

**TRANSFORMATION
& CONTINUITY
IN ARCHITECTURE**

Architectural Conservation Design
Faculty of Engineering, Lund University
Sweden





“When we re-examine—or discover—this or that aspect of earlier building production today, it is with no idea of repeating its forms, but rather in the expectation of feeding more amply new sensibilities that are wholly the product of the present. To the pure historian this may seem regrettable, as introducing highly subjective elements into what he believes ought to be objective studies. Yet the pure historian, more often than not, will eventually find himself moving in directions that have been already determined by more sensitive weather-vanes.”

Henry-Russell Hitschcock
Perspectia 6, The Yale Architectural Journal
 New Haven (1960), 2

TIME: TRANSFORMATION & CONTINUITY IN ARCHITECTURE

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This publication is a collaboration of the Architecture and Built Environment Department, Faculty of Engineering, Lund University, Sweden and the Interior Design Department, College of Design, Construction and Planning, University of Florida.

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Welcome

ARCHITECTURAL CONSERVATION DESIGN AT LUND UNIVERSITY

Dr. Kerstin Barup, Head, Architectural and Built Environment Department, Lund University

Editor's Statement

AGAINST AUTHENTICITY

Morris Hylton III, Assistant Professor, College of Design, Construction and Planning, University of Florida

Introduction

APPROACHES TO ARCHITECTURAL CONSERVATION AND CONTEXTUAL DESIGN

Dr. Mats Edström, Professor, Architecture and Built Environment Department, Lund University

Germany

LOW-COST REPAIR OF OLD BUILDINGS AND HISTORIC MONUMENTS IN EASTERN GERMANY:
EXPERIENCES AND STRATEGIES

Konrad Fischer, Architect, BYAK

Norway

TRANSFORMATIONS AND CONTINUATIONS IN NORWEGIAN ARCHITECTURE

Einar Jarmund, Architect and Principal, Jarmund | Vigsnaes Architects

TIME WEAVE

Dr. Mari Hvattum, Senior Lecturer, School of Architecture and Design, Oslo, Norway

United Kingdom

"DO NOT GO GENTLE INTO THAT GOOD NIGHT:"

RELFECTIONS ON THE CONSERVATION OF MODERNIST BUILDINGS

Dr. Julian Holder, Historic Building Inspector and Historic Areas Advisor, English Heritage

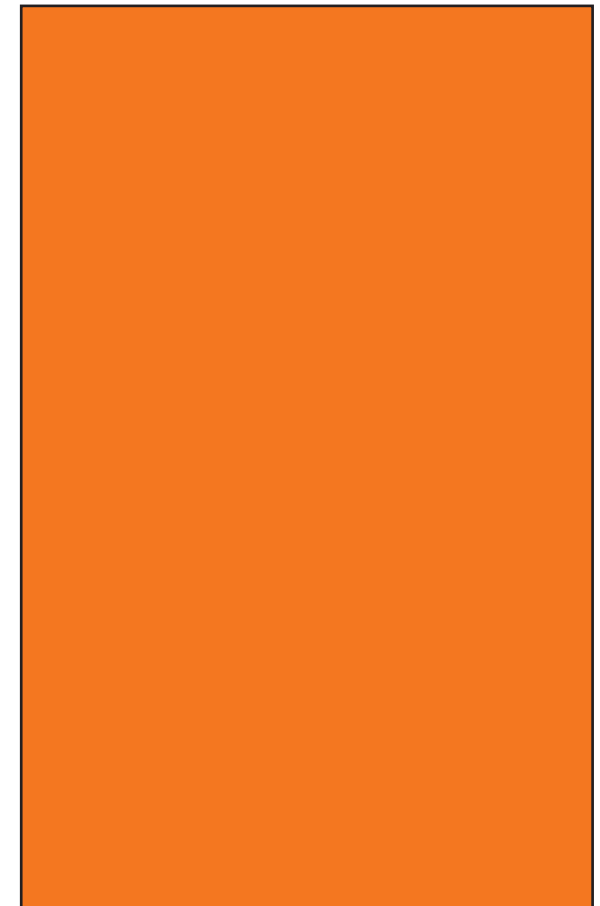
United States

MODERNISM AT RISK:

CHALLENGES TO ADAPTING AND CONSERVING AMERICA'S POST-WORLD WAR II ARCHITECTURE

Morris Hylton III, Assistant Professor, College of Design, Construction and Planning, University of Florida

CONTENTS





WELCOME

**ARCHITECTURAL
CONSERVATION AND
DESIGN AT LUND UNIVERSITY**

Dr. Kerstin Barup
Head, Architecture and Built
Environment Department Lund
University

Welcome to Lund University's conference *TIME: Transformation and Continuation in Architecture*, which focuses on "Architectural Conservation Design"—the preservation, conservation, and upgrading of historic buildings and sites to meet current needs and to extend their lives.

A special welcome to the four invited professionals and educators who will present papers that address specific issues impacting architectural conservation design internationally.

Einar Jarmund is a practicing architect and principal of Jarmund | Vigsnaes Architects based in Oslo, Norway, the firm is one of the most progressive design offices working in Scandinavia. Mr. Jarmund will use projects to illustrate the philosophical and methodological frameworks for infill and narrative architecture.

Dr. Julian Holder, Historic Building Inspector and Historic Areas Advisor for English Heritage will discuss the ideological issues of preserving Modernist architectural heritage in Britain.

From the United States, Morris Hylton III, Assistant Professor of Interior Design, College of Design, Construction and Planning, University of Florida will present his research, which explores the challenges and offers a potential model for rehabilitating the Modern architecture of Post-World War II America.

Architect Konrad Fischer will examine the impact of reunification on preserving the built heritage of East Germany and present economical and effective strategies .

For more than 20 years conservation and contextual architecture have been an important part of the architectural program in Lund school of architecture. This year more than 80% bachelor students graduate in the field. The Department of Architecture and the Built Environment launching therefore a new master's program in "Architectural Conservation Design". The program is both hands-on, following the motto "learning by doing," embracing current best practices in Conservation Design, and is theoretically oriented, encouraging advanced research in the architectural design fields of conservation and contextual architecture.

The foundation for this program is the existing educational and research competence within the faculty of the Architecture and Built Environment Department together with a broad network of Scandinavian and international universities and practice-oriented academics worldwide. The field is established here as a front-line actor in education, research, and a successful mid-career training course delivered annually to thirty architects from the third world.

While many schools of architecture across Europe still regard architectural conservation design as devoted to embalming historic urban centers, we regard it as a challenge to elaborate and learn from. While some of our colleagues strive to reinvent the wheel, we are constantly learning from the theoretical and technical lessons offered by historic architecture. Existing buildings can give solutions to new questions. We find inspiration in the process of developing solutions that transform existing buildings and extend their life.



Context and contextual are key words in our work. Nothing stays the same, not even historic monuments; they are in fact often very much changed over time although we consider them as authentic. Architects have to upgrade historic buildings to meet new needs, facilitate accessibility, and make alterations that accommodate changing uses and modern technologies. At the forefront of concerns in adapting and modifying historic buildings is the need to respect old material and details and ensure that changes can be reversible when needed.

Design is an English term. Design means the shaping through the entire building process: investigating the site and the building, sketching, doing mock-ups, designing the form, choosing the materials, selecting the colors, and specifying the construction technologies and techniques. Developing a comprehensive project that will be constructed in full scale and evaluated by us all—this is architectural design.

In Sweden there is a trend to reduce the meaning of the word “*design*” to simply making *form*. This approach will only diminish our discipline and profession to that of an advertiser. Architectural conservation design is needed to steward and adapt our heritage for the future—keeping, interpreting, and transmitting inherent values for future generations. The conservation architect works with the entire building, having acquired a range of additional competencies. These competencies include repairing historic buildings, adapting or extending them for new uses, preparing conservation management plans, working with physical and historical documentation, making interviews, assessing conditions, identifying specialists, sourcing materials, guiding clients in scoping and budgeting, assessing the development of potential risk to historic sites, obtaining construction permits and conservation area consents, *and* giving form to additions needed.

Conservation architects should be trained to know how to design and specify work in a manner that will preserve the features of the building and site, and avoid devaluing it through inappropriate or harmful measures. The conservation architect should be able to assess why a building or district is significant, identify and diagnose defects, and approach all commissions in a spirit of minimum intervention consistent with prolonging the life of the building and sustaining it through an appropriate use. Conservation architects must understand the historic context, justify proposals, and negotiate with authorities to secure permissions. The conservation architect needs a lot of knowledge and extensive training. One of the most important areas of training is in communication, including drawings and illustrations, descriptive and analytical texts, presentation and verbal skills, and management and leadership—knowing and overseeing the conservation and architecture process.

We hope the establishment of a new Masters in Architectural Conservation Design here at Lund University will be beneficial to students, educators, and practitioners from around the world.

With this conference we have the opportunity to have an enriching discourse and exchange of knowledge that will help to highlight the education and practice of Contextual Architectural and Conservation Design.

Dr. Kerstin Barup

Dr. Barup is Head of the Architecture and Built Heritage Department, Lund University and a practicing architect and principal, Barup & Edström Architects AB. Her past experience includes study at ICCROM, Rome, Italy and direction of the preservation of Linköping and Kalmar Cathedrals as chief architect.

EDITOR'S
STATEMENT

AGAINST AUTHENTICITY

Morris Hylton III
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"...history involves constant reinterpretation as well as the presentation of new facts, and even buildings, personalities and events that once seemed to have some immutable status must be rescrutinized and re-considered." (1)

William J.R. Curtis
Modern Architecture Since 1900

Is it not time that built heritage conservation specialists end—or at least replace—the more than century-old ideological dispute between Eugéne Emmanuel Viollet-le-Duc and John Ruskin? Described as “scrape versus antisrape,” this philosophical debate focuses on the material authenticity of historic architecture and built sites and the merits or heresy of restoring them. (2) For the Frenchman Viollet-le-Duc (1814-1879), restoration was a “...means to reestablish [a building] to a finished state, which may in fact never have actually existed at any given time.” (3) It is difficult to question this position after visiting Paris’s Notre Dame Cathedral, Viollet-Le-Duc’s most well-known restoration (ca.1825-1875). However, English Romanticist Ruskin (1819-1900) took a strong stance against Viollet-Le-Duc’s hypothesis and work.

Ruskin described restoration as “...the most total destruction which a building can suffer: a destruction out of which no remnants can be gathered: a destruction accompanied with false description of the thing destroyed.” (4) Ruskin’s opposition to restoration was further articulated by William Morris in “The Principles of the Society [for the Protection of Ancient Buildings] As Set Forth Upon Its Foundation” (1877), which stated that the stewards of historic properties should:

“...resist all tampering with either the fabric or ornament of the building as it stands; if it has become inconvenient for its present use, to raise another building rather than alter or enlarge the old one; in fine to treat our ancient buildings as monuments of a bygone art, created by bygone manners, that modern art cannot meddle with without destroying.” (5)

To borrow the words chosen by Robert Venturi to describe his *Complexity and Contradiction in Architecture*, this editorial statement is a “gentle manifesto” against Ruskin’s narrowly focused version of material authenticity that continues to impact cultural heritage conservation today. (6) The reign of architectural authenticity at the cost of intangible heritage—the past, present, and continuing activities of the people who use, care for, and assign and reassign the values of historic buildings—must finally come to an end.

This statement can be challenged for a myriad of reasons, not the least of which is the literal reading of mid-nineteenth-century writings that have been used in a more general way to describe extreme theoretical positions toward preservation in the Western world. Yet, the anti-restoration rhetoric of Ruskin and Morris greatly influenced the creation of twentieth-century standards and guidelines for safeguarding cultural heritage that still inform and shape cultural heritage preservation education and practice today.

