

The Bauhaus Buildings in Dessau

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In terms of the conservation of historic buildings, modern architecture is still viewed as an anomaly, for it is associated with industrial production, and therefore again as reproducible. The buildings, which still originate an aura of modernity today, have also become an accepted part of everyday life, and so they are expected to meet present-day requirements. Changes and additions to their structures, however, often obscure their original qualities. Unlike older structures – a medieval castle or a Baroque palace – modern buildings are often barely acknowledged as historic or artistic property, with a distinctiveness that calls for research and conservation. This poses a specific risk for these cultural monuments, which stand for social, spatial, technological and aesthetic change.

In recent years, a number of important modern buildings have been carefully renovated. These examples show how the original qualities of the architecture may be revealed and adapted to meet present-day requirements. A successful renovation project is dependent on a deep knowledge of the buildings, a planning process that takes account of their specific character, the particular planning of details, and the sensitive implementation of building measures.

Architecture of Modernism – quality and challenge

Modern buildings were often built using experimental methods of construction and innovative materials. Because those technologies were not tested in any significant way, structural and physical-technical weaknesses and faults are a frequent consequence. For the architectonic impact of the buildings however, these structures and materials are not just means to an end, but essential constituents of the building and its importance as a monument. Moreover, because these building materials are seldom produced today, they constitute unique and irreplaceable elements of the building, which must be protected and preserved. Redressing weaknesses and faults therefore potentially means the loss of features or qualities relevant to the monument.

Colour and surfaces also have a decisive influence on the impact of the architecture. Theo van Doesburg summarised this aspect thus: “Ultimately, only the surface determines the architecture; the human being does not live in the structure, but in the atmosphere that is evoked by the surfaces!”¹ For the buildings of classical modernism in particular, with their reduced design elements, deliberate manipulation of light and shade, and the use of innovative materials, the often subtly differentiated surfaces have a special significance.

Neglect or minimal interventions therefore readily lead to subtle interferences in the architectonic impact. This is why it is so important to research into and carefully preserve the original architectural surfaces.

The protagonists of modern architecture rejected the concept of “style”, because they were interested in a fundamentally new approach, which unites form, functionality and construction. Nevertheless, modern buildings demonstrate a specific aesthetic, which is characterised among other things by flat roofs, a lack of ornamentation and an economy of detail. The inherent spatial fluidity, transparency and openness of this architecture also add to its essence. In terms of aesthetics, the approach to modern buildings therefore also calls for a particular sensitivity, for instance in relation to the addition of missing elements, or those which must meet present-day requirements.

The relationship between inner and outer space is an integral part of the concept, which informs modern architecture, although this generally stops short of Adolf Rading’s interpretation, which essentially sees the house as a part of the garden. The generous glass surfaces of these buildings not only permit one to see both in and out; their transparency and the reflections they create allow the deliberate intertwining of inner and outer space. Until now, research into and the cultivation of the gardens and outdoor areas of modern buildings has often been overlooked, and because some of their characteristics – their functionality, simplicity or void space – are innovative, they are seldom acknowledged as an integral part of the design, or as cultural documents. The garden as a “place of change”² also presents exceptional challenges in terms of preservation.

Modern buildings meet the norms and standards of the age in which they were built. As such, they not only document the prevailing pretensions and regulations, but also reflect the modern age’s endeavours to standardise and rationalise construction. Today’s legislative regulations and comfort needs differ significantly from those of the past. Meeting these needs presents a specific challenge for modern buildings, not only because they stand to lose some of their historic impact, but also because they are compromised by alterations to characteristic features, such as glass walls, spatial layout, and sensitive surfaces.

A building’s use generally dictates its preservation. Some outstanding older monuments, for example castles or churches, adopt other important social functions, in that they serve as urban or historic points of orientation. Modern buildings on the other hand are expected to meet present-day requirements. Use, however, often leads to the destruction

1. Theo van Doesburg: *Farben in Raum und Zeit*, [in:] Hagen Bächler and Herbert Letsch: *De Stijl Schriften und Manifeste*, Leipzig and Weimar 1984, p. 221.

2. Erik A de Jong, Erika Schmidt, Brigitt Sigel (ed.): *Der Garten – ein Ort des Wandels, Perspektiven für die Denkmalpflege*. (published by the Institut für Denkmalpflege, ETH Zurich, Vol. 26), Zurich 2006.



