of 'found' material was medical instruments.

This unique collection of antique medical instruments is now on loan to the the Royal College of Physicians of Ireland.

The quantity of material generated in this exercise was significantly greater than originally anticipated and the process was both filmed and recorded in written (logbook) and photographic format.

A full record of the research has been lodged with Dublin City Council's Conservation Department, the Gilbert Library and the Irish Architectural Archive.

The Planning Process:

An enabling programme of exploratory opening up works, was carried out in early 2016 under Section 5 Approval from Dublin City Council.

This process identified a significant number of issues involving the front façade and spine wall structures which were significantly imperilled due to historic alterations and Planning Permission for necessary works to the Front Façade, Window Joinery and Shop-front was granted on 08th July 2016

An initial minimal intervention strategy focussing upon roof weatherproofing was agreed with Nicola Matthews Conservation Officer of Dublin City Council and Paraic Fallon, Senior Planner Dublin City Council.

Primary Issues:

The primary issues identified as causing structural failure to the building were as follows:

- Poor quality intervention works carried out in the 1770s which resulted in the removal of a chimney breast at ground and first floors (leaving the stack through three floors above in place).
- The removal of the spine wall of the original 1760's shop and dwelling at ground and first floor in the 1770s'.
- Poor original building practises in the front façade, which was found to be free-standing without restraint to the main structure, and lacking adequate floor joist tie ins to the front walling.
- Significant subsidence due to adjacent building works and poor-quality historic maintenance of the built fabric.
- General dilapidation decay and neglect.
- Excessive wear and tear in daily use particularly with regard to cabinetry and fittings and fixtures which had remained in constant daily use from 1762 right up to 1988.

Resolution:

A solution was arrived at in agreement with the Planning and Conservation Officers which identified a series of relevant necessary works aimed at a 'minimal intervention' based process of structural intervention to stabilise the building, and a schedule of brick repair and re-pointing to weather it combined with a series of repair based interventions to windows and shop-front.

A schedule and programme of repairs was agreed for the restoration of fittings and fixtures which focussed upon minimal repair and restoration of all original fabric.

Following opening up works, Nolan Group were appointed to the works and commenced roofing repair and related weatherproofing works in early September 2016.

Those works were extended by agreement to include a range of other internal completion works including plumbing and heating, works to upper floors and plastering etc.

Window repairs were carried out by PJ Murphy and general historic joinery repairs to staircase, shop-front, skirtings and architraves, was carried out by conservation joinery specialist Mr Paul Lawrence.

All joinery repairs and works were based upon the principle of retaining original fabric and the isolated repair (following dismantling, cleaning down and assessment) of individual elements by consolidation and grafting in of new matching timber where required.

Following erection of scaffolding, dismantling of the shop-front and provision of full access, it became clear that while the bressumer beam over the shop-front was in better than expected condition but that the wall above had moved considerably and, as a result of poor original construction the front portion of brick, which it transpired, consisted of snapped headers rather than full depth brick, had delaminated.

It also became clear that the front wall was not tied into the main structure of the building and that the fourth-floor wall and parapet level above was in a state of imminent collapse and required dismantling and reconstruction.

Exposure of the original brick behind the late 18th century surviving shop fascia, did however identify the original 1760s brick pointing which became the model (under agreement with the Conservation Officer) for the re-pointing of the front façade.

Further investigation revealed that the brickwork, while in reasonable condition required extensive stabilisation laterally into the fabric of the party walls. This was achieved this using a combination of corner Heli Ties and Bow Ties in the depths of the floors.

It was found that much of the destabilisation of the internal fabric resulted from intervention works of the 1770s and 1780s which had removed two intermediate levels of chimney stack and a spine wall at ground and first floor. Stabilisation was achieved by the tying in of the front wall to the floors and party walls and by the structural reinforcement of the existing timber floor beams supporting the second floor and upwards, dating from the 1770's interventions but originally inadequately sized.

These works necessitated the insertion of a new ancillary steel frame while retaining as much of the original fabric as possible.

This work was carried out as emergency structural stabilisation works by Agreement with Conservation and Planning Officers following the preparation of a relevant Conservation Impact Assessment.

The works proceeded to completion in late 2017 with final completion of minor internal items in 2018.

In November 2017 this project was the Winner of the British Georgian Group's 'Diaphoros' Award.

The Rathaus am Alten Markt is Stralsund's best-known landmark and Purcell's first commission

CASE STUDY 7 | GERMANY 7

Eastern Block Conservation in Stralsund, NE Germany

Janet Jury RIBA SCA
Location: Stralsund, Mecklenburg-Vorpommern, N.E Germany
Scope: Conservation strategy, education and training, repair and design proposals, site inspections and advice
Timeline: 1990-1993
Team: Janet Jury, Jasper Herrmann, David Bissonnet, Martin Ashley

In 1990, as a German-speaking Part 2 architectural assistant, I joined a returning Stralsunder to establish a small satellite office of Purcell at the invitation of the City of Stralsund's council. They were seeking help in dealing with the quantity of dilapidated buildings in this remarkable *Hanse Stadt,* located on the unspoilt Baltic coast in northeast Germany. Stralsund's potential problems and opportunities sprung from the same roots, threatening the remarkable collection of buildings with rapid revitalization:

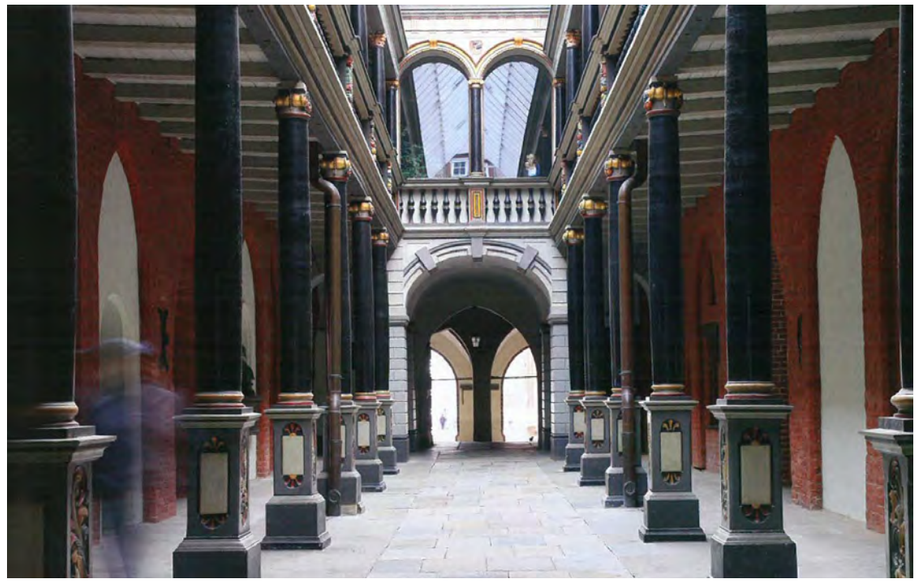
- The growing and some heated discussion about lapsed ownership of properties that were abandoned by their owners as the Russians moved through eastern Germany in 1945-6.
- The once bustling Hanseatic Trading League port remained in operation as a modern shipping construction and docks destination at the northern edge of the city.
- The depopulation of the medieval walled city merchants' houses, and later Baroque additions due to the communist regime favouring system built suburban workers flats.
- The benign neglect that left reunified Germany with one of the least altered 'authentic' medieval city centres in Europe, where one man's view of the cobbled streets as charming was seen as backward by those who strove to modernize.
- The city and its transport links to varied islands like Rugen and Hiddensee, where DDR workers and party officials had previously enjoyed summer vacation destinations in limited numbers. No such mechanism would temper market forces as western Germans explored this new area of their unified land.