However, in the past ten years or so, the hierarchical order of buildings over human activities in terms of cultural heritage has been re-examined. Strides have been made in expanding the definition of authenticity beyond the artifact to include, among other things, the processes by which it was made and is safe-



guarded. In 1994, the Japanese representatives of ICOMOS held an international gathering to consider the significance of authenticity in relation to the World Heritage Convention. The result was the *Nara Document on Authenticity*. Among the opening declarations, there is a statement asserting the validity of an authentic conservation process:

“In a world that is increasingly subject to the forces of globalization and homogenization, and in a world in which the search for cultural identity is sometimes pursued through aggressive nationalism and the suppression of the cultures of minorities, the essential contribution made by the consideration of authenticity in conservation practice is to clarify and illuminate the collective memory of humanity.” (7)

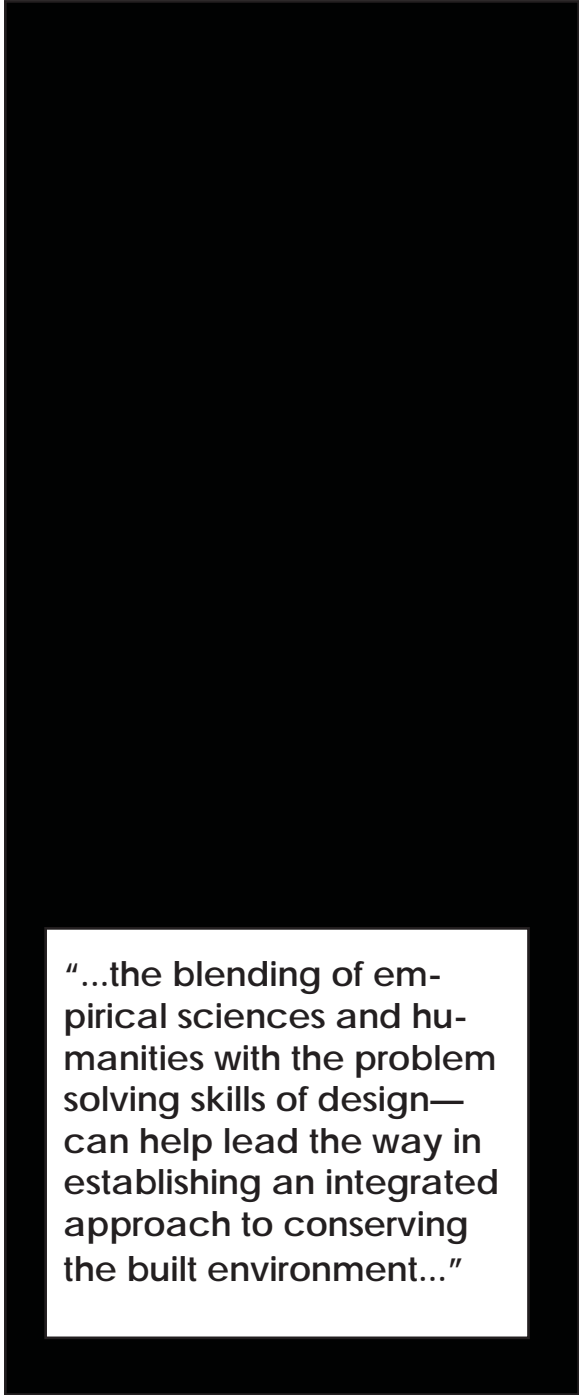
For the ten-year anniversary of this international gathering, and the forty-year commemoration of the *Venice Charter* (1964), a second meeting was held in Nara, Japan. *Place-Memory-Meaning: Preserving Intangible Values in Monuments and Sites* examined, among other things, integrated approaches to conserving tangible and intangible heritage that were recorded in the *Yamato Declaration on Integrated Approaches for Safeguarding Tangible and Intangible Cultural Heritage*. Of particular relevance to this conference is Article 14 of the declaration, which reads:

“We, the experts assembled in Nara, Japan urge...national authorities and all other stakeholders to take concrete measures for raising awareness of the importance of safeguarding [tangible and intangible] heritage, especially through formal and non-formal education, and for ensuring active local participation in this regard;...” (8)

Lund University’s innovative approach to integrating conservation and design education demonstrates that the interdisciplinary nature of the study and practice of architecture—the blending of empirical sciences and humanities with the critical thinking and problem solving skills of design—can help lead the way in establishing an integrated approach to conserving the built environment and the intangible aspects that imbue it with meaning.

Prepared for this conference, the authors of the following papers—including myself—consider this paradigm of an integrated approach to architectural conservation design when attempting to provide answers to relevant questions impacting the ability to safeguard humankind’s tangible and intangible cultural heritage legacy for future generations:

- What is an appropriate model for prioritizing, designing, and implementing conservation projects at historic sites when there is overwhelming need, but limited resources, as was the case in East Germany following reunification?
- How are strong architectural traditions of regions like Scandinavia continued and transformed through contemporary design interventions at significant heritage sites?
- What is the role of contextual design in interpreting and transmitting the meaning and values of historic buildings?



“...the blending of empirical sciences and humanities with the problem solving skills of design—can help lead the way in establishing an integrated approach to conserving the built environment...”



“The intellectual debate today seems less about the validity of intervening within a historic building or site and its impact on material authenticity and more about appropriate methods.”

- Does the modification and conservation of Modernist architecture, such as that built in the United Kingdom and United States between and after the World Wars, require a new philosophical approach to heritage conservation and subsequent revisions to existing standards and guidelines?

As the reader will hopefully ascertain from the various responses to these questions presented in this publication, the influence of John Ruskin and the antiscrape camp may be waning. An account and critique of the recent project by Jarmund | Vigsnaes Architects to rehabilitate the 700-year-old plus Akershus complex site in Norway, Dr. Mari Hvattums’s essay *Time Weave* relays the importance of considering unconventional processes and approaches to altering historic sites that may not comply with conventional notions of restoration.

Although it concludes by pondering whether there is room for both scrape and antiscrape positions, Dr. Julian Holder’s paper examining the conservation of Modern Movement sites in the United Kingdom infers that the shortened period of time between completion of a building and its recognition and protection as a landmark may eliminate the ruin and the need to deal with its conservation. This same idea was examined by architect Rem Koolhaas in his article “Preservation is Overtaking Us,” which hypothesized that preservation may “...no longer be a retroactive activity but becomes a prospective activity. This makes perfect sense because it is clear that we built so much mediocrity that is literally threatening our lives. Therefore, we will have to decide in advance what we are going to build for prosperity sooner or later.” (9)

The intellectual debate today, as represented by the theses presented in this publication, seems less about the validity of integrating new design within a historic building or site and its impact on material authenticity and more about the appropriate methods of intervention. In his “Approaches to Architectural Conservation and Contextual Design,” Mats Edström identifies and describes “...different strategies for the preservation of the historic buildings and the integration of additions.” These strategies, which are elaborated by the other conference participants through case studies, begin to expose a number of values that should be considered when designing an architectural conservation intervention, such as spatial experience, architectural concept, design process, construction techniques, etc. The process and its documentation are just as valuable as the product. Historic buildings are not valuable without the people who care for them.

Is it not time that built heritage specialists recognize the transformation and continuity of historic sites through design interventions does conserve valuable resources while affording society the opportunity to critically examine itself, determine its shared values, and ensure their authenticity.

Editor’s Note

The words preservation and conservation have been used interchangeably, and do not reference any specific national or international standard unless otherwise noted by the author of each essay. Also, I wish to acknowledge that the title for this editor’s statement was inspired by Susan Sontag’s *Against Photography* first published in 1977 and reprinted in 1990 by Anchor Books Doubleday, New York. Like Ms. Sontag’s struggle with understanding photography and its many roles, I am fascinated by and grapple with the notion of authenticity and its relationship to the conservation and adaptation of built heritage, especially those buildings of the Modern Movement.

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Morris Hylton III

Morris Hylton III is Assistant Professor of Interior Design, College of Design, Construction and Planning at the University of Florida. Prior to his appointment, he worked for the World Monuments Fund where he developed and directed initiatives for saving endangered cultural heritage, including the creation of the Modernism at Risk program.

APPROACHES TO ARCHITECTURAL CONSERVATION AND CONTEXTUAL DESIGN

Dr. Mats Edström
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"Nessun futuro senza passato" — Italian for "no future without a past"— was the theme of the 1981 ICOMOS General Assembly in Rome. The titles and intended themes of conferences and symposia often seem meaningless, but this one is worth considering as it relates to architectural design, the inspiration and transformation of established values.

Since the "rebirth" of classicism during the Renaissance, architects have looked to the past for inspiration. Designers as divergent as Andrea Palladio, Nicholas Boullée, and John Soane absorbed the principles and formal language of ancient Greek and Roman architecture in developing individual approaches. The works of these architects respected the past while responding to the specific needs of the present context—social, cultural, and physical. More than pastiche or facsimiles of classical antique monuments, the architecture of Palladio, Boullée, and Soane can be described as timeless.

Many architects today are adopting and transforming the tenets of early Modernist movements as they were developed in Europe between the World Wars. For example, Functionalism, which was introduced some eighty years ago, has influenced architects like Johannes Norlander, whose own house was nominated for *The Young Architects Prize*.

The Dutch designers of MVRDV, whose WoZoCo building in Amsterdam became an instant icon. Here at Lund University, the faculty design center, known as the IKDC building, was designed by Gunilla Svensson just three years later adopting similar design codes. Previous architecture can be used as an inspiration, for transformation and unfortunately also for copying.

Completed in 2005, the Baron House in Ystad, Sweden by the design team of John Pawson, Kerstin Barup, and Mats Edström transforms the regional tradition of the Scania courtyard house. The typical courtyard house is comprised of a series of separate structures that form a central outdoor area or "courtyard." With the Baron House, the overall form and massing of the traditional courtyard residence is retained, but the exteriors and interiors of the individual structures are designed in a minimalist aesthetic based on a limited materials palette. Large sliding glass walls in each structure visually and physically open the interior to the common courtyard. Axes through the Baron House and the reinterpretation of the "acropolis," or raised entry form, also relate to the historic design of the courtyard type. (1)

Historic buildings and settings are not only an inspiration for new architecture, but also unique and irreplaceable resources. Cultural heritage includes that of the recent past such as Modernist architecture and industrial structures. All of these historic resources required continual and routine maintenance and periodic upgrades to systems and alterations to meet changing needs. Those designing changes to historic buildings must possess a sound understanding of the philosophical and technical aspects of cultural heritage conservation and architectural design. The key is formal education and professional training based upon:

- Qualified theories and applied methodologies
- Recognized policies and guidelines

- Informed and appropriate design solutions

The science of conservation respectively regards historic architecture as a critical source of information. Scientific values and methodologies for analysis help guide the proper evaluation of built heritage. When adding new architecture to old buildings, respectful creativity should be a primary objective. Additions to listed buildings should be based upon a close examination and careful assessment of the historic architecture. In the case of historic buildings that are not listed, additions may be designed to contrast and add new character to the original. The choice of approach depends upon the heritage site's significance and assessed values and the possibilities offered by its original design. Most additions to historic properties warrant an approach that lies between these two approaches. It is more commonly referred to as contextual architecture, an important part of Architectural Conservation Design.

The contextual architecture of Lund, Sweden has been internationally recognized. The architects Klas Anshelm and Bernt Nyberg have both contributed modern buildings that respect and enhance the medieval cityscape of Lund. The Art Museum (1957), Civic Hall (1967), and County Archive (1971) by Anshelm demonstrate that modern architecture can assert a new aesthetic while acknowledging its immediate context. Differing from much of the post-World War II architecture of Sweden and Europe, the work of Anshelm and Nyberg is sensitive to the scale and materials of the surrounding neighborhood. Their work offers wonderful examples of how to design in a contextual way.

Another approach is demonstrated by the Cultural Centre of Nimes, France designed by Norman Foster, Foster + Partners. The new building faces a square dominated by the Maison Carrée, a centrally placed, hexastyl Roman temple (19 B.C.) with a high stone base and open portico of Corinthian columns. The entrance elevation of the Cultural Centre, which faces the Maison Carrée, interprets the ancient Roman portico in slender, white steel columns. The transparency of the building's entrance provides views and frames the ancient temple.