1. Dessau-Törten Estate, Kleinring 42. View from the road before renovation, 2002. Photo by Johannes Bausch



2. Dessau-Törten Estate, Kleinring 42. View from the road after renovation, 2004. Photo by Johannes Bausch

of the very characteristics that define the monument – an aspect also noted in the Venice Charter³. It therefore follows that maintaining the historic usage while meeting present-day needs can present as many problems as adaptation to a new use.

In keeping with the established approach to older buildings, a modern building's history is increasingly viewed as a self-evident and indispensable part of the monument. The endeavour to recreate the historic tableau faithfully is accompanied by the knowledge that the elimination of later features not only often leads to the loss of original substance, but also to the negation of the building's historic dimension⁴. For modern architecture too, therefore, solutions must be

3. Article 5 of the Venice Charter, international charter on the conservation and restoration of monuments and ensembles, 1964.

4. "Unless we are prepared to accept aged surfaces, changes and limited practical value in modern buildings, we will soon have no listed buildings, or authentic 'objects as witness', only reconstructions that bear a likeness to the original, such as the buildings of the Weißenhofsiedlung in Stuttgart". Schmidt, Hartwig: *Der Umgang mit den Bauten der Moderne in Deutschland*, [in:] *Konservierung der Moderne?* Conference of the German National Committee of ICOMOS in collaboration with "Denkmal '96", ICOMOS catalogues of the German National Committee XXIV, Munich 1998.

3. Dessau-Törten Estate. Kleinring 42. View of the interior with original and new elements, 2004. Bauhaus Dessau Foundation, Photo by Roland Zschuppe



found, which accommodate the vestiges of age and history without compromising the architecture.

For modern buildings, the systematic and continuous upkeep and maintenance of the original structures, building parts, materials and surfaces is of great importance. Only this can guarantee the long-term preservation of the building substance, safeguard the quality of the restoration work, and save on costly and complex repairs and replacements. To date, this aspect has often been neglected, a situation compounded by the lack of workable systems for the long-term and proper maintenance of buildings under a preservation order. This approach requires an understanding and appreciation of the monument, summarised by Professor Wilfried Lipp (International Council on Monuments and Sites, Austria) as "Prevention begins in the mind".⁵

Bauhaus Buildings in Dessau – preservation and maintenance

In recent years, many important modern buildings worldwide have been exemplarily preserved, renovated and fostered. These include the Bauhaus buildings in Dessau, which were built from 1925 to 1932. During this period, the Bauhaus not only generated stimuli in architecture, design and art, which had repercussions throughout the world, but also built outstanding examples of the New Architecture in Dessau itself. The following presents just a few examples of successful renovation and related projects, which were based on each building's specific qualities and requirements. These include the careful renovation of the small terraced house on the Dessau-Törten Estate, the improvement of the original structure of the former Employment Office, the debate surrounding the conservation of historic remains at the Muche-Schlemmer Masters' House, and the discovery of sophisticated colours and surfaces in the Bauhaus Building.

Dessau, Kleinring 42 (Fig. 1-3)

The Dessau-Törten Estate was built from 1926 to 1928 as an experimental estate, based on plans by Walter Gropius. It consists of 314 single-family houses, each with a large garden. The objective was to reduce housing production costs significantly by rationalising and industrialising the building process. True to the motto of the Bauhaus – "Art and technology – a new unity", a product's functionality also integrated its quality of design. The Dessau-Törten Estate therefore not only experimented with new building materials and new methods of production, but also with innovative aesthetic elements. The different types of houses show variations in spatial arrangement, in façade finishes

5. Wilfried Lipp: Prävention beginnt im Kopf! In: Ursula Schädler-Saub (ed.): *Weltkulturerbe Deutschland. Präventive Konservierung und Erhaltungsperspektiven*. International symposium of the German National Committee of ICOMOS, the HAWK (Hildesheim/Holzminde/Göttingen) University of Applied Sciences and Arts and the diocese of Hildesheim, in collaboration with the Evangelical-Lutheran Church in Hannover. Hildesheim 2006.



