THE GREEN LIBRARY
The challenge of environmental sustainability

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The second-hand library – a way of reducing the ecological footprint
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**The second-hand library – a way of reducing the ecological footprint**

**Abstract:** Old buildings are being converted into libraries all over the world. The process of re-using a building which formerly had a different function into a library is quite obviously a recycling issue. The transformation of an existing building with a prior non-library function into a library brings the challenge and the opportunity for sustainable thinking in library planning. As non-renewable resources are decreasing, re-using and recycling are going to become increasingly necessary in the future. The recycling of old buildings means reducing the ecological footprint of library buildings in a cost-effective and efficient way. Quite apart from “green” aspects like water conservation, energy conservation, recycled or sustainable building materials, indoor air quality, and solar power from photovoltaic panels, the planning of an adaptive re-use is a very different task than the planning of a library in a totally new building. Some best-practice case studies from different countries are presented.


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1 Introduction

“We are ecologically interdependent with the whole of the natural environment; we are socially, culturally, and economically interdependent with all of humanity; sustainability in the context of this interdependence requires partnership, equity, and balance among all parties.”

Why should libraries be sustainable buildings, and what is sustainability with regard to an adaptation of an old building for library use?

Old buildings are being converted into libraries all over the world. Many buildings which have been given such a new purpose include an old grain silo, a post office (Schelling 2011), barracks, a brewery, a factory (Frank 2011; Niess 2011), a railway station (Sanne 2009), and a stable, to name but a few. Recycling of buildings will become increasingly important in the future. Conversion and re-use of an old building which formerly had a different use into a library means per se that there is a sustainability aspect. Revitalization includes elements and features to lessen the buildings’ energy and environmental impact on our planet. Being green is an element of being sustainable, but sustainability is actually a larger and more holistic concept than being green. Part of the whole concept of sustainable thinking is the realization that the ecological footprint is reduced because of the opportunity to bring green features into an old building. The proportion of libraries adapted from old buildings when compared to construction of new buildings is likely to remain a significant issue in the future, especially in the so-called developed parts of the world. Our paper will show the advantages in sustainable terms of recycling old buildings into libraries: the issues of ecology, culture, urban regeneration, finance and corporate identity and marketing are considered.

Libraries, as non-commercial public buildings, are especially suited to provide examples to illustrate the idea of sustainability, to distribute and to disseminate this idea to the people, and to promote civic involvement in sustainability. The Seattle Public Library\(^3\) provided a good example as “the architects and contrac-
Figures 10.1a and 10.1b: City Library Mössingen, Germany, re-using the transformed former textile printing factory “Pausa”, a listed late modern age barrel-vaulted building from 1950/51. © M.B. Frank.
tors who designed and built the Central Library were committed to constructing a sustainable building to demonstrate the City’s commitment to environmental, economic, and social stewardship, to yield cost savings to the City taxpayers through reduced operating costs, to provide healthy work environments for staff and visitors, and to contribute to the City’s goals of protecting, conserving, and enhancing the region’s environmental resources."

2 An old subject in a new context

For a long time the idea of adapting buildings to library use was mainly met by rejection of the re-use of old buildings and emphasis on the benefits of new buildings: “A librarian must never accept an old building which has previously been used for other purposes.”

In 1985 there was a turning point in the librarians’ debate. At the IFLA conference in Budapest there was a discussion of what conditions must be fulfilled for an old building to be converted into a library and what must be considered when remodelling. This seminar initiated a change in the discussion: “Not all the advantages are evident in every project, but when one considers and contrasts a large number of these re-used, converted premises, one can discover a substantial number of differing factors which have definite advantages.” (Kroller 1985, 13)

In 2007 Santi Romero pointed out the possibilities of re-use; he developed a typology of adaptable buildings and identified the advantages and disadvantages of the conversion and the specific aspects of renovations according to different building types (Romero 2007). He compiled a list of different conditions which a re-used building should meet. He pointed out the positive aspects, the symbolic value, meaning for the cultural identity, the urban situation, the most central location, the architectural heritage, the distinctiveness of the architecture, and acceptance by the population.

In 2011, Frank Seeliger gave an overview of the current state of research (Seeliger 2011). In the same volume, case studies from Germany, Switzerland and Austria were presented (Hauke & Werner 2011b).

5 Sven Plovgaard, Seminar of the IFLA Library Buildings and Equipment Section in 1975 staged in Finland, cit. after Papp 1987, 58.
3 Some examples

Sustainability also involves preservation of the cultural heritage, the historical identity of places and buildings, and preservation of the “genius loci”. The examples below help to illustrate the concept of sustainable revitalization and may draw librarians’ and architects’ attention to best-practice examples of such regeneration, and encourage them to look around and find their own opportunities for re-usable buildings in their own environment.