Designing new architecture in a historic setting begins by analyzing the context. Because individual sites vary, it is important to determine the general dimensions and scale, massing, and proportions. It is also essential to identify common materials and colors and to understand how they are detailed and employed. The contextualization of architecture is also established through architectural order, sequencing of space, solidity and void, and construction modules. (2)

Ruins are also remnants of the past, but from an architectural conservation design perspective offer a paradox, how to integrate a new function and activities while maintaining its destroyed and ruinous quality. The sustaining of ruins is a difficult task and has produced interesting architectural solutions intended to preserve its destruction. The roof cover of the ruin halls in Koldinghouse of Denmark by the Exner Architects demonstrates one solution that follows John Ruskin's philosophy by not altering the ruin. The new roof system is an "umbrella"-type construction that allows the careful placement of vertical supports to avoid the historic building remains. Another similar example is the glass cover of the Hamar Cathedral ruins in Norway by Lund & Slatto Architects. The transparent cover creates a modern sacral space but loses also the connection to



The MVRDV WoZoCo apartments for Elderly People inn Reimerswaalstraat, Amsterdam 1994-97.



Alta House by architect Johannes Norlander transforms the architecture of 1930-ties functionalistic cube. Photo Rasmus Norlander



Architect Peter Zumthor's major addition to St. Kolumba Cathedral in Church, Germany is an evocative building that challenges established values of respect toward the historic site.



The Baron House interprets the regional tradition of the Scania courtyard house in a minimalist modern aesthetic. Photo Åke E:son Lindman

the surrounding landscape. The sloping glass walls appear as a block of ice with the changing sky. Peter Zumthor's addition to the St. Kolumba Church ruin in Cologne, Germany is different from the Danish and Norwegian examples. It connects the new architecture to the old ruin firmly and directly. A portion of the new building walls were constructed on top of the old ones, establishing a direct relationship between old and new. (3) The melding of the two creates an intense, yet sensitive sacred place. On the urban scale, the building's strong solidity re-establishes the medieval street pattern. While the St. Kolumba addition has been recognized as a successful project, it is also an evocative building that questions established values of respect toward the historic site and reversibility of contemporary interventions.

Traditionally, a common approach of distinguishing old from new has been the use of "the gap." A void between the original and contemporary construction achieved through the use of glass. The technological advancement of glass has only offered exciting new opportunities for this type of application. However, a gap can also be created by through careful placement of the new structure in juxtaposition to the historic one, such as setting it back and creating a visual break with a shadow.

When examining new architecture in historic settings we can identify and begin to classify different strategies for the preservation of the historic building and integration of an addition:

Anastylosis in archaeology aims to preserve the original artifact by reinserting missing components and reconstructing the site using historical precedent. However, according to the *Venice Charter* additions should be carefully designed and identified as new historic layers. (4)

Reconstruction means that a new building is constructed to resemble an original based on scientific analysis of remains and examination of historical records. However, lack of detailed information and documentation often make it impossible to reconstruct, which means that re-establishing an old building involves studying the immediate context and similar historic structures that have been preserved.

Narrative Architecture describes a story-telling approach to integrating new architecture into a historic context. The conservation of the old and the new architecture become pedagogical tools to present and interpret an often complicated history.

Contextual Architecture focuses on the relation between old and new architecture. "genus loci" translated as "spirit of place" is respected and it inspires, offering approaches to the design of additions. (5) A careful analysis and understanding of the specific context guides the process.

Historic buildings and districts are designated and protected by special policies established on the local, regional, national, and even international level, as with the World Heritage List. They are subject to strict control aiming at ensuring that new development preserves and enhances character and sense of place. Repair and additions have to be justified and decisions defended in conservation terms. Good ideas need to be developed and presented and financial mechanisms understood. Sustainable design does not only mean energy efficiency, but includes the retention and renewal of traditional materials, durability of conservation measures and new construction, responsiveness to changing conditions, and feeling of continuity

created by remembering the past. Environmental policy based on these principles will promote sustainable traditional techniques and healthy natural environments.

Old buildings with history and character give flavor to our built environment. The Architectural Conservation Design program provides an understanding needed for repairs, refurbishment, alterations, extensions, and conversions of traditional buildings, while meeting modern standards of comfort, convenience, and accessibility. The program focuses on the preservation and reuse of built heritage through an integrated conservation and architectural design approach. This is the mission and purpose of the recent proposal for an Architectural Conservation Design Masters in Lund University.

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Dr. Mats Edström

Dr. Edström has served as Head of Architectural Conservation and Restoration Design, Architecture and Built Environment Department, Lund University since 2002. He is a practicing architect and principal of Barup & Edström Architects AB. In 2007, the firm received the Europe Nostra award for the restoration of Eslöv Civic Hall.

LOW-COST REPAIR OF OLD BUILDINGS AND HISTORIC MONUMENTS IN EASTERN GERMANY: EXPERIENCES AND STRATEGIES

Konrad Fisher
Architect, BYAK

The reunification offered the East German monument care authorities and owners of protected cultural heritage many new opportunities for preservation activities. The limited financial resources during the socialist era limited preservation to urgent interventions on historical buildings in a poor state of repair and mainly archaeological programs at medieval sites. With the sudden injection of money from the West post-reunification, neglected historic buildings—many intended for demolition—received an unanticipated chance at survival. Based on the experience with monument subsidies in Western Germany, new support programs were developed for the preservation and repair of heritage properties.

During the decade that followed reunification (1990-2000), extensive subsidies and workers from the collapsed state enterprises were made available for preservation. Unfortunately, in many instances, much of the historic fabric was damaged or destroyed in the process. This was due in large part to an ineffective project organization that could not always ensure appropriate implementation. In analyzing a series of projects from this period, five primary issues were identified:

- The safety technology applied by the project participants led to further destruction of the buildings. For example, under the 1,000-Roofs program, endangered buildings were sealed with temporary plastic tarpaulins. This solution often promoted infestation of dry rot in the moist parts of the buildings.
- To address the severe unemployment, especially in large cities, inexperienced workers were used for gutting and clearing valuable historic buildings. The lack of a careful building preparation program from this period is still a point of regret.
- Many of the building-archaeological investigations initiated or approved by the monument authority led to expensive reconstructions of a mostly falsified “original state,” especially for public or larger monuments. The building-archaeology agency did not hesitate to devastate even still habitable buildings and transform them into ruined masonry using hammers, pickaxes, and shovels. This destructive “monument care” created great losses among the newer and still usable parts, as well as significant increases in construction costs.
- The government subsidies managed by municipalities were spent mostly on the paving of city centers or over-restoring municipal buildings and the façades of townhouses in urban historic districts, without refurbishing the interiors. The result has been increasingly vacant historic homes abandoned by owners in search of more affordable housing.
- Planning and construction with traditional techniques and materials truly compatible with the historic structure was not always the standard of the involved planners and craftsmen. Often there was too little experience in the building restoration neglected during GDR times.

These problems persist in many monument care and restoration projects today. However, the overall preservation activities for East German monuments have decreased some due to reduced funding. Now, a sixth issue threatens many East German historic monuments and buildings, including private houses, worthy of protection:

- The historic urban cores are losing their population and economic viability due to a continual exodus of residents to new, more affordable developments outside cities. Many old houses are increasingly vacant, as more people choose to occupy more cost-effective flats in housing blocks erected in the 1960s and 1970s. Further, millions in state funds are used for the demolition of residential buildings, including the razing of nineteenth-century districts.

As evident by the situation in East Germany, the repair of historic buildings and districts is impacted by many economic and technical issues. The adaptation of historic structures for new uses often involves more than merely painting the walls and façades and renewing worn floor finishes. Inappropriate, prior maintenance or lack of stewardship may have resulted in major structural damage to roofs, walls, and foundations. To accommodate new uses, building systems and other technologies must be augmented, if not replaced. Often, additions are called for to provide more floor area.

Planning and implementing all of the necessary design and construction work requires funding from public agencies and private individuals or entities. The economic climate today means resources to support preservation work is scarce. Even highly significant civic buildings and administrative structures do not always receive the necessary funds. Research and development of sound financial strategies are perhaps the most critical actions for securing the future of the built heritage. But how does the conservation and long-term preservation of protected properties succeed financially? There is no one model that can be applied in all contexts. However, there are some important principles that have proven successful.

The following is a summary of some of the principal issues to be understood and addressed in conserving and sustaining built heritage. The identification and articulation of these issues is the result of experience gained from planning and implementing work on some 400 restoration projects since 1979 and developing hundreds of building survey reports, many of them in East Germany.

Real Estate Purchases

The survival of historic buildings is often threatened by the lack of resources. In East Germany and in many other historical and contemporary instances, the loss of an economic foundation results from political and social restructuring. The dispossession of land owners caused by secularization, revolution, war, and other political changes has resulted in much damage to historic buildings. As a result of these and other reasons, more and more historic properties are appearing on the real estate market.

Important Project Costs

The purchase price of old buildings, is often difficult to estimate. There are a litany of factors to be taken into consideration: building age and construction, contamination, inventory, mortgage debt, tenancy rights, etc. Due to the complexity of evaluating and assessing all these factors, there is often large discrepancies in the estimated prices per square meter.

A buyer has to possess the necessary funds not only for the purchase, but also for the repair, potential adaptation for a new use, and on-going maintenance. Thus, the conservation status of the building, the use-

The repair of historic buildings and districts is impacted by many economic and technical issues.





The first prerequisite for the project promotion is the articulation of the significance—historical, social, cultural, architectural, etc.—of the monument.

dependent and operating costs, and also the above mentioned factors need to be identified and roughly estimated before property negotiations and purchase.

Funding Sources for Preservation Projects

In the absence of a private owner or investor who has the necessary resources to undertake conservation work and to provide continual, cyclical maintenance, public financing, often in the form of grants, is one of the few alternative funding sources. There are direct and indirect subsidies, sometimes linked to future use. If tax benefits are used to finance a project, then a consultant should be involved to help navigate the complex system. Private institutions such as foundations or wealthy donors can occasionally provide help. However, the external grants cover very few buildings and they do not always benefit the monument or justify the effort.

Major construction projects may also attract private, commercial sponsors interested in bolstering their images or at least gaining recognition by placing highly visible advertising on scaffolding. However, it is important to recognize that accepting funding from sponsors creates obligations and dependencies, perhaps even contradictions. Creating a "Friends" association and developing personal connections to supporting media and relief organizations such as Rotary, Lions and other foundations can also be effective tools for public and private fund raising. There are professionals who can help with marketing and fundraising for projects. They can evaluate the expectations of sponsors regarding media presence, on internal and external communications, and monitor the success. The creation of an economic strategy and plan should begin prior to the building purchase and complex planning. What are some of the critical elements that need to be assessed?

Building Significance and Use

The first prerequisite for the project promotion is the articulation of the significance—historical, social, cultural, architectural, etc.—of the monument. In addition, if the property is threatened, this status should be promoted as it typically increases the level of public interest and funding support. It also helps if the proposed use accommodates public and community functions.

Organizing Funding

Planning projects which are heavily dependent on grants not only depend on the wishes of investors and the official building permit, but also on the support program. Only an early negotiation can avoid costly mistakes. Also, the funding should have been negotiated prior to submitting the written application. This should be managed from a strong position, prior to signing the purchase agreement and investing in costly planning.

Many regulations and the owner's own contribution to the project have been financially coordinated in the case of a subsidized building. This is a matter of organizing construction financing, application status, construction procurement, and invoicing. If this does not occur, then subsidies may have to be repaid. Often negotiations need to be held on several levels. The authorities responsible for public funding and approval of the building permit take priority. However, local representatives from the municipality, the county, and

other policy makers are also important. Government support is often an important initial step toward raising necessary private funds.

Repair as Destruction

Researching and protecting historical buildings such as civic structures is often willingly financed for patriotic reasons. Damage to historic buildings can occur whenever exaggerated research is used to justify gutting reconstruction in an approximated historic state. Preservation plans developed by architects and professionals inexperienced in conservation and adaptation of historic buildings can also result in destruction. Although materials testing and analysis is now a typical aspect of the conservation planning process, the findings and recommendations have to be carefully coordinated with all the necessary work. Too often the recommendations based on scientific analysis endanger, damage, or even destroy them. In many instances, it would be more economical to omit the expenses of materials investigations. Instead, the approach could be to preserve all building materials and components that are technically and functionally sound, even if they are partially damaged or are part of a more recent alteration.