4. Dessau, former Employment Office. View, 2008. Photo by Doreen Ritzau

and in construction. The structure consists of load-bearing firewalls made from hollow slag-concrete blocks, and ceilings constructed with unassisted prefabricated joists (so-called *Rapidbalken*). The window frames are made of steel, and their functions were refined with each building phase. The first of extensive changes to the privately owned buildings were made in the 1930s. Today, these houses have been significantly compromised by changes made to both the interiors and exteriors. These were inspired by the new demands made on usage, the inhabitants' alternative design ideas, and a lack of appreciation and sometimes also of knowledge, wear and tear on structural components and fittings, or uninformed choices of materials for repair. However, some inhabitants are aware of the quality of the original design and renovate accordingly.

The house at Kleinring 42 bore the signs of typical changes, such as extensions into the garden, and changes to the windows and rendered surfaces. Inside, however, the original layout of rooms and original fittings, such as doors and door handles, were still in place. The renovation, which was organised by the architect Johannes Bausch of Berlin, was based on scientific preliminary investigations, and focused on the preservation of the original building substance. At the same time, compromises were necessitated by its present-day use by a young family. Consequently, the original windows to the street and garden were reconstructed, while a later extension, which enlarged the living space, remained. Reconstructions were made of the profiles of the original windows, but these were fitted with double-glazing for improved protection. The roof was fitted with a near-invisible layer of insulation, while wall insulation, which would compromise the building's appearance, was avoided. Beside safeguarding the original building substance and adapting the building to meet present-day needs, solutions were also found in terms of approach, specifically to the special aesthetic of this economically designed house. New elements, such as a glazed door in the later extension or the new linoleum flooring, fit into the atmosphere of the house, without dominating it. The overall concept for switches and sockets, as well as the fitted kitchen, integrate aspects of the original design, without imitating it. Selected with care and sensitivity, the amendments respect the original aesthetic and are still recognisable, though modest, as contemporary elements.⁶

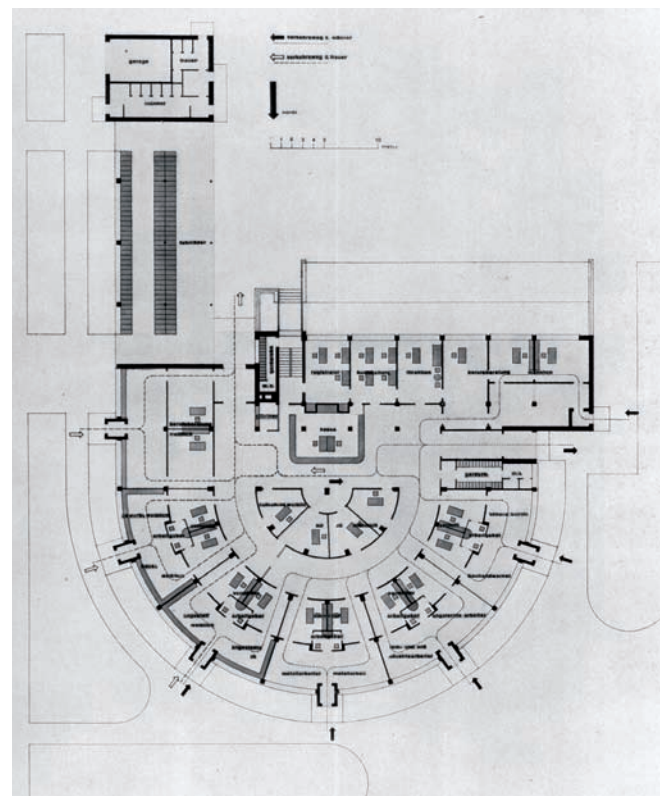
Employment Office

(Fig. 4-5)

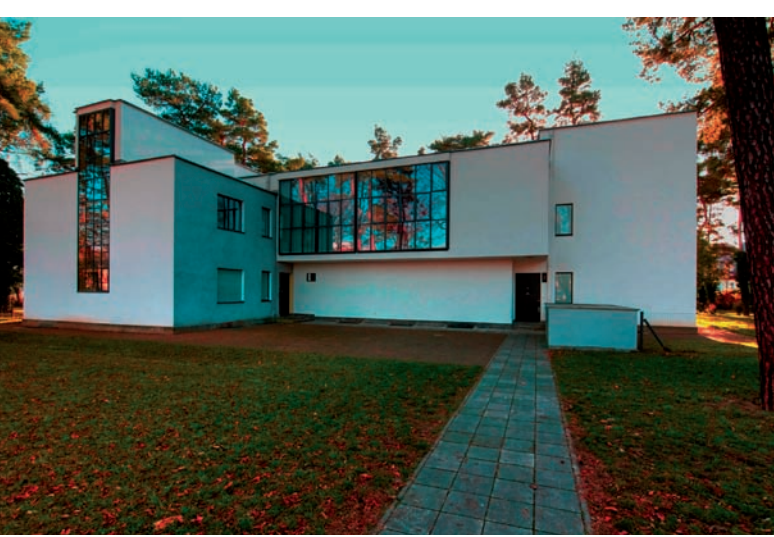
Mass unemployment in Germany the early 1920s brought a new challenge in architecture, because locations were required to facilitate consultation between employers