The studio lead, Jasper Herrmann, had left the DDR some years before. The British conservation philosophy of favouring repair of a heritage asset over 'rebuild-it-better-than-new' had been unfamiliar to him on arriving in the UK, despite his having studied the care of historic buildings at Weimar University. Herr Herrmann (as he always was and will be to me even some 30-years hence) re-learnt an approach to the care of historic buildings at Purcell. Together, we set out to introduce a philosophy of retention and an acceptance of the imperfect to our host city.

On arriving in former DDR in the winter of 1990, I initially marveled at how much of the historic fabric remained in Stralsund. Taking opportunities to travel to Warsaw and Dresden, I began to identify a technical solutions approach to demolish and rebuild that prevailed and had been developed in response to the magnitude of the appalling postwar task of providing homes, places of business and recreation in the centre of once great towns and cities.

Construction teams, led largely by Polish surveyors and engineers, were considered masters of heritage restoration in the eastern block, employing very high standards of craftsmanship. There were many such experts in Stralsund when I arrived. Restoration of the east elevation of the town hall (Rathaus) was partly finished and an interpretive reconstruction of the 12th century façade had removed virtually all trace of its renaissance and later evolution.

The medieval walled city (top left) is flanked by the Baltic, islands, a commercial port and modern housing located away from the heart of the city.



A glass roof and glazed infill was added to the 17th Century open courtyard and gallery and the columns and decoration over-painted in the 1980's.

Even worse, badly spalled but salvageable 12th century columns in the undercroft of the Rathaus (the Ratskeller, in part a Kneiper or pub) were being removed and put in a skip. Newly carved stone columns replaced them, the retained vaults were refinished using cement render on expanded metal lath and the brick ribs indented or completely replaced with industrially produced modern brick. As these areas were under the jurisdiction of the city council, the works were halted whilst Purcell presented alternative philosophies for our first commission, the Rathaus.

Owners, statutory authorities, contractors, and practitioners were invited to Purcell's very prominent workspace on the ground floor of the Rathaus where we offered short informal presentations over *Kaffee und Kuchen* to introduce the principles of established advisory bodies such as ICOMOS, English Heritage, Historic Scotland and SPAB via short talks and informal discussions about the past works and future needs of the Rathaus building. Key senior Purcell staff made short visits to present conservation in action via case studies from the UK, promoting:

- repair rather than replacement,
- retaining accretions to document the buildings story,
- making repairs and alterations honest, 'of their time', supportive of the aesthetic integrity of the building and, preferably reversible.

We stressed that all of this would only take place in the UK after undertaking thorough research to understand the evolution of a part or the whole building, and documentation of its current condition, tasks that fell to me.

Purcell's first commission enabled us to demonstrate how the alternative approach could be applied. Working with David Odgers of Nimbus Conservation Group, I was involved in a programme of works to conserve a badly damaged 12th century limestone column in situ using a combination of indenting, lime watering and lime based plastic stone techniques. This benchmark project convinced the client to commission conservation of the remaining columns using the same techniques but involving local 'apprentices', and to review the proposed ongoing repair of the east

Pre-reunification column and vault repairs in the Ratskeller used hard new brick and cement rendering (rear of the image). The repairs under Purcell's direction conserved brick ribs and lime-washed the vaults are in the foreground. The 1890's brick casing to the column was repointed and limewashed too.

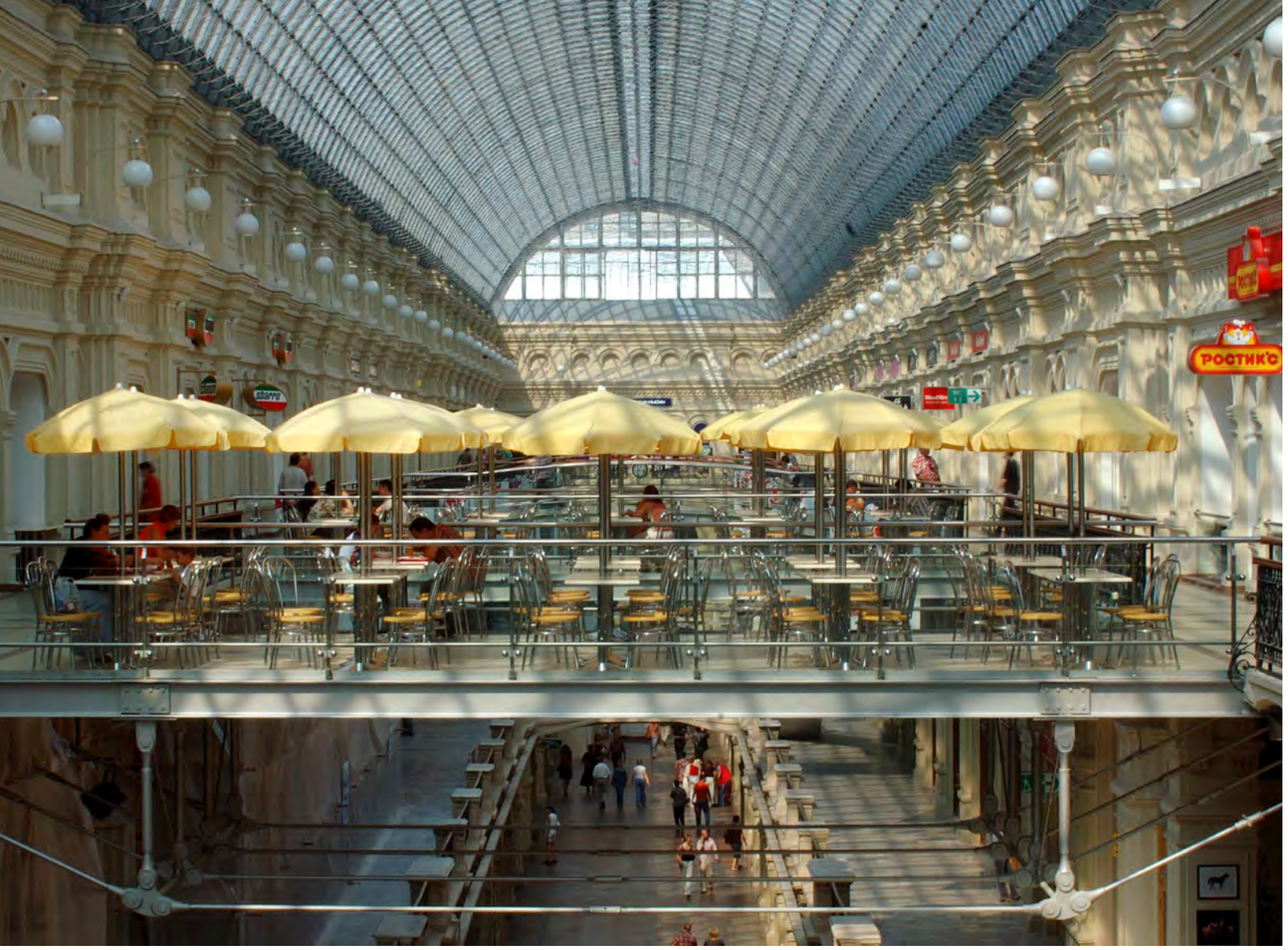
elevation. However, practical difficulties of political constraints, lack of funds and a dearth of materials did not disappear immediately after the fall of the Berlin Wall. Detailed specifications that would have been compiled in the UK were of little use as workable solutions if materials were unobtainable and we were sensitive to the former East German peoples dislike of being made to feel that they were falling short of 'western' expectations. At the time, new methods and procedures were being introduced with impressive speed from western Germany. Our aim was to equip our eastern German construction team colleagues with a means by which they could take their own time and make informed decisions about whether what was on offer was appropriate.