MODEL STRATEGY

The traces of age or patina often help lend the monument its character. New design that is based on architectural theory, but ignores the monument and its changes over time does not justify the additional construction costs that it typically adds. The use of the least invasive means should be the first principle of the cost-conscious architectural conservation designer. More important is an appropriate, simple repair strategy and respectful, modest design coupled with a well-organized construction are more important. A solid knowledge of the historical construction and repair technology, of the building's history, art history, of the building laws and jurisprudence and of economics provide the appropriate foundation for this.

Determining the Preservation Approach and Scope of Work

The least invasive and most-economical means should be a primary consideration when determining the conservation design approach and determining the scope of work. Design of the architectural conservation program, which is required as part of protection, should also occur in stages from the initial assessment through the various design phases and construction support. This avoids disappointment if the project can not be realized as desired.

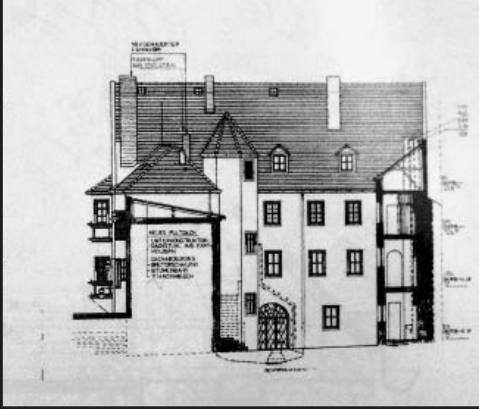
Preliminary Planning and Economics

In most instances, a short appraisal including a technical inspection and economical analysis report is sufficient to help the building owner or buyers make initial decisions. During a site visit, the house inspector or surveyor should evaluate the condition of the building to identify any damage and its severity and preliminarily determine the repair needs. The client's needs and resources should also be discussed and recorded.

Old building drawings, if they exist, can be updated with little effort to record existing conditions and draft schematic design plans upon which an initial cost estimate can be prepared. Larger projects must be divided into realistic phases. A preliminary economic calculation should include a cost benefit analysis that compares projected construction costs with potential revenues from the use of the building.

The traces of age or patina often help lend the monument its character.





An initial cost estimate can be prepared. Old building drawings, if they exist, can be updated with little effort to record existing conditions and draft schematic design plans upon which an initial cost estimate can be prepared.

With assessments undertaken on houses being considered for purchase, the preliminary cost estimates and cost-benefit analyses should be made on a quantitative determination of the main construction parts without further detailed design. This planning step creates a low-cost feasibility study. It provides a cost overview for building and planning and also calculates the external financing needs and subsequent operating costs. This strategy avoids senseless planning efforts and an implementation phase which ends unhappily in a financial disaster. Only a financed project phase should be prepared in greater detail.

Preliminary Negotiations for Building Permit and Financing

With the preliminary plan and cost estimate, the owner can negotiate with banks and authorities. This step involves the building permit, overall financing, and project preparation, including the inventory, detailed planning of construction works, and exact calculation. This will help reduce unforeseen issues impacting cost and schedule during project implementation.

Inventory System

Detailed and precise cost planning requires the survey and preparation of existing conditions of the building. Measurements and structural and materials conditions should be recorded using a suitable and consistent recording system with clear and effective technical descriptions, sketches, and photographs. This data is evaluated later in the detailed design and performance specifications. The precise cost planning with a high level of budget-security and the subsequent awarding of building contracts will only succeed after sufficient study of the construction along with selective probes and tests, as required. This occasionally involves the examination of typically concealed or difficulty accessed structural components and systems through sensitive probes and investigations.

Functional Design

Low-cost modernization respects the building's history and eliminates potentially questionable, destructive, and exaggerated use of the given structure. It can also retain and conserve partly damaged and deformed building components and make use of under-utilized space.

Engineering Design

Where possible, any required new building components or systems should be integrated into either existing, un- or under-used spaces or added to the original. The new parts must be adapted to the structure and not the other way around. Necessary penetrations of the original building need to use the path of least resistance, preferably employing less important or previously modified areas. New interventions require great attention to detail, not rushed decisions in the field. Installation of new pipes, conduits, and ducts should be concealed wherever possible.

Some of the laws and regulations mandating construction can also serve the interest of certain industries. One example are energy-efficient. The thermal insulation and hermetic sealing of historic buildings can cause damage. Despite subsidies, the savings gained from insulation, ventilation systems, and new windows remains far too small to guaranty the refinancing and amortization of additional costs. There is no guarantee that these upgrades will off-set construction costs or reduce energy use over time.

The ideology of preservation, however, can not solve every problem. Contemporary building technology offers better comfort and protection of the building in terms of fire and security. But, it is always important to integrate the new technology with proper respect for the old building. To prevent structural damage resulting from the selection of harmful new building materials and construction techniques, the historically proven building methods must be identified and understood. This knowledge requires practice and application in the field.

Specifications, Statements of Work (SOW), Construction Costs, and Progress

In contrast to the design of new buildings, architectural conservation design relies on the comprehensive assessment of existing building structures—their design, changes over time, and condition. This information must be systematically utilized during the preliminary design and cost estimating phase and the particular technical specifications of repairs. If any existing conditions are missed and not addressed in the scope of work, the tendering process will be negatively impacted and subsequently the schedule and budget.

Investment Goal

The goal of low-cost repairs requires appropriate methods of planning. Sound project planning that takes into consideration all factors may amount to as much as 20% to 35% in savings resulting from unanticipated, additional work.

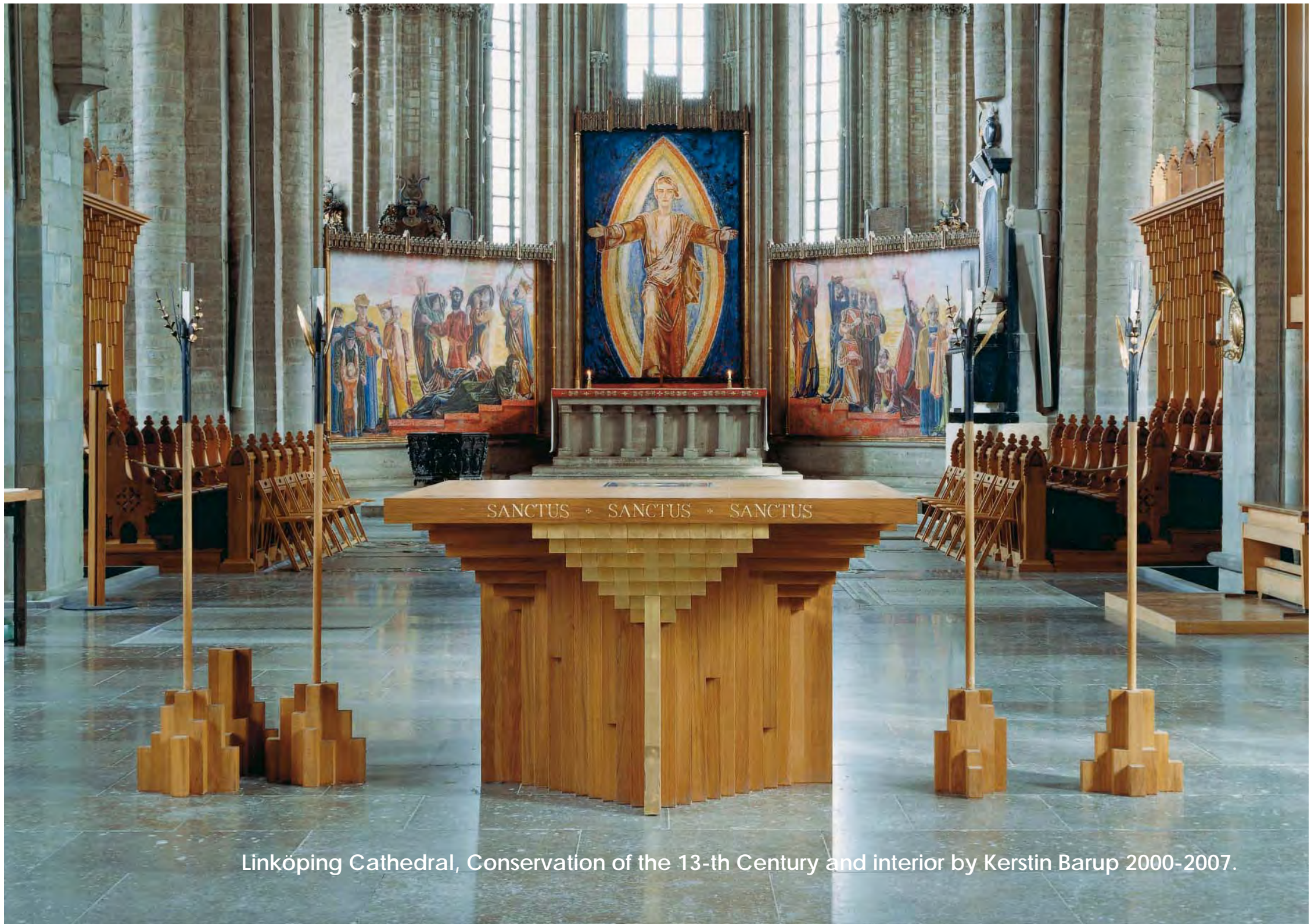
Summary

Cost-effective preservation of old buildings requires the maximum use of external sources for financing and customized planning. Comprehensive survey, highly detailed planning, and testing are essential. If the investor and planner accept the true needs of the use, technology, and economics, this will reduce negative impacts on schedule and financing. It is critical that those developing and implementing the project understand, record, and consider the construction, function, and character of the historic building using contemporary, well-tested technologies and best-practice methodologies.

Konrad Fischer

Konrad Fischer is an architect specializing in conservation and principal of Architektur und Ingenieurbüro Fischer. Among his many activities, he is a member of the Council for Monument Preservation and Building, Commission for Marksburg Castle, Braubach/Rhein of the Deutsche Burgenvereinigung (German Castle Association).





Linköping Cathedral, Conservation of the 13-th Century and interior by Kerstin Barup 2000-2007.





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Project:
**FROSLÖVS BACKAR
 SWEDEN**

Drawing Title:
GROUND FLOOR

Scale:
 1:50 @ A1
 1:100 @ A3

Drawing No:
A100

Client No:
 BS08

Date:
 17 September 2008

Revision:
 5





Baron House, Sweden, Minimalist Interpretation of Scania Courtyard House by John Pawson and Barup & Edström 2004-2005. Photo Åke E:son Lindman.