and employees. In 1925, Berlin's municipal planning officer, Martin Wagner, drafted a development plan to meet these new demands. In 1927, on this basis the architects Walter Gropius, Hugo Häring and Max Taut were invited for a limited competition, which was won by Gropius' architectural office. Gropius's design adopts many aspects of Wagner's development plan. In a semicircular, freestanding flat roofed building, employees are guided through separate entrances according to profession and sex, first to the placement officers, and then to the central cash office. The administrative department is located in a multi-storey wing. This innovative building consisted of a load-bearing steel skeleton construction with a building envelope of yellow brick. The central hall and the public entrances were clad with glazed tiles. The round building was lit exclusively by skylights and a glass ceiling. The building received additional ventilation by means of a central ventilation system. By these means, Gropius developed a form for the new building project, where function and aesthetics unite. Inaugurated in 1929, the building became superfluous in 1934 due to the prevailing labour shortage. Adapted to a new use in 1936, severe changes were made to the substance and design of

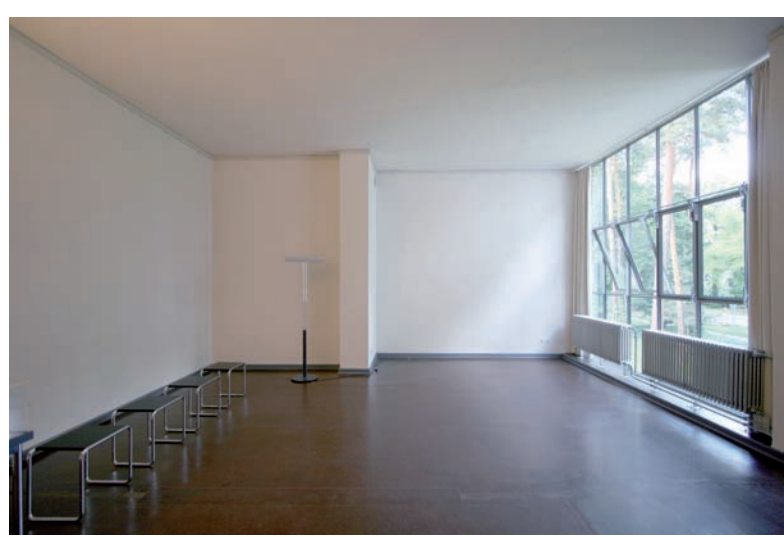
5. Dessau, former Employment Office. Floor plan, 1929. Bauhaus-Archiv Berlin



6. Further literature on the Dessau-Törten Estate: Walter Gropius: *Bauhausbauten Dessau*, Munich 1930 (Bauhaus Books Vol. 12, identical reprint, Mainz 1974); Andreas Schwarting: *Die Siedlung Dessau-Törten. Rationalität als ästhetisches Programm*, Dresden 2009 (i.e.); Andreas Schwarting: *Das Ungewohnte bewohnbar machen. Bauliche Veränderungen in der Siedlung Dessau-Törten zwischen individuellen Bedürfnissen und gestalterische Reglements*, [in:] Dessauer Kalender 2007, pp. 54-63.



6. Muche/Schlemmer Masters' House. View, 2008. Photo by Doreen Ritzau



7. Muche/Schlemmer Masters' House. View of the Schlemmer studio with visible improvements to the monochrome flooring and new adjustable light fittings, 2008. Bauhaus Dessau Foundation, photo by Martin Brück

the building, with wooden windows inserted into the round building to provide light for the offices now located there. After 1942, the building was used by various public administrative bodies. Following the completion of renovation work in 2003, the building houses the road traffic department.