The lead players in the care of Stralsund's heritage assets became regular visitors to these first projects, where philosophies were discussed, and practical demonstrations undertaken. In addition, we engaged with the local technical college in Wismar to offer placements for students and I oversaw their continuing professional development. Historic buildings work at that time seemed very much the field of the Bauingenieur (although direct translation indicates Civil Engineer, loosely a surveyor role in this instance) rather than an Architekt or Architektin.

Throughout the 1990's, the Stralsund office team and Purcell UK exchanged staff for short placements (of which I was the first to do so) and some attended the SPAB biannual residential course. In response to widening the opportunities beyond Purcell staff, Purcell instigated a historic building conservation course that was run by SPAB at Weimar University. It included speakers not only from the UK but also eastern and western German contributors. It was never Purcell's intention to dictate that British philosophy was fully developed, unchanging and the only way. The introduction of the Weimar initiative, guided by the Weimar alumni Herr Herrmann, brings to mind the Italian phrase 'Give a man a fish and you feed him for a day. Teach him how to fish and you feed him for his lifetime'.

Having an opportunity to reflect some 30-years later, my more recent visits have confirmed that the evolutionary story gleaned from walking through east Berlin in the 1990s, passing facades peppered with bullet holes from WW2 is lost to today's visitors where very few such imperfections remain. Instead, story boards describe what was once there. A review of the status of conservation training in Germany and its place in international conservation yields nothing like SPAB as a resource for building owners or professionals. Weimar University, through its Chair for Heritage Conservation and Architectural History (Professur Denkmalpflege und Baugeschichte) continues to offer architectural history and heritage-focused academic options to its main-stream architecture students. However, as I noted 30 years ago, the technical schools like Hochschule RheinMain (akin to the old UK Polytechnic) are still where one would go for a deeper conservation focused education. The Architectural Heritage Conservation Bachelor of Science is described on the Hochschule RheinMain website as '*This new degree program, unique in Germany*', suggesting that deep conservation understanding akin to the broad accessible education offered by bodies like SPAB to professionals, owners and enthusiasts alike still has a little way to go in Germany. In a European context, France, Italy and the Netherlands are well represented by organisations responsible for the conservation, restoration and repair of historic buildings and places, but notably Germany isn't represented.

On the ground floor of the restored facade (right), pre-reunification work had replaced carved baroque or earlier mullion-and-transom windows with speculative reconstructions. The facade on the left retains its building biography, and was repairable.



CASE STUDY 8 | RUSSIA 8

Trade Rows of GUM, Moscow, Russia

Alan Davies RIBA CA
Location: Red Square, Moscow
Scope: Concept/ Scheme Design (Handed over to Moscow-based architects for delivery)
Team: BDP Manchester Studio – architecture and engineering.

The Building

The Trade Rows of GUM building is situated in Red Square, Moscow. It is one of the country's most prominent buildings, familiar to people throughout Russia and the world as part of the backdrop to many Russian state events in Red Square.

Building History

The Trade Rows of GUM building was completed in 1896 to designs by the Russian architect Alexander Pomerantsev and engineer Vladimir Shukhov. The design was influenced by other 19th century retail galleries, notably the Galleria Vittorio Emanuele II in Milan, designed in 1861 and built between 1865 and 1877. The GUM building and the cast iron roofs over the arcades are separately scheduled as historic structures.

GUM comprises four galleries of retail space separated by three long, covered arcades of approximately 250 metres. These are intersected by three secondary arcades. Each of the arcades is covered by a magnificent lofty glazed cast iron roof, which is domed at the main central intersection.

The building represented a high point in the Russian national style of architecture and in technological engineering. The use of vaulted reinforced concrete in the construction was key to achieving the sense of space and light, which is evident in the building.

Setting

GUM runs along the east side of Red Square, opposite the 15th century wall of the Kremlin and Lenin's Tomb, whilst the 16th century St Basil's Cathedral closes the south side of the square. The north end is closed by the State Historical Museum built, like GUM, in a period of demolition and remodelling in the late 19th century, which created the square as it is seen today. Red Square has been a UNESCO World Heritage Site since 1990, recognising its unique history and architecture, and its national and international profile and significance.

Understanding the heritage asset

The project involved collaboration with knowledgeable Moscow-based experts, including architects, engineers and academics who had researched the building's history and construction. Several visits provided the opportunity to meet with a range of local experts and to carry out inspections of the building to understand its architecture and to assess its condition.

From the ground, the building appears robustly built. Closer inspection revealed that many elements were in poor condition. An inspection of the roof (carried out on a memorable bitterly cold Moscow day) revealed that it was in poor condition, with a history of makeshift short-term repairs. The basement level was damaged and full of diesel fumes from delivery vehicles. This polluted air was vented into the shopping arcades, which created a polluted atmosphere at odds with the high-end retailers who were beginning to be drawn to the Moscow landmark. Cast iron balustrades on the upper stories were low, loose and unsafe. Some of the entrances, including those facing Red Square had been closed, for operational reasons.

Causes of decay and decline

The reasons for the building's decline were both intrinsic and extrinsic. The decline in the condition of the building reflected wider political and economic factors, which resulted in the decline of the USSR. As a result, it suffered from significant backlog maintenance issues. Intrinsic problems with the building related to its architecture – which provided a

large number of small retail spaces arranged over four storeys. Ventilation was poor. Access to upper floors was limited. Whilst the building's location and architecture could appeal to smaller high-value retailers, the environment within the building was poor due to a combination of old and inadequate engineering installations and diesel fumes.

Conservation and design strategies

Some on the client team wished to see significant alterations to the building to provide greater retail footprints, They proposed a conventional 'dumbbell' shopping centre layout, which would have entailed significant demolition to create large footprint anchor stores at each end. We proposed an alternative 'constructive conservation' approach, which conserved all elements of the building whilst making calculated, informed interventions to make it viable for the future. This approach was informed by respect for the original architecture of the building, its form and structure. It involved minimal loss of fabric and limited interventions.