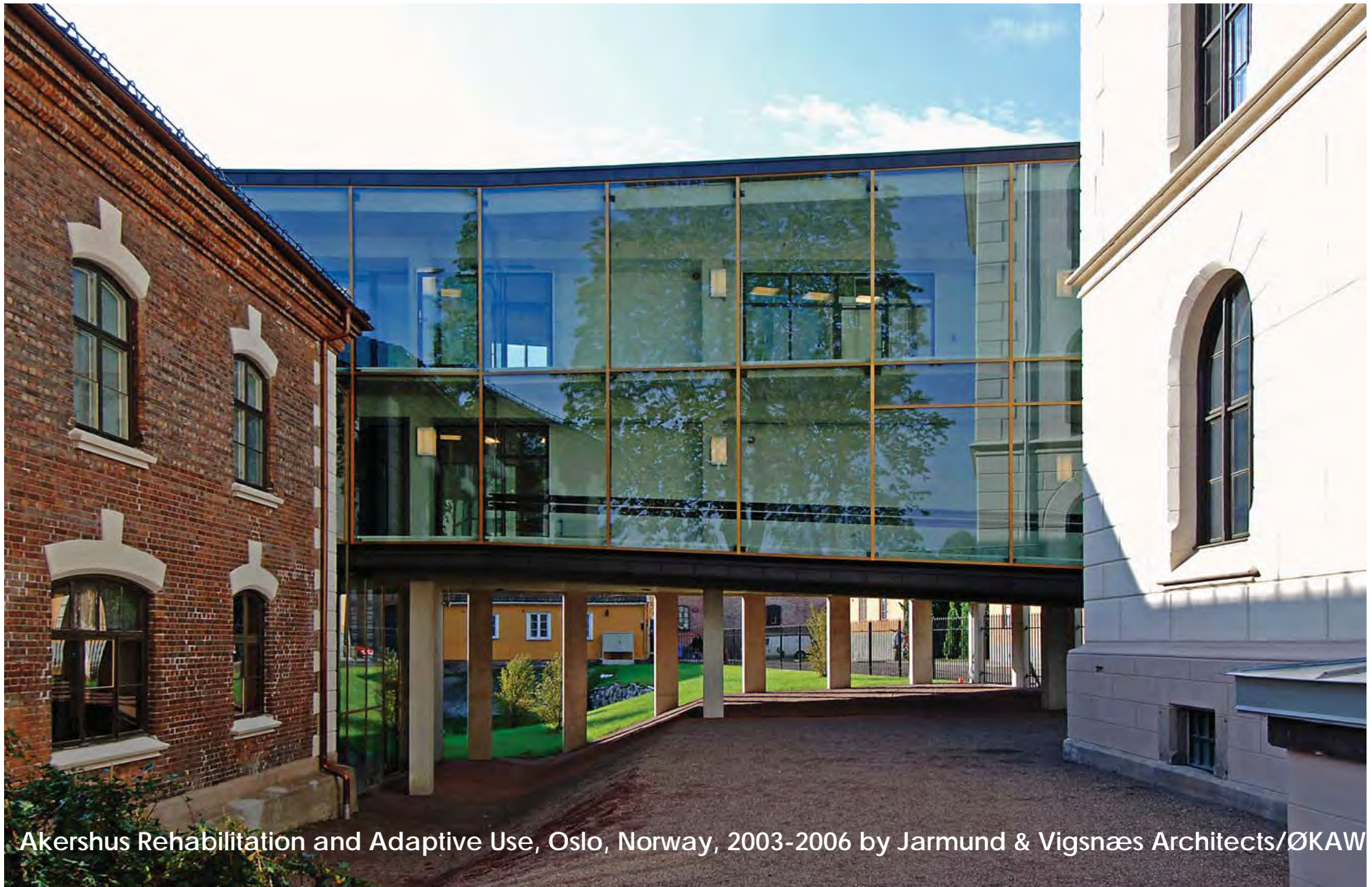




Eslöv Civic Hall by Hans Asplund 1948-1957.
Conservation by Barup & Edström Architects 2002-2006. Photo Åke E:son Lindman .







Akershus Rehabilitation and Adaptive Use, Oslo, Norway, 2003-2006 by Jarmund & Vignæs Architects/ØKAW



NORWAY

TRANSFORMATIONS AND CONTINUATIONS IN NORWEGIAN ARCHITECTURE

Einar Jarmund
Architect and Principal,
Jarmund | Vignaes Architects

Our practice has always been intrigued by the capacity of architecture as a storytelling device. Our investigations of each project is always a search for a specific material for a new architecture; a material that is not physical, but that can be expressed through physical means. Projects involving existing structures give unique opportunities compared to starting with the proverbial "clean slate." Approaching existing structures means there is the possibility to interpret and continue an existing story. This story can be simply revealed, enhanced, altered, or even blurred; we have no single approach or strategy being imposed in every case. A change of use could also imply a necessary transformation in meaning that might lead to multiple, parallel stories being expressed.

To illustrate these different strategies, we are presenting some five projects briefly and The New Norwegian Ministry of Defense in more detail.

Administration Building for the Governor of Svalbard

The existing building was a concrete structure destroyed by fire. The ruin was transformed by the application of a new skin around the existing structure. The new architecture tries to communicate both with the topography of the surrounding landscape and the industrial past of the settlement.

Kvitsøy Coastal Control

An existing pilot station was enlarged lengthwise and vertically. However, the old building remains visible beneath. The new structure relates to both the topography and buildings in the fishing village below and opens up for a multitude of readings, including an animal, a coastal sign, a ship, etc.

Vestkantbadet (West End Public Bath)

A beautiful public bath from the early 1930s was restored. A shower and sauna department were upgraded to meet today's standards, but at the same time evoke the spirit of the original period. This is done with obvious references to the work of the renowned Swedish architect, Gunnar Asplund.

Oslo School of Architecture

A workshop building for Oslo Electrical works from the 1930s possessed a character appropriate for learning in the new millennium. The project retains some qualities of the existing structure, such as the continuous horizontal spaces and the poured-in place concrete, but develops a relaxed architectural setting, devoid of rhetoric, for today's students.

The Stable House

An 1860s stable was radically transformed into a house for a family of four. The expression of the new program in the façade of the building is an overt expression of the concept that anchored the transformation.

New Norwegian Ministry of Defense

In 2002, as part of a major defense reshuffle, the Storting (parliament) resolved on a new HQ building for the Ministry and Staff of Defense in the Akershus fortress area.

Site

The site, the Verkstedgården, specifically the workshop block, occupies the northeast corner of the fortress area. It was converted the administrative and logistical facilities for the fortress following the removal of the outworks in the mid-nineteenth century. The basic plan for Verkstedsgården and the adjacent Arsenal facing south, currently the Defense Museum, was devised by architects Schirmer and von Hanno in the 1850s. The Arsenal part of the plan has been implemented to be discernible, while also revealing traces of earlier fortifications. The Verkstedgården part of the plan had been realized to a lesser degree. The superblock is less discernible.

Evaluation

The fortress of Akershus bears the imprint of many historical strata. Some of these, such as the plan by Schirmer and von Hanno, are distinctly identifiable, while others can be termed transitory, the result of coincidence or of plans unrealized. The old apple orchard in the south part of Verkstedgården, for example, resulted from the incomplete implementation of the plan during the 1850s. In this way the Akershus fortress area represents a continuous process of evolution and transformation, which we have endeavored to preserve and articulate.

Design

The new program required a transformation of the area. One overriding aim of this transformation was to develop a modern office organization with good internal communications between the various departments. The approach is intended to represent an open, accessible institution while meeting the special security requirements involved, both for day-to-day activities and in emergencies. Special flexibility had to be integrated into the concept in order to accommodate heritage and organizational considerations.

Preservation

The project solutions are based on the main principles of block interpretation devised in close collaboration with the National Heritage Board and the preservation expertise called on by the Norwegian Defense Estates Agency. The new plan establishes an internal space within Verkstedgården, between the old buildings. The pattern of building development is based on a desire for interaction between massive volumes, so as to relate to Schirmer and von Hanno's planning approach in the 1850s in terms of monumentality and materiality. The freer geometry is derived from traces of old fortification walls that are below ground, which become a tool for joining building units and communication routes together.

Materials

The overriding aim of the project has been to create a dialogue with the existing buildings, a dialogue which both refers to and discusses the past. A dark hue has accordingly been chosen for the pointing of the heavier parts of the new building, alluding particularly to the pointing of the Arsenal and the Workshop building. We have pursued this further in the detailing by putting the windows in deep recess where their profiles are obscured by the masonry. Control of natural light is achieved by the use of thermal glazing.

In this way the Akershus fortress area represents a continuous process of evolution and transformation which we have endeavored to preserve.



Einar Jarmund

Educated in Norway and the United States, Einar Jarmund is an architect specializing in design in historic settings. He is principal of Jarmund | Vigsnaes Architects and has taught at a number of institutions including the Oslo School of Architecture, Norway and the Universities of Washington and Arizona, United States.

TIME WEAVE

Dr. Mari Hvattum
Senior Lecturer,
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At a time when historic buildings are all too often becoming ossified into museum-like constellations, it is refreshing to see a project where new architecture is effortlessly interwoven with historical contexts. Jarmund & Vignæs/ØKAW's project for a coordinated defense HQ at Akershus achieves this convincingly, but by no means without controversy. The old Norse epic poem Voluspa tells of the Nornsmystical—female figures weaving past, present and future together into a fateful fabric. A fabric is a unit consisting of innumerable single threads criss-crossing each other—an apt metaphor of the multifarious contexts of history. Perhaps, then, it is no mere coincidence, the architects made the weave their metaphor when launching a big new project, the first in over a hundred years, at history-laden Akershus. By interweaving some of the loose threads of the fortress area and introducing new material in warp and weft, Jarmund & Vignæs/ØKAW have made valuable new additions to the time weave that is Oslo.

Akershus: Myth and Reality

The fortress of Akershus is today ranked, unquestioningly, as a national heirloom and one of the finest legacies of Norway's proud medieval history. It is often conveniently forgotten that the complex today crowning the Akersneset promontory is a reconstruction based on guesswork and romantic, nineteenth-century notions of medieval greatness. The fortress area has evolved through a complicated sequence of building, devastation, reconstruction, and transformation lasting without interruption from the late thirteenth century to the present day. In such a context, any modification—even the most scientifically based reconstruction—is bound to be an interpretation. Holger Sinding-Larsen's heroic vision of the fortress as it had been in 1300 was undoubtedly such an interpretation, and a supremely controversial one. Even so, that vision laid the foundations of the fortress as we know it today. Between 1913 and 1963 the castle and inner defences were "restored" to something which even conservation enthusiasts feel bound to describe as "medievally inspired" rather than an authentic medieval structure.

If Akershus Castle has a manifold history of indeterminate authenticity, this is truer still of the outer defence works. This part of the fortress area was not fortified until the second half of the seventeenth century and was of relatively slight importance before the mid-nineteenth, when the area came to house a chaotic union of military industry and bureaucracy. The plan created by Schirmer and von Hanno in the 1850s was an attempt to impose order on the chaos, and not least to coordinate the outer defenses with the adjoining blocks. Their plan was only partly realized, in the form of two large blocks overlooking Skippergata: the Arsenal block, which today houses the Defense Museum among other things, and the unfinished Workshop block. This latter is dominated by the 1860s Artillery workshop building, executed in the "round-arched style" of the period. The expressive brick building with its monumental smokestack tower forms part of a more reticent ensemble which includes the so-called School building in delicate Neo-Renaissance and the more anonymous Artillery office building. This inchoate area—with layers of curtain wall remains and modern tunnels surrounded by eighteenth-century barracks and 1970s garages, impressive historicist buildings and German barracks from World War II—was the site proposed for the new defence HQ. Several other siting options were ruled out by the Hague Convention ban on siting defense installations close to heritage buildings (an awkward clause for military heritage buildings, one might think), but the Workshop block passed through the proverbial needle's eye of the preservation clause and in 2002 the Storting (the parliament) signalled the go-ahead.