The renovation, which was carried out by the architects Burkhardt und Schumacher of Braunschweig based on detailed research and surveys, aimed to keep structural interventions to the absolute minimum. As such, the windows added to the round building in 1936 to allow light into the offices were preserved as witnesses to history, despite the fact that they dilute the bold design. Inside the building, the technical installations were improved, and Gropius's colour design was reinstated, based on the findings of research. Much of the work focused on the repair of the load-bearing steel structure. Because moisture had penetrated through cracks in the brickwork, the inlaying steel skeleton was affected by corrosion. The subsequent increase in the volume of the steel pushed the brickwork outwards, which enlarged existing problems. To expose the steel structure in its entirety, it would have been necessary to dismantle most of the building. A more conservative approach to repair was therefore taken. The brick façade was laid bare only selective so that rust could be removed from the steel skeleton, and a protective coating applied. The missing brickwork was replaced with new bricks made specifically for this purpose. This conservative method of selective repair permits the continued observation and maintenance of the building, so that further damage may be prevented in time. This method also facilitated the conservation of most of the original brickwork, so that the building today turns out to be authentic and retains most of its original substance.⁷

7. Further literature on the former Employment Office: Walter Gropius: *Bauhausbauten Dessau*, Munich 1930 (Bauhaus Books Vol. 12, identical

Masters' Houses

(Fig. 6-7)

With the Bauhaus's move from Weimar to Dessau, the municipality of Dessau made funds available not only for the new school building, but also for the construction of a small estate of houses, where the Bauhaus's masters were to live. Pursuing the principle of a "large construction kit", Walter Gropius designed houses, which shared the same basic elements. The floor plans of the semi-detached houses mirror one another, rotated by 90°. The use of shared building components therefore results in a structure loaded with spatial tension. After the closure of the Bauhaus and the departure of its teachers and students in 1932, the Bauhaus buildings were used by the Junkerswerke and later, by the municipality of Dessau. Over this period, significant changes were made to the architecture. The large windows on the northern side of the studio building were bricked up and living room windows were inserted into the otherwise solid southern walls. The original architecture was further compromised by changes to the layout of rooms, the addition of chimneys, the demolition of stairheads, and the application of roughcast render. The estate was subjected to further damage in WW II with the destruction of the Gropius House and the semi-detached Moholy-Nagy House. After the restoration of the Feininger House and the Kandinsky/Klee House in the 1990s, work began on the cautious renovation of the Muche-Schlemmer House, in a process largely funded and managed by the Wüstenrot Foundation.

reprint, Mainz 1974); Robin Krause: *Das Arbeitsamt von Walter Gropius in Dessau*, [in:] *Zeitschrift für Kunstgeschichte* 63 (2000), issue 2, pp. 242-268; Berthold Burkhardt, Christiane Weber: *Das Arbeitsamtsgebäude von Walter Gropius in Dessau (1929-1999)*, [in:] *Dessauer Kalender 2000*, pp. 2-17.

8. Bauhaus Building in Dessau. View from the southwest, 2004 Bauhaus Dessau Foundation, photo by Martin Brück





9. Bauhaus Building in Dessau. Workshop wing after renovation, with un-rendered and limewashed surfaces, 2006. Bauhaus Dessau Foundation, photo by FH Müller

The building measures were carried out by Büro Winfried Brenne of Berlin. Based on extensive investigations and surveys, these encompassed structural engineering improvements, the reconstruction of important components, such as the staircase and studio building windows, and the installation of new service systems. Because it was not possible, by means of restoration-related research, to fully ascertain the original colours used, these were replicated where possible. A subtle tone was used in the remaining areas. In the renovation of the Muche-Schlemmer House, the massive changes brought about by neglect and intentional building alterations led to a controversial debate focusing on the preservation of relevant time layers, or the building's restoration to its original condition. The alterations made to the building in 1939 were not undertaken for purely pragmatic reasons: the National Socialists wanted to make this "alien architecture disappear from the urban landscape". On these terms, the alterations present important evidence of the history of the Bauhaus, which is in principle worth preserving. In weighing up the preservation of these buildings as artworks or historic documents, a more sophisticated approach was adopted. The exceptional artistic value of the buildings led to the restoration