The main interventions proposed were to improve access to previously underutilised upper floors. New lifts were incorporated within the masonry fabric of the galleries. Escalators were installed in the arcades to give access from ground to the two primary upper level galleries. A number of additional bridges were proposed to provide an improved circulation pattern. These changes, together with alterations to the basement increased the effective usable retail space.

These proposals – together with strategies for incorporating new engineering services to provide a comfortable year-round environment, invisibly within the voids and structure of the building; and repair proposals for the building fabric; were accepted as both preserving the character of the historic building and also ensuring its future viability.

Challenges

To progress such a conservation approach to concept stage required close collaboration with a Moscow-based client (the Moscow office of an international contractor), a Russian-speaking architect colleague in Manchester, and the expertise of Moscow architects and engineers who assisted in obtaining the necessary consents.

After the concept design was approved, the project stopped for economic reasons. When it re-started, working in Russia had become more challenging. The scheme was progressed and realised by a state-owned design organisation, Mosproject.

This fragmentation of the project shows some of the challenges of working from a distance on a heritage building. However, the initial concept was faithfully executed, demonstrating the importance of a clear and feasible conservation strategy, and of working with knowledgeable and committed local experts.

The images taken on completion of the project shows a thriving specialty retail centre, as does GUMs current day website.

CASE STUDY 9 | PAKISTAN 9

Peshawar Museum, Pakistan,

Malcolm McGregor RIBA SCA
Location: Peshawar, KP Province, Northern Pakistan
Scope: Conservation Strategy for the building and collection; Site visit; Advisor on ongoing restoration work; Exhibition design and Reinterpretation strategy development
Timeline: 2020-2022
Team: Malcolm McGregor, Gonca Ozer, Dr Christian Luczanits & Benedetta Tiana

The Peshawar Museum was opened in 1907 commissioned by the Governor General of the North-West Frontier Province of British India or the British Raj (1858-1947). The project was conceived in 1901 as a Durbar Hall to celebrate and commemorate the late Queen Victoria. It was also designed as a Museum to contain extensive Buddhist Artefacts excavated within the province. At the time there were substantial funds raised from the people of the province and support secured from the Viceroy or Government of British India.

Peshawar as a city dates back to at least 539 BCE making it possibly one off the oldest cities in Pakistan. As the centre of the ancient Gandhara region, Peshawar became its capitol, during the Kushan Empire circa AD 30 – 375 and remained an important trading centre on the Silk Road. Today it is the capital of the region of Khyber-Pakhtunkhwa or KP Province of modern-day Pakistan with a population of over 2 Million but only 35 miles from the border with Afganistan.

Malcolm McGregor of PRS Architects was commissioned by the World Bank in June 2020 to consider the various risks and opportunities inherent in the museum following limited investment over the last decades.

It became quickly apparent that this project offered an incredible potential to help change attitudes and to develop a renewed sense of pride for an entire region or even nation following years of decline in the wake of 9/11. A revitalised Peshawar Museum that was originally built as the 'Queen Victoria Memorial Hall' could help Pakistan, in the 21st Century, evolve its post-colonial position or narrative.

The original architect was Sir Samuel Swinton Jacob who designed the building in the Indo-Saracenic style that reflected the British aspiration for an "Imperial style" of their own on an intentionally grand scale, promoting a notion of an unassailable and invincible British Empire.

The building with its main exhibition hall is of considerable significance however the museum's collection, of in excess of 14,000 objects, is recognised internationally as one of the largest and most important collections of Buddhist Gandharan artefacts in the world. The majority of the sculptures and artefacts were excavated from the major Gandharan sites of Shah-Ji-Ki-Dheri Peshawar, Sahri Bahlol, Takht-i-Bahi, Jamal Garhi and many others including some from the SWAT Valley and Taxila.

The quality of many of the Gandharan sculptures within the collection are exquisite and on a par with some of the best contemporary Greek or Roman examples. Growing interest throughout the world with examples in New York, London & Berlin have placed great value on Gandharan Artifacts .

The Gandharan Buddhist religious artefacts and sites in Pakistan record various important and highly significant changes and developments that are still recognised throughout China, Japan and South East Asia today. There are also numerous heritage assets that illustrate linkages that are being researched across the globe regarding the development and interaction between ancient Indian, Persia, Greece, Mauryan to Kushan Empires that all exerted their control and influence on an international scale.

Palpable risks of destruction, damage or deliberate removal/dispersal of the museum or its collection due to varied political considerations such as occurred in the Swat Valley or to numerous Buddhist artefacts (Bamiyan statues) in neighbouring Afghanistan.

Various items of work were identified and working closely in a virtual manner starting in June 2020 some conservation work was able to commence, taking advantage of the museums closure during the pandemic. This included essential conservation work to the four Cenotaphs at roof top level which were severely deteriorated as well as externally all the internal walls restored following damage from the previous application of modern emulsion paints. Work also involved the removal of unsightly modern suspended ceilings.

Malcolm has also been able to illustrate the considerable opportunities that The Directorate of Archaeology & Museums of the Government of Khyber Pakhtunkhwa and the Peshawar Museum with the support of the World Bank have to respond to the many identified risks. The overriding aim of the project is to better preserve and conserve this world class collection within the following parameters:

A. Research and understanding

Allow a deeper understanding about the collection by reviewing and reconsidering each object in terms of its quality, condition, provenance, original use, significance etc to allow the development of an improved interpretation

B. Interpretation and outreach

Consider a comprehensive redisplay of this significant Gandharan cultural collection in a way that breaks away from the now dated western orientated format that still derives from the original 1910 layout describing the life of the Buddha to a more thematic approach that can allow visitors to understand the high quality and cosmopolitan nature of this ancient civilisation. This could achieve the following outcomes or benefits:

- Develop a wider audience of people locally, regionally, nationally and internationally will be reached and able to understand the incredible international connections that Gandharan Civilisation had as well as what its legacy is today
- Allow an increased sense of pride to be developed within the people of Peshawar, KP Province and Pakistan as a whole by illustrating the astonishing achievements of Gandharan culture on an international scale as well as by increased international tourism and contact with other nationalities.
- Ensure the full potential of collection is released to help change people's attitudes and improve people's behaviour
- Increase local, regional and national revenue achieved through tourism
- Develop an enhanced understanding of tolerance by illustrating how previous Pakistan civilisations have lived in a multi faith context achieving great wealth influence and culture
- Improve an understanding of diversity by showing the origins of current Urdu or Indo-aryan and even Chinese to Ancient Gandhari text
- As well as develop local and regional skills in tourism, conservation and craft

All the work carried out so far has been in accordance with ICOMOS guidance and aimed at supporting and informing the management of any proposed changes to the museum and its collection. The overarching aim is to ensure this significant heritage is better conserved and understood to promote tourism and increase skills and pride within Pakistan.