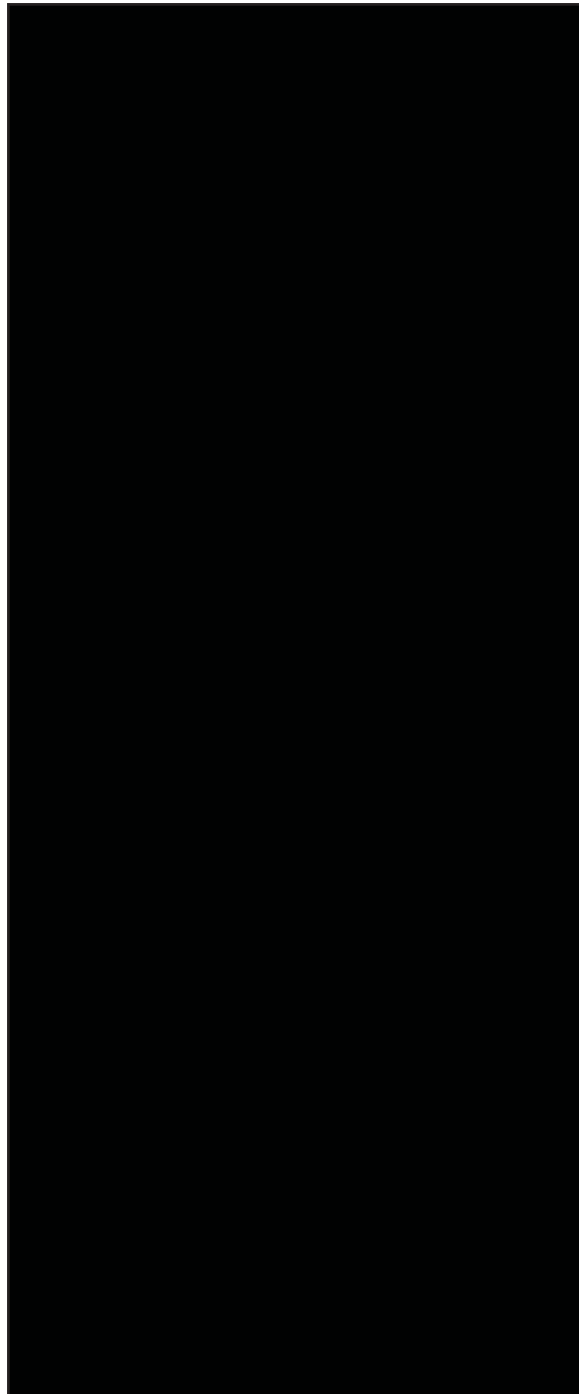
The Preservation Process

Since a development program of 19,000 square meters or more had to be squeezed into such a historically sensitive area, circumspection was the watchword. Happily, the Norwegian Defence Estates Agency rose to its responsibility and the challenge, devising an exemplary reconciliation of conservation interest and the desire for reuse and new use. At the recommendation of the Agency's Architectural Committee, a group of experts was formed, consisting of highly respected specialists in architectural heritage conservation, namely Johannes Exner (Århus School of Architecture), Mats Edström (Lund University), and Knut Einar Larsen (Norwegian University of Science and Technology, NTNU). Karl Otto Ellefsen moderated the process, initiating four architecture seminars which took place during the autumn of 2002. Each seminar referred to specific phases of the decision-making process and, in addition to the group of experts, was attended by heritage authority specialists and representatives for client and construction company. These seminars proved to play a pivotal role in the process, for several reasons. Because the group of experts represented an unquestioned specialist expertise, respected by client, architect team, and heritage authorities alike, the group could help to engineer a dialogue between specialized groups who are not always very good at communicating with each other. Through analyses and discussion of the historical context, moreover, the heritage conservation seminars helped to pin down the distinctive character of the Workshop block and thus to clarify the project's architectural priorities. If all modification means interpretation, then perhaps one can say that the seminar proceedings became a forum where the potential for interpretation could be articulated and the architectural consequences laid bare. At the very first seminar it became clear that it was the nineteenth-century Akershus, especially the 1850 plan by Schirmer and von Hanno, that would dominate understanding of the situation for this assignment. Fulfilment of the intentions of the block plan, plus a call for clear demarcation between new and old, were conclusions forming the starting point of the work which was to follow.

Transformation and New Creation

One of the most impressive aspects of this process has been the determination and ability of the architect team to follow up topics from the heritage seminars and turn them into a motive force in the design work. The debate concerning the Artillery office building, the much talked-about Building 53, is an interesting example of the workings of the process. Initially, the building was a headache. In addition to its negligible architectural merits, it imposed an entry and communications conundrum on the entire complex. The architects proposed demolition or possibly relocation, a disheartening prospect to the heritage people. After the heritage seminars and a succession of alternative sketches, the conclusion was reached that Building 53 should be retained in situ but that its value consisted first and foremost in its position on the site. In other words, sweeping architectural changes to the building could be acceptable without belittling its value—a conclusion which gave the architect scope for manoeuvre while catering to heritage preservation interests. It was through this kind of dialogue that, step by step, the project evolved. The new building, for which Jarmund/Vignes were primarily responsible, changed from a bulging free-form volume and an expressive termination of the southern end of the Workshop block to a retrained and austere atrium building which both completes and reinterprets the structure of the block. Viewed from the Workshop block, the new volume is remarkably reticent. The glazed façade overlooking the piazza defers to Building 53, which now forms the entrance to the entire complex. A generous opening carved out of the classical façade clearly

“Through analyses and discussion of the historical context, moreover, the heritage conservation seminars helped to pin down the distinctive character ... thus to clarify the project's architectural priorities.”



signals the impact of a new age, and through the large expanse of glazing one can see right through the entrance building and foyer to the Commandant's Apple Orchard on the south side. The orchard is a big resource for the new complex, like a green extension of the foyer. From here one has a view of the barracks and "the Commandant's Stables"—a charming little 1890s building, typical of the architectural anonymity of Akershus—and also of the eighteenth-century curtain wall, a part of the fortifications which has been uncovered and restored. The same curtain wall is also visible through an area of glazed flooring in the foyer, and runs like a trail through the Workshop block, where it absorbs the differences of level. This knack of giving historical traces a new and meaningful function and appearance is one of the great strengths of the project. History is activated rather than 'museified.'

From the bright and beautiful foyer one moves to the main communication artery of the complex. The link to the School building is provided on another floor, by means of a glazed bridge and ramps, while traffic to the Workshop building and the lower floor of the new building is channelled half a floor below. Looking at the strained quality of communication in this part of the building, one can understand the architects' worries over the role of Building 53 in the complex. For while the architects have coped skillfully with this awkward encounter, Building 53 remains the most controversial part of the complex. To achieve access without steps from the Workshop block, the floor of the old office building was lowered by about one metre. Architectural capital has been made out of this on the inside, in that sloping buttress walls of concrete hint at the difference between the old level and the new. The building has been divested of interior load-bearing walls, the upper floor being supported instead by a huge longitudinal glulam beam braced by rough, A-shaped wooden "trestles". During the final architecture seminar in 2006, this solution was criticized for being unnecessarily affected. Understandably, not least because the almost Fehn-like expressive force of the concrete and timber sections is obscured by the longitudinal glazed wall with its many and space-demanding control installations. Even so, I could not help liking the unruly expressiveness of the entry building. The rest of the new headquarters building is so restrained and discreet in its handling of the over-canonized architectural heritage of Akershus that the "muddle" of the entrance section inspired a sense of relief. The sanctioning of such radical architectural treatment of a listed building, moreover, bears witness to—at least by Norwegian standards—a most unusual process with interesting and unexpected results.

Wholeness and Coherence

The architects used the metaphor of weaving as a means to explore and conceptualise the development of the structure. The weaving motif enters the project on several planes. The new building volume is woven into nineteenth-century structure by means of glass corridors, allowing old and new to be functionally united while kept visually apart. The solitary building volumes by Schirmer and von Hanno acquire a worthy counterpart in the clean-cut brick volume of the new building, which provides the Workshop block with an exact conclusion facing Skippergata and Bryggegata. The dark brick of the façade sets up a rich play of color, and the clear-cut window apertures, displaced from one storey to the next, give the building a distinctive rhythm. As a result of the window glazing being flush with the inner wall, with no visible frames, the vertical window apertures, viewed from outside, resemble deep niches with a fine, exact play of shadows. The retracted corner windows, not least, endow the building with a distinctive relief evoking the vocabulary of fortress architecture.



At first glance the new building seems to be a solitary brick volume attached to two historic building volumes, with a lightweight glazed connection in between. However, the new atrium building is not enclosed by the brick façade. If anything the brick wall is “twisted,” suddenly cropping up as a wall of the inner courtyard room, where the austere, abstract idiom and the clean-cut, vertical window apertures impart an almost Loos-like sternness. The atrium view through the raked glazed wall of the ministerial wing is one of the most dramatic architectural experiences in the whole complex. Through the north wing of the atrium one glimpses the military hospital in Grev Wedels Plass, and the huge chimneys of the Workshop building soaring above the cornice to the north. Another heightened “time encounter” can be experienced in the office of the Minister of Defense, where the window aperture, exactly the height of one storey, frames Akershus Castle in a way that is almost overwhelming. The apparently lightweight buildings in between the main volumes also harbour a hidden complexity. They are not as lightweight as they seem. Strict security requirements have dictated stout concrete structures, which have been covered with a skin of glass. In the various preliminary sketches a good deal more was made of the intermediate buildings in the form of faceting of the façades. The intermediate building to the southeast was described as a concertina bellows stretched between the Workshop building and the new brick volume. In the realized project these ideas have been toned down in favour of a relatively austere wall, pulled back behind the old wall along Skippergata. But the idea of a multi-faceted surface is retained in the rhythmically displaced apertures of the concrete structure, glimpsed behind the glazed skin. The concrete latticework is gauged according to horizontal load-bearing requirements, i.e. the ability of the building to withstand explosions. This requirement varies from one part of the building to another, giving rise to an interesting variety of expression. Once again, textile associations assert themselves. The concrete lattice resembles meshes in crochet-work, with stitches of varying thickness and density.

Time and Interpretation

About half the spatial program for the complex occupies historic buildings. The team of architects have chosen very different strategies for the three buildings, and the resultant complex presents an interesting cross-section of current attitudes to preservation. Whereas Building 53 was gutted and made the subject of radical architectural changes, the Workshop building and the School building have been treated by ØKAW with a good deal of subtle sympathy. The Workshop building, which now houses a canteen, auditorium, and offices, was carefully divested of a welter of partition walls, lowered ceilings, and temporary mezzanines. Altogether just under 1,000 square meter was removed, and credit is due to the developer for having consented to a tidying-up so prodigal a space. Beautiful ceiling paintings and original cast iron pillars were uncovered and reinstated, and the four-storey entrance hall has been restored to its pristine splendor. New elements like stairs and office cubicles adhere to a sober modernism, in clear contrast to the materials palette and vocabulary of the old building. In the School building, contrast and readability were less of a concern. Here again, ceilings and surfaces have been carefully reinstated and the color scheme mirrors the palette of the 1860s, uncovered by painstaking materials analyses. The northeastern avant-corps room on the first floor has recovered its 1890s coloring, a legacy of the major rebuild undertaken at that time. Here, however, the first attempt at coloring produced such garish results that the job had to be done all over again—a reminder that when opting for the strategy of reconstruction, conservation must always be married to soundness of judgement. Fortunately there has been no lack of sound judgement in this restoration, which has cunningly contrived to create good, modern workstations in a historic building.

Dr. Mari Hvattum

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UNITED
KINGDOM

**"DO NOT GO GENTLE INTO
THAT GOOD NIGHT:"
REFLECTIONS ON THE
CONSERVATION OF
MODERNIST BUILDINGS**

Dr. Julian Holder
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It may seem a little strange to begin thinking about the conservation of Modernist buildings in England by using as the main title a quote from a Welsh poet, Dylan Thomas. Yet Dylan was, like my mother, from south Wales where they speak, and write, English more than Welsh. I use his words because they raise, in I hope a memorable way, one of the central problems in the conservation of Modernist buildings—must they be forever young? Trapped in a seemingly eternal past? Put it another way: how should Modernist buildings age? How can they or should they develop a patina and therefore appeal to our compassion through that mixture of frailty and dignity which comes with age? (1)

The poet's words may also remind us of the point raised by the great Austrian theorist Alois Riegl nearly a hundred years ago of whether we should just let some categories of monument fall into disrepair, and ultimately, return to the elemental world from which all buildings come—earth to earth, ashes to ashes. (2) If we are to resist this process of ultimate decay what does it tell us about ourselves as people?

In 1993, in the British magazine *The Architects Journal* I asked the question: Would you pay good money to visit the crumbling, spalling remains of a modern movement building?" (3) Probably not—and if you did what would you be doing other than indulging in some form of what anthropologists regard as "ancestor worship?"

In this short paper I want to explore arguments about the conservation of Modernist buildings being in some way different to that of buildings of an earlier period. It's in three parts and I'll begin with some background—as the very idea of English Architecture and the Modern Movement may come as a shock to many. Then I'll look at some examples of the conservation of both Modernist and buildings of—for want of a better phrase—the more recent past, and focus on a particular example I've been involved with in my role as a Historic Buildings Inspector with English Heritage is the British government's statutory advisor on all matters relating to the historic environment. Finally I'll return to my opening comments and try to come to some sort of conclusion for, whether we like them or not, these are the buildings of our time. As the Italian Futurist Antonio Sant'Elia put it in the 1914 *Futurist Manifesto*, "We feel that we are no longer the men of the cathedrals, the palaces, the assembly halls: but of big hotels, railway stations, immense roads, colossal ports, covered markets, brilliantly lit galleries...." (4)

Let us deal with the dull, but all important bit to start with—listing, designation, and inventories—in other words the legal mechanisms which seek to protect important buildings which otherwise could just be demolished without any thought of their cultural significance. Without it we'd probably all be out of a job and have to content ourselves with building replicas, like the Barcelona Pavilion, the complete re-creation of which we might consider one of the more extreme forms of ancestor worship. Though its worth pointing out that the Tate Modern, the former Bankside Power station, which has been such an international success following its conversion by Herzog and de Meuron, and one I'm most proud to have been involved with, is not, as many people think, a good example of what you can do with a listed building, but rather a great example of what you can do with a redundant power station.