3.1 Library of Braunschweig University of Art, former EXPO exhibition building of Mexico (2002)\(^6\)

A temporary construction for the EXPO 2000 at Hanover, Germany (Architects: Legorreta + Legorreta, Mexico City/Los Angeles) was changed to permanent use as a library: one of the 43 national pavilions – the Mexican Millennium Pavilion (Stiller 2011; Gonzáles 2000). The architecture of the building is represented by a large crystal box, using very light material (glass and steel) because it had to be a temporary construction. This was a unique chance to get a new library building within a very short time, because the opportunity to re-use the pavilion came just after the EXPO closed its doors.

The building consists of an outer and an inner cube structure. The interior was specially designed for the needs of the library by KSP Jürgen Engel architects. A building connecting to the university was added (only one storey with a basement). Here are the offices of the staff. So the Expo pavilion is an example of a library building which consists only of space for users and the collection, with the administration located in a separate building (like Norman Foster did in his project “Berlin Brain” for the Freie Universität Berlin) (Diecks & Werner 2004). Closed stacks are in the main building of the university too. The cube measures 18 x 18 m and has a height of 18 m. The inner cube is 11 x 11 m and 12 m high. There are 4.5 levels and a basement. There is enough space for 60 reader places and 80,000 volumes on open shelves. The top level of the inner cube is reserved for exhibitions and events. Because the whole library consists only of one room, there are some acoustic problems, but sound insulation and protection from sunlight were improved. A minus point is that an extension of the building is not possible.

It fits well with a university of art. Transparent, very clear, open to the outside, with a striking interior cube in colourful yellow, it became the new symbol

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Fig. 10.2a: The part of the Mexican Millennium EXPO 2000 Pavilion that was transformed for use as Braunschweig University of Art (HBK) Library. © Hochschularchiv der HBK.
of the entire university, used as new logo for the university, with a high level of identification from students and teachers.

3.2 Municipal Library Luckenwalde, Germany (2008)\(^7\)

The Municipal Library of Luckenwalde is a transformation of a railway station – a station building from the beginning of the 20th century in a small town a half-an-hour train ride from Berlin (Sanne 2009). It was transformed by \textit{ff-architekten Berlin / raumbewegung}. An excellent location for all citizens, especially for those who take the train. Because the building had not sufficient space for 45,000 volumes and 50,000 users a year, a shimmering golden extension was added for the children’s library (ground floor) and the library for young adults (first floor).

3.3 Library of the Lucerne University of Applied Sciences and Arts, Switzerland (2011)

A nearly 30-year-old logistic centre for the Swiss Mail was transformed into a library and university building by the Swiss architects Enzmann + Fischer, Zurich (Schelling 2011).

A very excellent location: near the main station in the middle of the city with good access to public transport and next to the Convention Centre KLL (designed by Jean Nouvel). Costs: less than half of a new building of this size and location. Typical for many projects in converted buildings is the surprise of gaining more space than needed! It was a chance for cooperation with partners: another university, the Lucerne University of Teacher Education (PHZ), joined in the collaborative use of the building. With space for 300,000 volumes and 670 reader places, this is nearly a perfect space. The library is the pivotal point of the building, right in the middle, on the first floor.

A positive feature is the very flexible use of space of this type of building. It allows the load-carrying capacity of the floor to be improved. A challenge is to bring light into the big spaces, the incomparable effect of daylight: more natural light for the impact on cognitive and psychosocial well-being and energy-saving (Sands 2002).

A negative point is the low ceiling height (less than 2.95 m), therefore shelving is not very efficient – it’s a compromise.
3.4 An impressive history: La Biblioteca comunale degli Intronati di Siena – The Public Library of Siena, Italy

The Biblioteca degli Intronati in Siena is one of the most historic cultural institutions in Siena. The library in via della Sapienza was founded in 1758 through a donation given by the archdeacon and university professor Sallustio Bandini. The collection was brought to the Palazzo dell'Accademia degli Intronati, the library’s home up to the present day. Other donors followed Bandini’s example so that the collection expanded up to its current size of some 550,000 volumes, including 63,000 manuscripts and 1091 incunabula and illuminated books and other historic and precious items like 50,000 autographs, etc.

Like other Italian libraries with a similar history over a long time the Biblioteca degli Intronati had to be seen and was used as a kind of “museum”: a historic collection in a historic building with a historic reading room – beautiful and admirable, but nothing that could be called a “public library”.