A detailed Conservation Plan that sets out over 30 policies for review and adoption by the Directorate of Archaeology & Museums of the Government of Khyber Pakhtunkhwa and the Peshawar Museum, Pakistan to assist in developing a coherent Management Plan to help conserve the Museum and its Collection. As part of this a detailed digital survey was commissioned to record the external and internal condition of the building. From this Malcolm's team were able to develop a 3D model to develop a deeper understanding of the opportunities that are available.

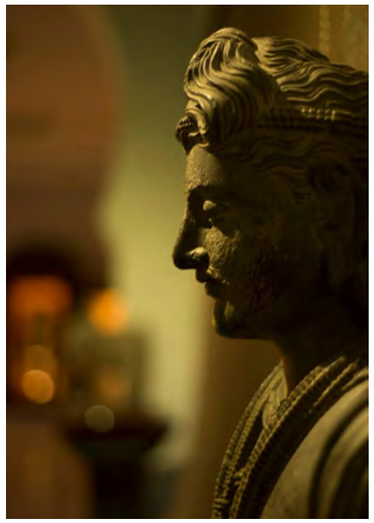
The following images show the main central hall which is a spectacular space. This space would have been well lit with high level clearstory windows bringing light directly

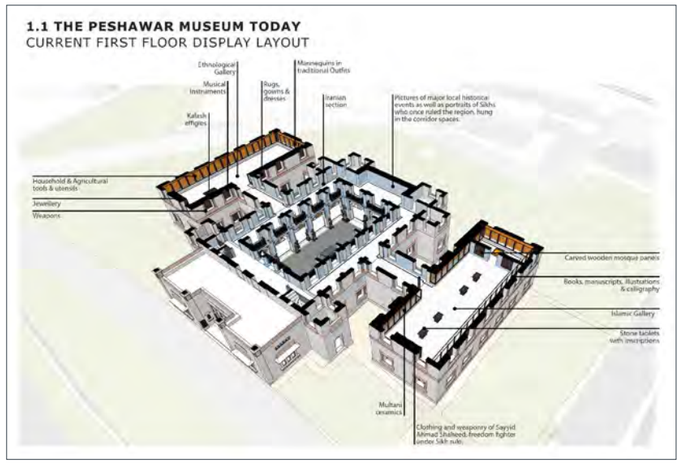
into the main hall. The space is a wonderful example of a 'Durbar' or celebratory hall for large social gatherings held near to the Governor's Residence as well as a museum. It is a place of splendour built to impress the local inhabitants.

The following three-dimensional diagrams have been developed to show the general layout of the ground floor of the museum. The main central hall has some of the most impressive statues fixed to the structure. Around the perimeter in an anti-clockwise arrangement from the left-hand side as one enters the hall the numerous stone friezes are laid out chronologically explaining the life story of the Buddha including: Pre-birth, Birth, Conversion, Performance of miracles, First sermons, The taming of the elephant & Death

The two side wings contain on the right or west side the Buddha Gallery containing smaller statues and artefacts whilst on the left or east side is the Bodhisattva Gallery which contains a model of the Takt-I-Bahi monastery complex as well as of model explaining the layout of a traditional Stupa

The diagram below gives one an overall impression of the current layout of the first floor of the museum which is dominated by the void space around the main hall with circulation balconies or galleries that look down into the space.





View from the south looking towards the Hna-Kyeik-Shit-Su Shrine and Dipinkara Shrine

CASE STUDY 10 | MYANMAR 10

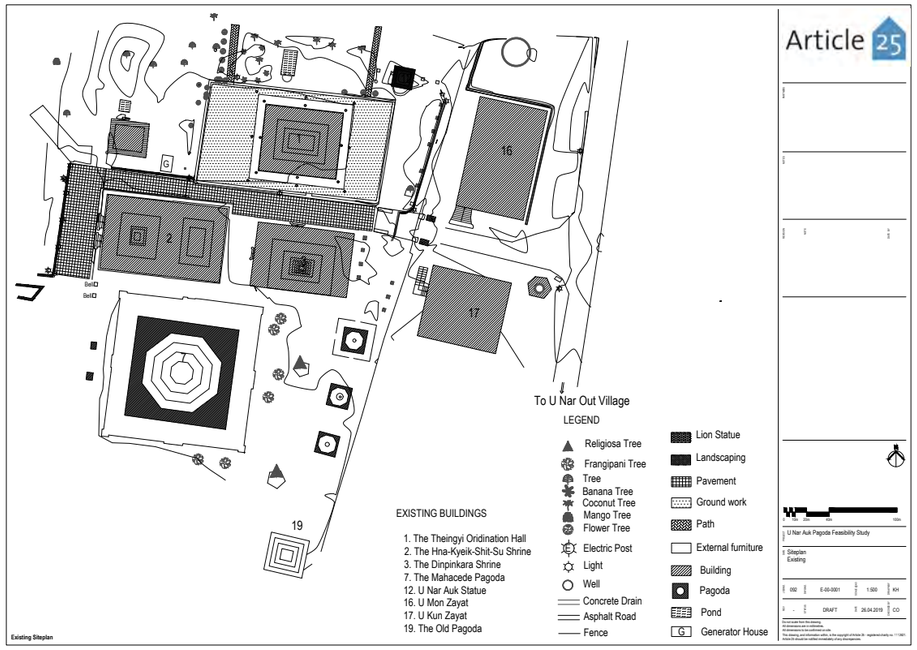
U Nar Auk Pagoda Complex, Myanmar

Caitriona O'Connor RIBA
Location: Kaw Hnat Village, Mon State, Myanmar
Scope: Feasibility Study, Conservation Guidelines and advice on urgent repairs
Timeline: January – June 2019
Team: Caitriona O'Connor, Khin Kyi Htet, Kim Kyi May.

Article 25 [www.article-25.org] is a humanitarian architecture charity. Our work is focused on improving access to healthcare, education and housing for communities around the world. In recent years our work in Myanmar included conservation projects undertaken with the objective of supporting local communities to manage and conserve their built heritage. Myanmar (formerly Burma) has a wealth of vernacular and colonial-era built heritage much of which has experienced neglect in recent decades due to a loss of local expertise and traditional skills and political and economic instability following independence from Great Britain in 1948. At Kaw Hnat village in Mon State we worked with the local Management Committee and a Yangon-based engineering firm to carry out a feasibility study for conservation and development works to a group of three late 19th century Buddhist worship halls. These richly decorated timber and masonry structures are situated within a wider monastic complex of pagodas (stupas), temples and residential buildings, located on the edge of the village.