Common with most European countries, legislation was passed late in the nineteenth century to protect a select group of important uninhabited ruins. (5) If the owner was willing these could be acquired by the

state, known as “taken into guardianship”—a phrase redolent of the ideology of John Ruskin, William Morris and the Society for the Preservation of Ancient Buildings (S.P.A.B)—and opened to the public.

Alongside this, and usually in advance of it, a plethora of public groups and amenity societies as they are now known, such as the S.P.A.B., The Society of Antiquaries, and National Trust to name the best known, were formed to exert pressure and offer solutions. Minor alterations during the early years of the last century were made to the legislation which allowed more categories of ruin to be cared for by the state and there was an increasing clamor to protect the setting of monuments and their immediate landscape. This was perceived by some in England as a socialist inspired attack on the rights of private property owners.

Despite, or perhaps because of this pressure, the ability to legally protect inhabited buildings, as opposed to ruinous monuments, finally became law in the 1940s. But the problems of listing were immense. What should be listed? How old must it be? How good a condition must it be in? Who was competent to decide? Not surprisingly the initial criteria favored buildings at least two hundred years old and mainly by famous architects. Buildings of the nineteenth century, let alone the twentieth, were barely considered and if they were they tended to be of a traditional, rather than Modernist, character, such as Middleton Park designed by Sir Edwin Lutyens, completed in 1938 and yet listed in 1951 when it was only thirteen year old. Stranger still was the issuing of what was called a Building Preservation Order in 1939 on the Foord Almshouses, Rochester (1927) by Guy Dawber, a fellow apprentice and friend of Lutyens. (6). However, such anomalies to the rule about age—the so-called “test of time”—are simply anomalies. They seem to have been born out of a desire to celebrate the life of the architect as much as the building. In both these cases, Middleton Park and the Foord Almshouses, the architect had died very recently. By default they seem to have established an unwritten and unthinking rule that we shouldn't try to protect a building by a living architect. Therefore, the final accolade of an architect's career might not be awarded until they were dead. Any building deemed significant within the oeuvre of the deceased architect would be conserved, no matter how technically deficient, for future generations.

By 1987 the “test of time” was losing its force of argument in response to public pressure and government advice. Buildings completed between 1840 and 1914 were allowed to be listed, but only, as the guidance stated “principle buildings by principle architects.” In a way that is typical of the British, a committee to consider listing inter-war buildings was eventually established. And in the way of committees it took several years to finalize a list of suitable buildings, such as the two which were included in the Museum of Modern Art's famous 1932 *International Style* exhibition in New York curated by Philip Johnson and Henry-Russell Hitchcock, “High and Over” and the Royal Corinthian Yacht Club.

In 1991 the latest advance in the age of listed buildings was made, the ability to list buildings of the recent past, that is to say post-1939, or effectively postwar. This brave decision was prompted by two events—first, the project by the architect Michael Hopkins to alter Bracken House opposite St. Paul's Cathedral, and second, the proposal to fill in the swimming pool of Norman Foster's Willis Faber building in Ipswich.

The decision to list Willis Faber in order to try and find another solution to the need for more floor space understandably sent the world of estate management into a tail-spin. In response, the government asked

Middleton Park, Oxfordshire was designed by Sir Edwin and Robert Lutyens and completed in 1938. It was listed in 1951 as “The last great country house to be built in England.”





The Willis Faber building, Ipswich by Foster Associates was completed in 1975 and listed in 1991, as a pioneer of the Management Agreement approach to conserving complex modern buildings.

English Heritage to embark on a program of research for listing post-war buildings to give property owners some security. (7) This was done thematically, by building type, to get away from the idea of "principle buildings by principle architects" and attracted great media attention, public interest, and support. By any measure it was a resounding public relations success as the public saw that ordinary buildings, ones of their lifetime, such as a row of eighteen temporary prefabricated houses put up at the end World War II, were considered to be important.

Not surprising, our work over the last eighteen years has raised several new, and somewhat novel, problems. First, what weight do we give the wishes of the architect to have his or her work listed? Norman Foster was, and I'm pleased to say still is, alive and yet his buildings are listed and have a life guaranteed beyond his own. What does this do to the arguments about the "test of time" and the presumption that one of these is that an architect must be dead before his or her work can be listed? Interestingly, despite railing against the idea of listing the architect Cedric Price found his own iconic Avery building at London Zoo listed as a postwar building, while others, such as Sir Denys Lasdun, was a keen supporter of the postwar listing program even when it included his own buildings such as the recently refurbished cluster block known as Keeling House.

As the case of prefabs so dramatically illustrates, what weight do we give to the notion of design life? Prefabs were designed as temporary emergency housing at the end of the last World War. They had a design life of ten years yet sixty years later we still have perhaps as many as a thousand of the 153,000 originally built.

And why do we need a passage of time to elapse at all before deciding what is a great building? If the gap has now narrowed to, in extreme cases, ten years what does that establish? How soon does a new building become a heritage building? For example, English Heritage is currently considering a request to list the Lloyd's Building designed by Richard Rogers.

This is the current status of listing Modernist or recent past buildings in the United Kingdom. Properties up to thirty years old can be listed, and in exceptional cases as young as ten years old. Ironically some now fear that the interwar period, and especially the poorly understood period of 1920s British architecture, could

benefit from the same kind of thorough research undertaken for postwar buildings during the 1990s. We now realize that perhaps we spent too long thinking of the early years of the twentieth century as the last gasp of the nineteenth rather than the first breath of the Modern.

Let me now turn to some examples of the conservation of Modern Movement buildings in England. One which has attracted a considerable amount of attention is the refurbishment of the ISOKON, or Lawn Road flats, in London. It was designed originally by the Canadian architect Wells Coates in 1929 and recently the subject of a sparkling restoration by Avanti architects. Avanti have specialized in this area of conservation and if you want more information you can do no better than to read John Allan's own account of their work with its observation that "...unlike historic buildings, modern architecture generally needs to look new

in order to look good.” (8) Other examples include the Finsbury Health Centre, Miramonte, Harbour Meadow, 66 Froggnal, the iconic buildings by Lubetkin at London and Dudley Zoos, and Willow Road, which is now owned by the National Trust. All restored, conserved, refurbished, and extended with great care, skill, and dare one say it, love.

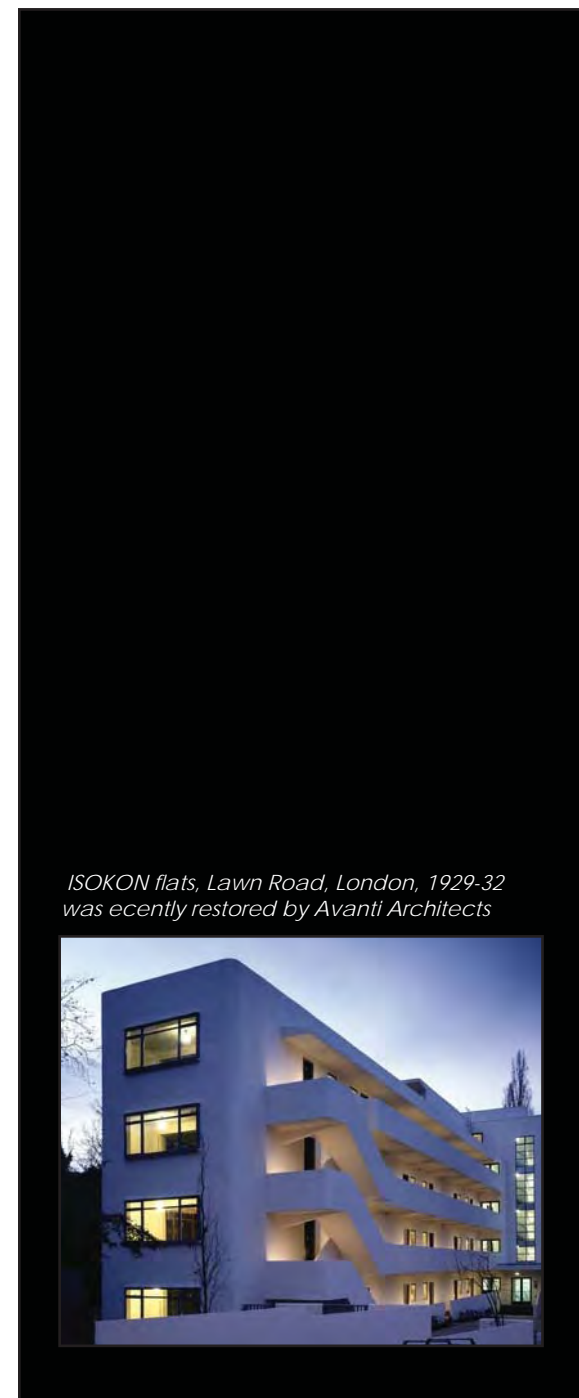
However, should these restorations unsettle us? They raise the question I posed in my opening remarks—do we or should we treat Modern Movement buildings differently? Must they be forever young? Restored, rather than conserved, to find their rightful place in the history books looking as if they had just been photographed for a contemporary architectural magazine, such as *Architectural Review*?

A commonly rehearsed argument is, following Sigfried Giedion’s classic formulation of Modernism in *Space, Time, and Architecture* that it is the sense of space which most characterizes Modernism, and therefore the retention of the sense of space, the significance of the original floor plans, etc, is paramount, perhaps more than fabric. This argument, in the hands of an architect such as Bruno Zevi writing in 1948, has even caused us to reappraise buildings of the distant past such as ancient Rome. (9) Does our acceptance of this argument make it easier to accept replicas? We shouldn’t think of producing a “better” Mona Lisa, but should we build a better Rietveldt house, one with better thermal insulation, better window design, and perhaps a pitched roof?

To finish this look at contemporary restorations you should consider the vexed question not of restoring and upgrading Modernist buildings, but of extending them. This is the former Mines Rescue Station, in Boothstown, Salford, a city next to Manchester in the north of England. It is a building of the 1930s but more Dudok than Le Corbusier in influence. Following the economic collapse of the coal industry it has been used for many years as offices. Now it is proposed to turn it into flats by creating a large extension to the rear. Following discussions with the local authority and English Heritage the architects came up with a contemporary design which would leave the significant parts of the building unaffected and graft on an extension in a style which would, in the tradition created by the S.P.A.B. and followed by most conservation theory since then, be clearly distinguishable from the original. (10)

However, as this is in a green and leafy suburb the local planning committee felt that it was inappropriate to have contemporary architecture there and the architects have been instructed to do another design “in keeping” with the original 1930s design. It is both surprising and reassuring to find that the shock of the new can still shock. Yet, it is also regrettable that this denies us the ability to maintain the integrity of a modest, but socially significant, building of the 1930s as represented by Boothstown.

What are we to do with the Modernist legacy? Must it always be restored back to its original condition? Must it, in the poet’s words, always “rage against the dying of the light?” Or is its legacy now secure? Can buildings such as Cardross Seminary be allowed to “go gentle into that good night,” to become ruinous monuments to an age that may have passed but still informs our practice today? I begin to think, and hope, that there is a place for both, but the Modernist ruin will bring challenges every bit as problematic as the Modernist restoration.



“What are we to do with the Modernist legacy? Must it always be restored back to its original condition? Must it, in the poet’s words, always “rage against the dying of the light?”

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Constructed in the 1960s, Cardross Seminary, Scotland was abandoned just 15 years after it was completed and now stands as a ruin.

Dr. Julian Holder

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UNITED
STATES

**MODERNISM AT RISK:
CHALLENGES TO ADAPTING
AND CONSERVING
AMERICA'S POST-WORLD
WAR II ARCHITECTURE**

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The twentieth century has been described as the "American Century." (1) The Modernist architecture of the Cold War era is imbued with the prevailing social, cultural, and other values that would come to define America assumed a more prominent role worldwide. Despite its significance, the Modern buildings constructed in the United States following the Second World War are increasingly in danger.