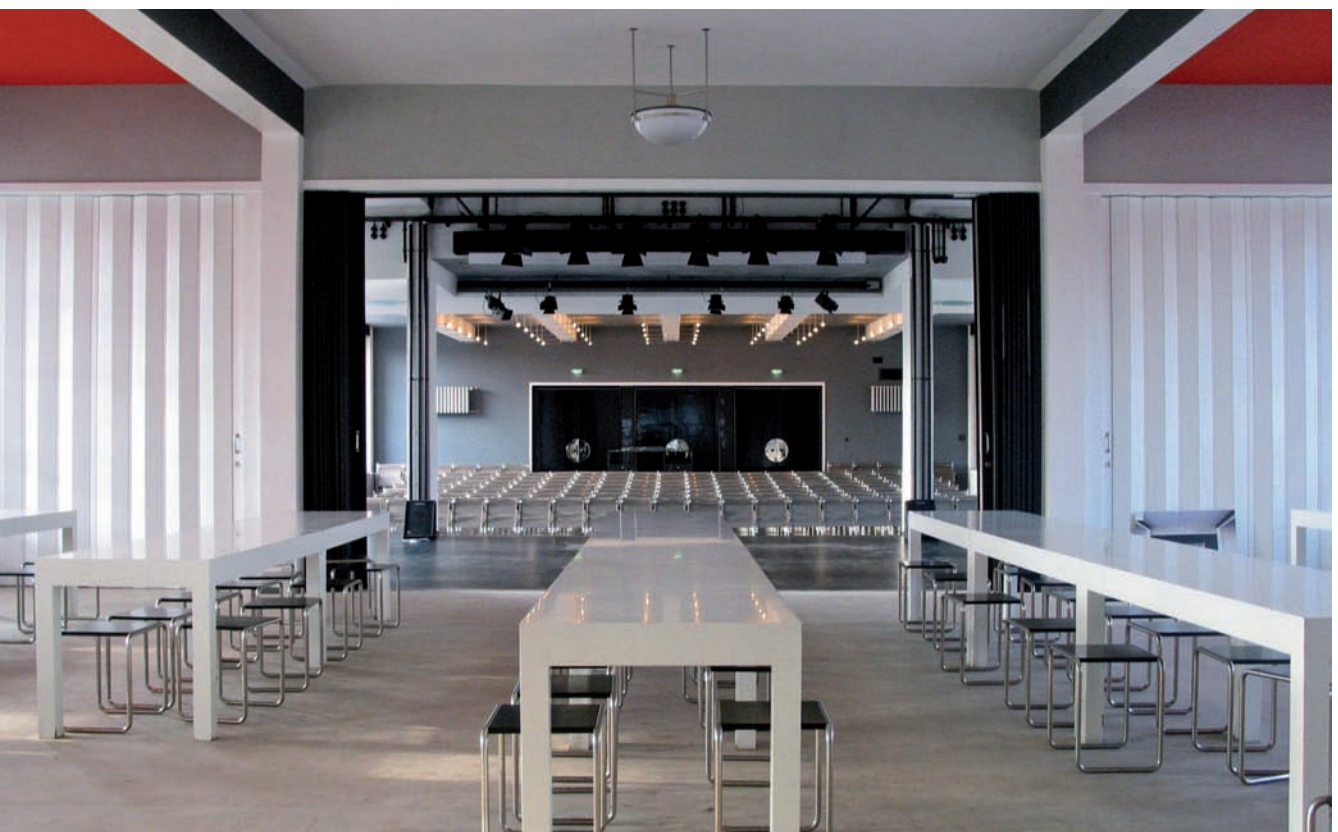
of their original outward appearance, while inside, evidence of their chequered history was preserved. As such, visible improvements in the monochrome flooring were accepted, fittings such as radiators from the 1950s remained in use, and lamps were not reconstructed, but replaced by modern light fittings. The debate on the restitution of the original tableau versus the preservation of traces of age or history continues in Dessau in the debate surrounding the reconstruction of the demolished Gropius and Moholy-Nagy Houses.⁸

Bauhaus Building (Fig. 8-10)

The Bauhaus Building Dessau, which was designed by Walter Gropius and built in 1926, housed the Bauhaus School of Design from 1926 to 1932. Since 1994 the Bauhaus Building has belonged to the Bauhaus Dessau Foundation, which is funded by the German Federal Republic, the Federal

8. Further literature on the Masters' Houses: Walter Gropius: *Bauhausbauten Dessau*, Munich 1930 (Bauhaus Books Vol. 12, identical reprint, Mainz 1974); Winfried Nerdinger: *Der Architekt Walter Gropius*, Berlin 1996; August Gebeßler: *Gropius. Meisterhaus Muche/Schlemmer. Die Geschichte einer Instandsetzung*, Stuttgart 2003.