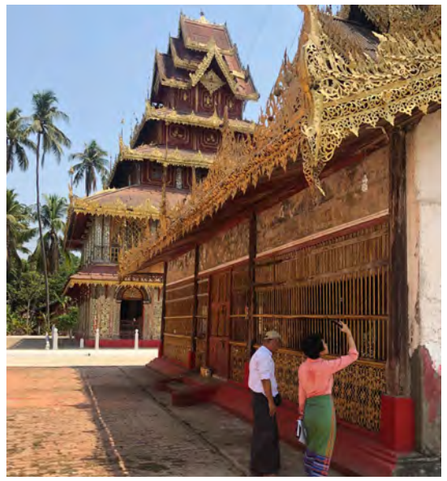
The three buildings at the heart of our study were commissioned by a local Mon businessman U Nar Auk between 1888 and 1895 as a monastic Ordination Hall and two Buddhist shrines. They were designed in an ornate traditional Burmese-Buddhist style with various Indo-European and Sino-Thai influences visible. It is understood that the head monk at the time had travelled to Mandalay in the mid-19th century where he was exposed to similar designs at the royal court and thus employed artisans from Mandalay to execute the vision for Kaw Hnat. The patron U Nar Auk had earned his wealth though a successful shipping company which for a time challenged the hegemony of the Scottish-owned Irrawaddy Flotilla company in late 19th century lower Burma, then a province of British India. As a result of this association the ornate structures and their founder have become a symbol of Mon and national resistance to the colonial regime.

Our work at Kaw Hnat comprised of strategic advice to the Committee for management and conservation of the site as a whole and specific technical support relating to the protection and repair of the three structures including their exquisite high-value decorative finishes. We worked with the committee and building custodians to create a preventative maintenance checklist and a schedule of urgent repairs which could be prioritised before the upcoming rainy season. Working



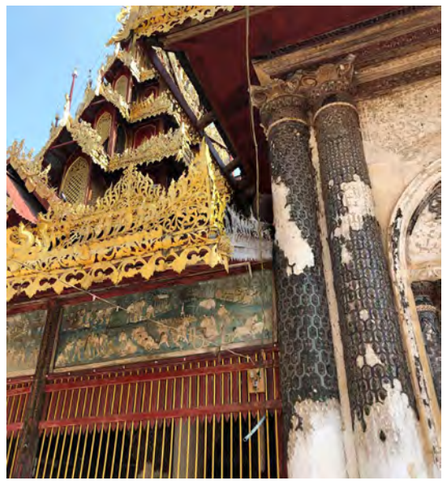
with a local structural engineer we identified the main issues which were affecting the integrity of the superstructures and set out a plan for addressing these issues and identified appropriate materials with which to do so. The decorative finishes adorning the interiors included carved timber relief panels, painted timber friezes depicting the lives of Buddha, gold leaf wall murals and glass and gold filigree mosaics inlaid with precious stones. Due to a lack of funds the repair of these finishes is currently impossible for the Committee so our advice related to stabilisation of the remaining finishes and mitigation of further water ingress. Poor rainwater drainage around the base of the buildings resulting in rising dampness was identified as a key issue to be addressed. We also contacted academics in Mandalay University where there is a growing interest in the reinvigoration traditional crafts, to bring this group of buildings to their attention and with a view to potentially directing further resources to their conservation.

While there is still much to do to protect these buildings, the main aim of our work was to support the local Committee to increase their management and conservation capacity and acknowledge the significance of these buildings within the cannon out south-east Asian Buddhist architecture. By raising awareness around basic maintenance principles and management of original materials and water-ingress we hope that these structures can be protected until such a time as extensive conservation works can be undertaken. Myanmar's magnificent and vastly rich heritage has experienced a variety of threats over the past 150 years and the country is once again suffering at the hands of a brutal military regime. Our thoughts are with our colleagues and friends in Yangon, Mon State and beyond, that their resilience and energy can persevere.

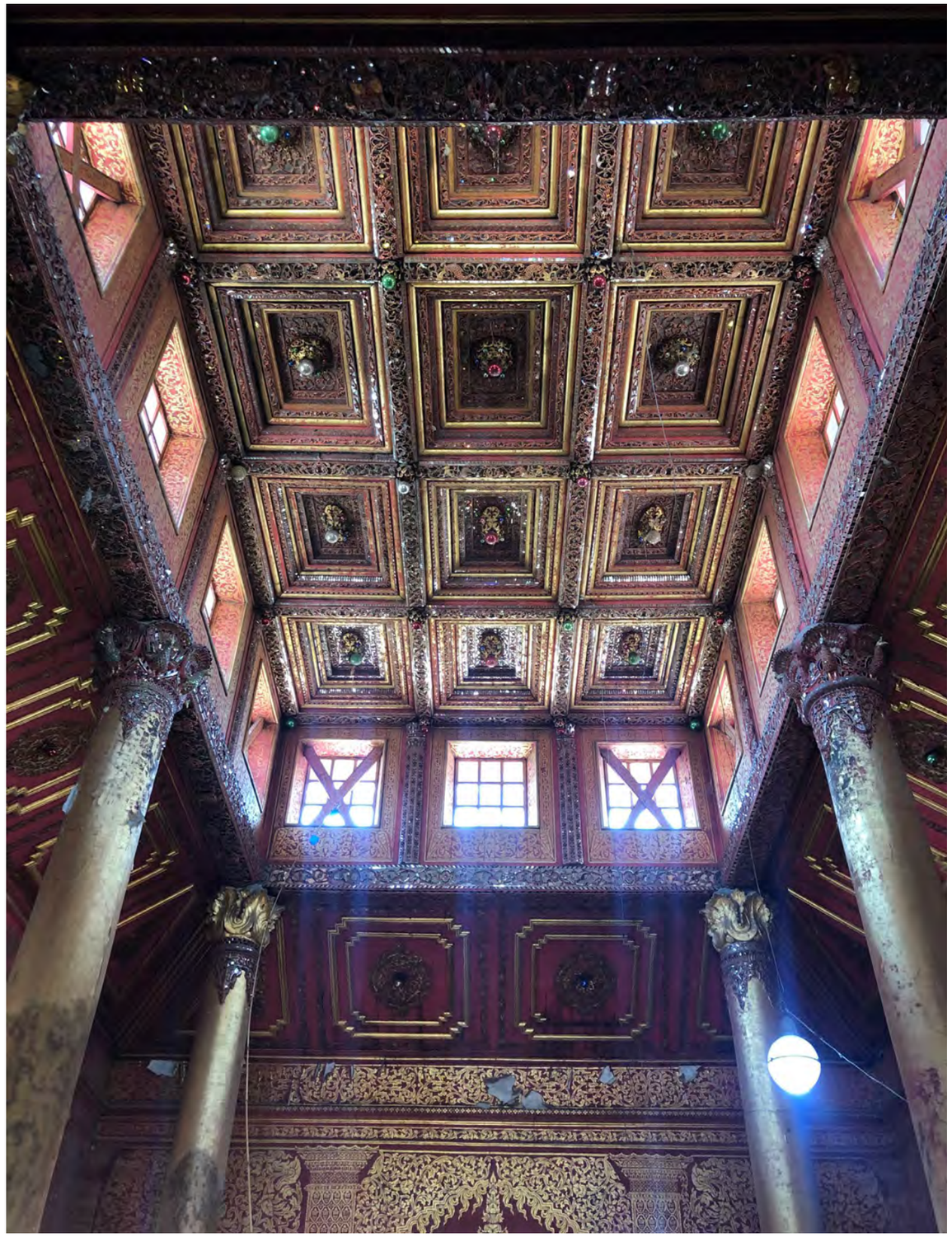


View of west elevation of Dipinkara Shrine with Theingi Ordination Hall visible in the background

Image of unsuitable concrete render repairs on the south gable wall of Dipinkara Shrine