As aptly described by Lewis Mumford, "Every generation revolts against its fathers and makes friends with its grandfathers." (2) The 2008 World Monuments Watch List of 100 Most Endangered Sites included a serial listing for "Main Street Modern" that cites the alarming rate at which post-World War II Modernist buildings throughout the United States are destroyed due in large part to "...public apathy—a lack of consensus or confidence—that buildings of the recent past can be important enough to be preserved for the future." (3) However, this indifference toward preserving America's Modernist architecture may change when the public realizes that retaining, adapting, and upgrading post-World War II buildings to comply with new energy efficiency standards is one of the most important challenges facing the sustainability movements.

This paper briefly defines the significance of America's post-World War II Modernist architecture, identifies and examines some of the challenges to preservation, and concludes with a case study that proposes a model for adaptation and conservation.

American Modernist Architecture ca.1945-1970

Much of the United States' built environment was constructed in the three decades that followed the end of World War II. For example, approximately 45% of the some 90,000 existing schools in the United States were built between 1950 and 1969. (4) A combination of many factors contributed to this unprecedented physical expansion including the explosion in births now referred to as the "Baby Boom," the replacement of the multigenerational household model with the nuclear family, and its subsequent move to the growing suburbs from urban centers. (5)

As described by Eric F. Goldman in his seminal work, *The Crucial Decade – and After: America, 1945-1960*:

"For many an American, the new era brought an added exhilaration. It offered not only increased income but a break-through in status, a chance at schooling and occupations and ways of living that previously had been barricaded from them...The GI Bill of Rights became law in 1944 and with the first release of veterans during the [Second World] war, the legislation began working its revolution. Men who had entered the army as employees returned to borrow money from the government and set up their own business." (6)

This period of optimism and unprecedented growth coincided with an important shift in the history of twentieth-century American architecture when Modernism was chosen over traditional styles in order to project the national image of progress that has come to define that era. The architecture of the majority of government (municipal, state, and federal) facilities, public schools and libraries, and religious and other private institutions erected at this time adhered to the Modernist idiom.

More than residential or commercial buildings, it is the civic architecture of Post-World War II America that retained the early Modernist agenda—as conceived in Europe during the interwar years—to democratize

design and society. For example, Modern design principles were used to create schools that reflected the ideal that all children should have equal access to quality education. European émigrés like Walter Gropius, Marcel Breuer, and Ludwig Mies van der Rohe—all former Bauhaus leaders—as well as the architects they helped train, such as Paul Rudolph, I.M. Pei, and lesser-known designers, created many of the icons of Modern architecture, including the Whitney Museum of Art, Seagram Building, and Yale University Art and Architecture Building. They were also the architects responsible for many of the everyday Modern structures that are now integral parts of American communities. The work of these designers was united by certain core principles, including a departure from classically inspired and traditional forms, the integration of arts and design disciplines, and the use of industrial materials and innovative technologies. Physically embodying these tenets, America's post-World War II architecture is typically characterized by simple, geometric or abstract forms, industrial, pre-fabricated materials and components, and new expressions of space, such as the visual integration of exterior and interior through large expanses of glass. (7)

Modernism at Risk

Despite what were considered major advances in the design of American architecture in the period after the Second World War, buildings from this period have received limited recognition as significant cultural heritage resources embodying the social, cultural, architectural, and other movements that shaped twentieth-century America.

This is a critical moment for the preservation of postwar Modernism. With a median age of 40, many buildings will be considered for major renovation—replacing components and systems designed for 25- and 50-year life spans—or demolition and replacement in the coming years, most without evaluation of their eligibility for listing on the National Register of Historic Places or designation as local landmarks. In order to protect and sustain these significant resources for the future, the significance of post-World War II Modernist buildings and the challenges to conserving and sustaining them must be better understood and this information disseminated more widely among decision makers and communities.

Awareness: Modernist architecture is threatened by a lack of public recognition that architecture from the recent past are worthy of preservation. The conceptual ideas and aesthetics of Modernist structures seem particularly misunderstood, making them vulnerable to unsympathetic alteration or demolition.

Experimentation: Modernist buildings were constructed with industrial, prefabricated materials and building systems developed during and after World War II. The experimental nature of many of these new technologies and their applications present new conservation challenges that will have to be addressed in sustaining these resources long-term.

Function: Arguments for destroying Modernist structures often include charges that they never functioned or that they are difficult to adapt given their programmatic specificity—the “form follows function” aspect of Modern Movement buildings. (8)

Guidelines: Existing preservation policies in the United States were devised for the protection of sites con-

Riverview High School (1958) in Sarasota, Florida is a seminal post-World War II school designed by renowned architect Paul Rudolph.





Riverview High School has been deemed obsolete by the Sarasota County School District. Unless a viable new use is found, the building will be demolished.

structed prior to the Second World War. As an example, the exterior and interior of buildings are separately designated by local landmark laws that regulate changes to built heritage. However, the preservation guidelines based on this approach do not protect the high-degree of transparency and conceptual relationship between interior and exterior that characterize Modernist architecture.

Sustainability: Most Midcentury modern buildings in the United States do not meet current energy code standards. Heating, ventilation, and air conditioning (HVAC) technology was in an early stage of development during this period, and there was not the same concern about environmental issues and depletion of natural resources that exists today. In temperate climates like Florida and other places in the Southeastern United States, many buildings were designed with only passive means of heating and cooling. Many of these structures have now been upgraded with HVAC systems. In the absence of vapor barrier and insulation, they consume a great deal of energy.

Authenticity: America's post-World War II Modernist buildings often suffer from inadequate maintenance or unsympathetic alterations due to lack of funds, proper maintenance procedures, and expertise. The same result occurs when upgrades are made to meet new codes and standards. In addition, the failure of component systems in these structures, such as steel and glass windows, often results in the wholesale replacement of character-defining features. The overall impact of these changes is the loss of authenticity, specifically material integrity, which is a major factor when a site is considered for designation and protected as a landmark.

Riverview High School Case Study

Located near Siesta Key in Sarasota, Florida, Riverview High School is an icon of post-World War II school design by internationally renowned architect Paul Rudolph (1918-1997). Rudolph, before becoming Dean of the Yale School of Architecture and establishing a Boston-based practice, was a leading proponent of the Sarasota School of Architecture—a regional design movement distinguished by the adaptation of Modernism to the sub-tropical climate of southern Florida. Like Rudolph's residential architecture in the Sarasota region, Riverview High School was designed with passive means of cooling the building and maximizing and controlling natural daylight, features that are finding renewed popularity today as part of sustainable design and construction. (9)

Riverview was one of fourteen schools designed and constructed as part of the nationally recognized Sarasota Public School Program (1953-1967), which helped establish a new set of design principles that would come to define the physical environment of postwar education in America. The February 1959 special school building issue of *Architectural Record* described the program as follows:

"Seldom does one run across a community school building program of such consistent interest as the one now underway in Sarasota County, Florida. Under the guidance of a very enlightened school board, with Philip H. Hiss as chairman, the four-year-old program has demanded a balance of quality and economy, good environment and good function, reasonable first costs and reasonable long-range costs. To date, the program has produced eight completed schools or additions... They are all worth studying; as a group they are fairly remarkable." (10)

Abandoning the traditional two-story, double-loaded corridor building of the previous generation, the Sarasota schools incorporated: flexible plans that were more conducive to then current teaching methods; industrially fabricated materials and building components that kept costs low and construction schedules short; and classrooms and other interior spaces whose natural light, color, and scale were designed to promote learning. In Sarasota, perhaps more than any other place in the United States following World War II, innovative architecture and pedagogy merged to advance the ideal of progress that characterized that period.

In 2007, the Sarasota County School Board announced that Riverview High School would be demolished and replaced with a new complex. Following an outcry from the architecture and design community, a one-year stay of demolition was granted to allow the newly-formed Save Riverview Committee of the Sarasota Architectural Foundation (SAF) an opportunity to try to determine alternatives for rehabilitation and reuse.

The University of Florida (UF) Interior Design Department collaborated with SAF on a "service-learning" project that gave students the opportunity to study Riverview High School first-hand by traveling to document and assess the building over a three-day period. (11) During a visit to Sarasota and the building, students interacted with members of the Save Riverview Committee and building users to gain a more-informed understanding of the community's needs and the potential in retaining and re-appropriating Riverview for another use.

After completing documentation and analysis, students, working in teams of four, were asked to develop design solutions for re-programming and adaptively using the building for a mix of residential, commercial, and cultural purposes. The students' projects demonstrated the viability of sensitively integrating new uses into the complex that would address local needs.

Among the project outcomes, the existing conditions documentation, which was completed to the standards of the Historic American Building Survey (HABS), was used by SAF in the organization's international rehabilitation and reuse design competition. And the students' final projects were presented at a public forum on October 29, 2007 in the auditorium of the *Sarasota Herald Tribune* newspaper building. The design solutions produced by the students demonstrate how the building can be zoned and sympathetically altered to accommodate a variety of new uses.

'SARASOTA PRINCIPLES'

Based on the success of this pilot effort, the UF Interior Design Department launched a multifaceted project to document the history, assess the existing conditions, and formulate rehabilitation guidelines for the Sarasota public schools that were built between 1953 and 1967.

Drawing upon the resources of the College of Design, Construction and Planning and other academic units of the university, the project takes a multidisciplinary approach to recording the history and existing conditions of the Sarasota schools. An integrated approach to preservation and sustainability will inform the development of rehabilitation guidelines, which will adhere to both the *U.S. Secretary of the Interior Standards*

For the Fall 2007 semester, Interior Design students from the University of Florida documented Riverview High School and developed designs for sympathetically adapting and using the building.





Presented at a civic forum, the University of Florida students' work helped demonstrate the viability of rehabilitating and re-programming Riverview High School, including the reuse of the original gymnasium by employing a 'building within a building' concept.

for the *Treatment of Historic Properties* and those of the *Leadership in Energy and Environmental Design (LEED)* program. As defined by the United States Green Building Council LEED Green Building Rating System, "...encourages and accelerates global adoption of sustainable green building and development practices through the creation and implementation of universally understood and accepted tools and performance criteria." (12)

A major project objective is to create guidelines and establish a model—the 'Sarasota Principles'—for documenting and rehabilitating postwar Modernist schools that can be adapted and replicated in other communities throughout Florida and the United States.

Documentation and Building Assessment: UF faculty and students have partnered with the Sarasota County History Center to research and compile archival documentation of Sarasota's postwar public schools, including Sarasota County School Board records, original drawings, historic photographs, and local and national press. Drawings, images, and descriptions of the current conditions of the schools will be produced from on-site surveys.

Oral History: As part of the documentation of the history of the Sarasota schools, the UF Samuel Proctor Oral History Program has agreed to assist in planning, gathering, and transcribing oral histories with individuals who were involved in the planning, design, and construction of the schools. Potential interviewees include local officials, members of the board and staff of the Board of Public Instruction, architects and consultants, contractors, and building users (principal, faculty, students, and parents). The oral histories will be transcribed and published and will help inform the creation of statements of significance for each school.

National Register of Historic Places Nominations: Based upon an evaluation of the historical and existing conditions information gathered during the first two activities, UF will work with the Sarasota County History Center to prepare National Register nominations for those school facilities determined to be eligible. National Register listing will help ensure long-term protection for the buildings.

Guidelines for Sustaining and Rehabilitating Postwar American Schools: Working in collaboration with The Powell Center for Construction and Environment at University of Florida, faculty and graduate-level students will build upon existing standards, including, but not limited to the *Secretary of the Interior Standards for the Treatment of Historic Properties* and *Leadership in Energy and Environmental Design* to develop a set of general guidelines for rehabilitating postwar schools in a sustainable manner. These guidelines will be tested and illustrated through service-learning projects where faculty and students work with local organizations to prepare design schemes for individual schools.

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10. "Sarasota's New Schools: A Feat of Economy and Imagination," *Architectural Record*, Vol. 135, 1964.
11. Service-learning
12. United States Green Building Council (USGBC), USGBC website, <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=222> (accessed April 14, 2008).

"A major project objective is to create guidelines and establish a model—the 'Sarasota Principles'—for documenting and rehabilitating postwar Modernist schools..."



Akershus Fortress Addition, Norway (left)
Jarmund | Vignaes Architects

Baron House, Sweden (above)
John Pawson & Barup & Edström Architects AB