10. Bauhaus Building in Dessau. Colours and surfaces in the Festive Area, 2006. Bauhaus Dessau Foundation, photo by Martin Brück



State of Saxony-Anhalt and the municipality of Dessau. The Foundation's role is to safeguard and cultivate the historic legacy of the Bauhaus, and to bring it into the public domain. The design of the building pursues the Bauhaus's programmatic concept, in that it unites functionality and aesthetics. The cubic forms of the Bauhaus Building vary from one another in their functions, volumes, façade designs, spatial makeup, surfaces, colours and lighting. The building as a whole is made up of a number of separate parts: the three-storey workshop wing, the so-called "laboratory of ideas" with the famous curtain wall; the three-storey north wing, which housed a municipal vocational school; the five-storey studio building, where students and junior masters lived; the single-storey festival area, and the bridge. The glass façades, particularly the curtain wall spanning the front of the building, are characteristic of the Bauhaus. The structure combines construction methods, with brickwork used to fill out a reinforced concrete skeleton. The building's décor and fittings, such as the colour design, lighting and furniture, were developed in the Bauhaus's workshops.

The building measures, which were carried out from 1996 to 2009, included the renovation of the flat roofs of the studio building and the adjoining building, the renovation of façades, the improvement of functional hindrances to usage, the renewal of outdated service systems, and the reorganisation of the outdoor facilities. Each step was preceded by extensive preliminary investigations informed by an overall concept, and carried out with the greatest care and consideration of the original building substance. Participants in the planning included the architects Brambach und Ebert of Halle, Pfister Schiess Tropeano & Partner of Zurich, and the Bauhaus Dessau Foundation with Monika Markgraf and Johannes Bausch. Particular attention was paid to the qualities of the surfaces, which inspire a new, more complex, perception of the architecture. The colour design

for the Bauhaus Building was drafted by Hinnerk Scheper, head of the wall painting workshop. According to his concept, the colour design underscores the architectural structure of load bearing and infilling surfaces, aids orientation within the building, and is differentiated by the diverse materiality and structure of the surfaces. In this, the colour is functional, in the sense that it is understood as part of the *Gesamtkunstwerk*. For the impact of the building, or space, it is furthermore important not to view the coloured surfaces in isolation, but to consider also the areas, such as curtains, floors and metal surfaces, which gain their impact through the colours of their materials. In the Bauhaus Building, most of the surfaces are rendered, but the surfaces of the concrete structure, ceiling and walls in the workshop wing are not. Here, the visible cables and the treatment of surfaces with a simple limewash also befit the typical character of a workshop. In all other areas, the surfaces are rendered and painted. The festive area is a perfect example of a design, which combines the application of colour with worked surfaces. The ceilings are divided into areas with rough or smooth surfaces, the surfaces of the joists have both matt and gloss finishes. With the architecture accentuated by surface design and colour, the original, vital and sensory aesthetic of the Bauhaus Building may be experienced again today^{9,10}

9. Further literature on the Bauhaus Building: Walter Gropius: *Bauhausbauten Dessau*, Munich 1930 (Bauhaus Book 12, identical reprint, Mainz 1974); Thomas Danzl: *Farbe und Form. Die materialtechnischen Grundlagen der Architekturfarbigkeit an den Bauhausbauten in Dessau und ihre Folgen für die restauratorische Praxis*, [in:] Landesamt für Denkmalpflege (ed.): *Denkmalpflege in Sachsen-Anhalt 9* (2001) pp. 7-19; Monika Markgraf (ed.): *Archaeology of Modernism. Renovation Bauhaus Dessau*, Berlin 2006.

10. This text is an extract of the publication: Wüstenrot Stiftung (Hrsg.), Monika Markgraf, Simone Oelker, Andreas Schwarting und Norbert Huse (Autoren). *Denkmalpflege der Moderne – Konzepte für ein junges Architekturerbe*, Stuttgart 2011.