Junction on the north facade of the Hna-Kyeik-Shit-Su Shrine showing the loss of external finishes on the relief columns



View of ceiling decorations in the inner chamber of Dipinkara Shrine

CASE STUDY 11 | CUBA 11

Cuba

Anna Joynt RIBA SCA AABC
Location: Havana and other cities, Cuba
Scope: Research, recording an Old Havana tenement and the craft of hydraulic tile-making
Timeline: January 2006 and April-September 2009, ongoing
Team: Anna Joynt with Anibal Del Prado (Havana City Historian's Office) and Felicia Chateloin (Havana University)

I am a conservation architect with a long-standing interest in Cuba and conservation of its buildings and cities. My 2006 post-graduate thesis for the Architectural Association Buildings Conservation Course was on the heritage-based regeneration of Old Havana. Subsequent research trips to Cuba – one to survey vernacular alterations to an Old Havana tenement, and the other to document the craft of decorative hydraulic tile-making in Cuba – were funded by the Zibby Garnett Trust and the British Academy. I am an Associate Director at Allies and Morrison.

My work in Cuba has gradually shifted my thinking about the whole purpose of conservation. Seeing conservation in such a different context somehow showed me how conservation of buildings was more than an absorbing intellectual and technical exercise – but that it responds to a deep human need.

Conservation in Cuba takes place in a very different context to ours in Britain. The ICOMOS international conservation principles may be the same, but the problems and the resources are so very different. The scale of the Cuban task is staggering, but so is the vision. The results may raise eyebrows in some conservation circles, but there is much to admire and much we can learn from.

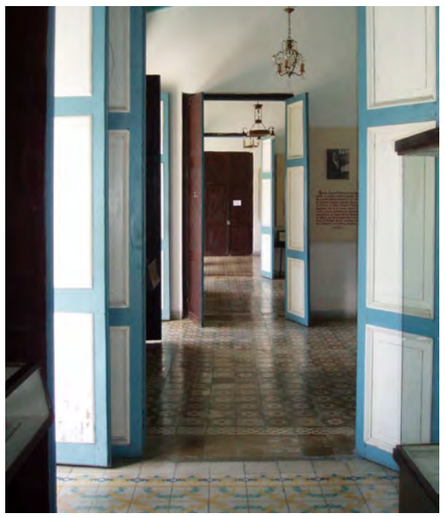
The Cuban approach to conservation is holistic and explicitly people-orientated. Whatever one's view on a one-party socialist state, there is much to be said for the ambitious Cuban process which integrates conservation, local communities, social systems, history and culture into planning and architecture.

Cuba, Conservation and Utopia

The Cubans take on the conservation of whole cities, tackling the full range of urban complexities. They have been engaging in earnest in the holistic, heritage-based regeneration of Old Havana since the 1990s, led by the late great Eusebio Leal Spengler, Havana's charismatic City Historian. The aim of their heritage-based regeneration is high; in Havana they explicitly set themselves the "Challenge of Utopia". The regeneration model in Old Havana pioneered by Leal uses the city's wealth of built heritage to promote foreign cultural tourism, investing the money generated right back into the city – into further conservation both tangible and intangible. Versions of the Old Havana regeneration model have been taken on in Cuba's other historic cities which include several UNESCO World Heritage Sites.

In 2006, the conservation of historic buildings in Cuba was being carried out solely by the Cuban State, sometimes in joint ventures with foreign enterprises. Following Raul Castro's reforms in 2011, increasing numbers of private enterprises have adapted buildings for bed-and-breakfasts, small hotels and restaurants. But despite the efforts, the joint ventures, and the reforms, the vast majority of Cuba's city buildings remain in a state of jaw-dropping disrepair.

For many western tourists, this crumbling disrepair is what draws them to Cuba. The extreme shabby-chic is shocking, even thrilling, evidence of past wealth and glamour lost to Cuba's dramatic Revolution. That people still live (and that there is so much life) in these ruinous cities is part of the spectacle – or poverty-porn as some have described it. But the situation is hard, desperate really, for the Cubans who live in these buildings. The conservation of Havana and other historic cities is not about preserving their exciting,



romantic, shabby chic for the tourist market, but responding to an urgent social need.

The Burra Charter conservation is about retaining the cultural significance of a place, and the Cubans have got this very right. They know very well what they have with their heritage, particularly their older heritage, and are very aware of its cultural significance. They also know that cultural significance for Cuba lives in its people not its property. Their long-term holistic approach for the regeneration is impressive, integrating conservation with the social, educational, environmental, infrastructural, intangible aspects as well as the economic. There are examples of excellent repair and traditional crafts, particularly in the museums and public buildings, and these places are really used by people.

Rediscovering a lost craft

In buildings throughout Cuba, one sees these decorative floors made of hydraulic cement tiles. Beautiful and robust, dating from the late 19th and early 20th centuries, these tiles are intrinsic to the character and appeal of so many Cuban buildings. But, certainly fifteen years ago, they were not valued by those who

were refurbishing buildings. The tiles weren't particularly antique, they were so commonly found, and they were considered too difficult to repair. Architects and specifiers were unaware of the (very limited) sources of replacement tiles in Cuba. So, rather than repair small areas, whole historic floors were taken up and re-floored in cheap imported ceramics. A whole layer of history and character of buildings was being lost.

My report 'Cuban Mortar Tiles' was written working alongside two Cuban institutions – the City Historian's Office of Havana and the Faculty of Architecture at the University of Havana. The research was funded by the British Academy. The purpose of the report was to chart the history and development of hydraulic mortar tiles in Cuba and the current state of the craft – and to communicate the value of the tiles. The aim was to encourage the resuscitation of the industry in Cuba, to create employment and revive craft skills as well as to benefit the restoration of World Heritage cities in Cuba.

Aerial view of Umm Qais
© APAAME

CASE STUDY 12 | JORDAN 12

Umm Qais Archaeological Site, Jordan

Geoff Rich RIBA SCA AABC; Feilden Clegg Bradley Studios for Turquoise Mountain (Jordan)
Location: Umm Qais, Jordan
Scope: Masterplan, Design studies, Conservation Guidelines and design oversight
Timeline: Summer 2020 – ongoing
Team: Geoff Rich, Tim Greensmith, Tom Lewis

Introduction

Umm Qais Archaeological site in northern Jordan is a place with fascinating layers of history and meaning, and a fusion of influences from different cultures including the Jordanian, Palestinian and Syrian communities of today.

Feilden Clegg Bradley Studios' is collaborating with Turquoise Mountain – an NGO specialising in heritage-led regeneration – on site wide visitor strategies, conservation works and design proposals.

The approach, led by Turquoise Mountain, seeks to offer exemplary heritage led regeneration, embracing both tangible and intangible 'heritage', and maximising the opportunities for engagement. In the longer term it is hoped it will lead to sustainable development – both economically and environmentally – delivered through inter-cultural collaborations.

Whilst people are of course more important than heritage, the first question is always how can we best manage heritage to serve the needs of communities both today and in future? Our approach includes developing careful conservation policies as a way to manage change. The site at Umm Qais is rich with opportunities to create a sensational visitor experience of the site, including through the reuse of the Roman amphitheatre, the reinstatement of the historic village houses, and the care of historic ruins such as the Roman Baths.

As such, the project aims to develop responses to protect and support the significant built heritage, sustainably increase tourism and radically transform the lives and livelihoods of the local and wider community through the employment and education benefits that the revitalised Umm Qais Archaeological Site will offer.

Historical Context

Umm Qais Archaeological Site is located 120 km north of Amman, on a broad plateau, surrounded by rolling valleys and olive groves, with panoramic views over the Yarmouk River and the Golan Heights to the North, Lake Tiberias (Sea of Galilee) to the North-West, and the Jordan-Valley to the West. In this strategic location, the site is notable for its sequential layers of historical development, from Greco-Roman, to Byzantine, Ottoman and modern military structures.

Once the city of Gadara, it was one of ten Greco-Roman cities in the region, known as the Decapolis. Today, the site still boasts two amphitheatres, Roman baths, colonnades and a mausoleum amongst its numerous archaeological features and artefacts.

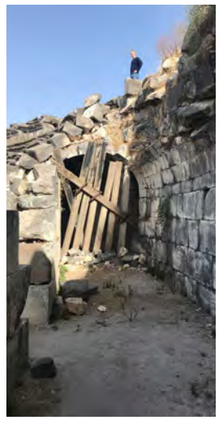
Nestled in-between is the historic village of Umm Qais, which predominantly dates to the late-Ottoman period, likely built and rebuilt from remnants of the ancient ruins it inhabits. The village remained occupied until 1976, when the Jordanian Ministry of Tourism and Antiquities (MOTA) purchased properties from the landowners and began transforming the whole site into a visitor attraction. The landowners and local community were able to retain surrounding farmland but were resettled nearby in what is now the modern town of Umm Qais.

Project

Following the success of regeneration projects in Amman, Turquoise Mountain were invited by MOTA to submit proposals for how best to improve the visitor experience at Umm Qais, including suitable suggestions for conservation and adaptive reuse across the entire site.
In 2020, Feilden Clegg Bradley Studios (FCBStudios) were subsequently appointed

Western Theatre
© Geoff Rich, FCBStudios

Western Theatre
© Turquoise Mountain



Left to right:

Heraklides – Mosaic
© Geoff Rich, FCBStudios¬

Western Theatre doorway (before)
© Turquoise Mountain

Western Theatre doorway (repair)
© Turquoise Mountain

Al Rousan Courtyard (before)
© Geoff Rich, FCBStudios

Heraklides
© Geoff Rich, FCBStudios

by Turquoise Mountain for our experience in conservation and contemporary design work in sensitive, historic contexts.

FCBStudios are supportive of a 'conservation in place' approach, only taking away modern accumulations which are detrimental to the setting and promoting the repair or creative re-use of existing structures where appropriate. As such, we recognise the huge opportunity to develop an exemplar of conservation, skills training and creative re-use in the design and delivery of proposals for Umm Qais. As part of this, we feel it is important that the project is a participatory process, working alongside Turquoise Mountain, other members of the team, and future stakeholders in a spirit of openness and collaborative working. We are keen to contribute to the process in ways where we can add most value including through design work, and as advisors and critical friends as the project progresses.

To date, FCBStudios have assisted with the development of potential catalyst projects, producing design ideas for the Western Theatre, archaeological shelters to the Roman baths and visitor accommodation in the Al Rousan Courtyard of the Ottoman village. These key interventions would better protect vulnerable elements of the site and have started to inform the vision for a future masterplan and visitor offer.

Delivered Projects

Despite the constraints of a global pandemic, Turquoise Mountain's team in Jordan, with minimal input from FCBStudios, has been able to successfully design and deliver its first project on site. Focussing on the Western Theatre, which dates from the 2nd-Century AD, they have worked with master woodworkers and their apprentices to design and install a new stage, as well as balustrades, safety barriers and screens – all using traditional jointing techniques – to better protect visitors and preserve the vulnerable structure from further damage.

At an early stage, FCBStudios produced conceptual designs for the reimagined amphitheatre, with images used in successful bids for funding from the J.M. Kaplan Fund and to gain support from the Department of Antiquities.

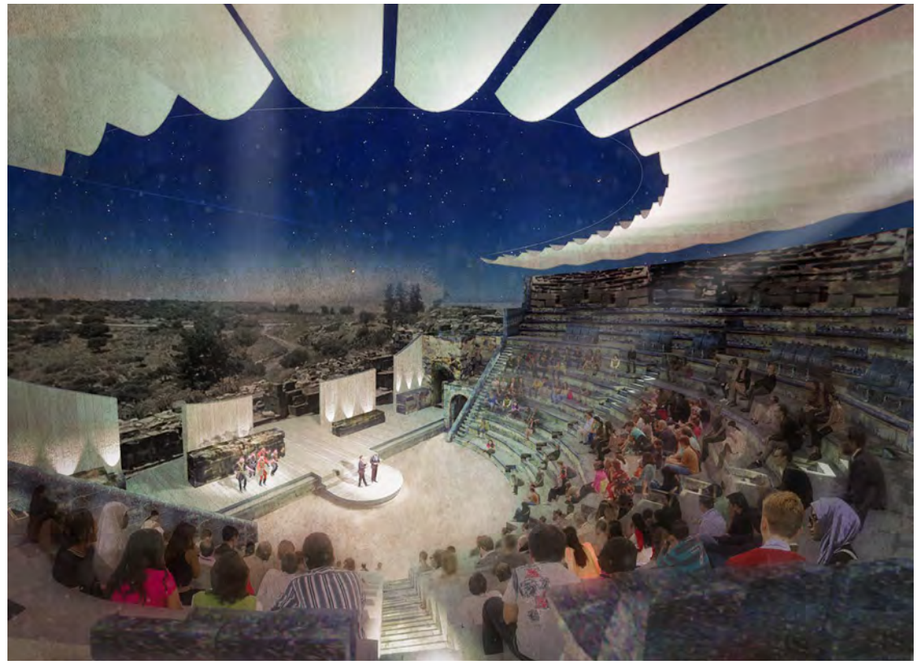
The project provided employment and on the job training and enhanced the presentation of the ancient theatre for local and international visitors. The feedback from government and community stakeholders has been overwhelmingly positive and the stage is already being used for informal performances.

Next Stages

As well as developing the masterplan for the site, the accomplishments in the Western Theatre have led to an invitation to submit proposals for the adaptation of the Treaty Court in the Ottoman village. This will include an exhibition, accommodation, business incubation space and craft workshops for the local community; and is an exciting next step.

It will take many years to realise the potential and respond to the needs of the Umm Qais Archaeological Site and its people, but Turquoise Mountain plan to work here in the long-term and their plans reflect a wider, participatory vision.

FCBStudios and Turquoise Mountain have previously collaborated on the Tourist Burma Building in Yangon.



Left to right:

Western Theatre;
© FCBStudios

Archaeological shelter
© FCBStudios

Al Rousan Courtyard
© FCBStudios

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