The history of the building goes back to the 13th century, when a couple of medieval houses were destined to become a so-called Domus Misericordia, serving poor or sick people, orphans, and pilgrims. More buildings such as a church and a public fountain were added and a medieval lane between via della Sapienza and via dei Pittori was built over and remains hundreds of years later as today’s so-called “vicolo”. All the construction work, however, stopped rapidly with the plague in 1348.

In 1408, under the influence of Pope Gregory XII, the Casa della Misericordia had a new opportunity and became Casa della Sapienza. During the following centuries more buildings were added, and famous architects were involved to create a prestigious building, suitable for the home of the University of Siena, La Sapienza, and the scholarly society, Accademia degli Intronati. After 1758, when the library came to the Palazzo, it grew rapidly and occupied more of the space of the former Domus Misericordia, displacing other institutions from the complex of buildings.

A new era was born when, in 1999, the library got financial support from the state as well as from sponsors. A new concept was created to develop the “biblioteca per presenza” into a “biblioteca circolante”, based on the IFLA-UNESCO Public Library Manifesto. New and more space was needed to provide a children’s library, as well as 70,000 volumes on open shelves, 100 reading places, space

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Fig. 10.5a: City Library Siena, Italy, reusing a medieval “underground” street for library purpose. © Biblioteca comunale degli Intronati.
Fig. 10.5b: City Library Siena, childrens' library re-using medieval hospital's storage room. © Biblioteca comunale degli Intronati.
for 14 OPAC terminals and internet research, and all the other modern library services.

But instead of building a new library, the built-over medieval lane, the “vicolo”, with all the small medieval houses on the left- and right-hand sides, was rediscovered and re-used. Special solutions had to be found to ensure safety and security, conservation issues, structural analysis, and organizing enough space to provide open-access shelving instead of storing the books. Some compromises had to be accepted, e.g. not all rooms have natural light, there is no large central reading room, and the architects had to design special furniture and open shelves for 70,000 volumes amongst other things.

But the most important thing is that a very user-friendly library was created where people – both adults and children – like to come and stay to read and learn, to meet people and to feel comfortable. It is a very special, individual library, and will not be confused with other places, nor could it be found anywhere else in the world. More important than some of the compromises that had to be made is the fact that users will identify with the place as “their” library and enjoy the very specific atmosphere.

4 Sustainable development and sustainable construction

Contrary to the earlier dictum that projects where buildings are transformed into libraries could not become really good libraries, we can point out successful and recent examples from Germany, Italy, Austria and Switzerland: public libraries, academic libraries, and special libraries. Also in the USA the re-use of buildings for library purposes is very common.

This requires that the old building is adaptable enough for library use, although “it is not realistic to expect the same level of functionality as we would expect from a new building” (Romero 2007, 227). Through re-using an old building as a library, a special urban place can be created and the library will provide a lively atmosphere in an existing area.

The benefits for sustainability relate to ecology, cultural heritage, urban regeneration, and finance. Sustainability in the context of the re-use of an old building means less land consumption and no disposal of the entire building; and in addition, in the case of an historic building, re-use means a special kind of conservation of the heritage.

It is a growth area for the future because, in times of decreasing public budgets, investment in new buildings is often harder to achieve than renovations,
redevelopments and upgrading. Often, instead of seeing a conservation order as a burden, it can be seen as an asset and an opportunity to develop an old building to new use. A number of advantages are obvious. The buildings are often architecturally valuable properties in prominent locations. The charm, or ambience of a distinctive urban building, or even a building that is enshrined in the public consciousness, can be useful for the image of the library – and it does not have to be a Baroque city palace or other major architectural landmark. The history of the building can be inspiring and may influence the decision of planners and librarians. Later on in the process library users, too, will find the new response to the old building exciting, atmospheric and unusual. This could allow for joint use by different partners using a single building at the same time, leading to unexpected synergies (libraries and tourist centres, educational institutions, shops, and the list goes on). In a broader sense this is also about sustainability – the re-use of an old building: a valuable resource, not only historically, in the case of prominent buildings, but also financially. The library may hope to raise some financial support – for example, from the European Union for countries of the EU – whether for historical preservation, or energy saving from urban development programmes, to motivate decision makers to accept a new library. Architects with their professional skills can see the potential of an apparently derelict building that can be re-used for a new purpose: libraries, the largest non-profit educational and cultural institutions and places of communication with their own specific qualities.

5 Encouraging librarians to see the special value of adapted buildings as a sustainability issue

We should encourage librarians as well as architects to think about the special value of an adapted building for library use. Sustainability should be seen as part of the corporate identity of the library, not only in relation to energy saving, but as part of the strategic aims of the library. Sustainability is more than going green.

It becomes more and more obvious that to re-use, adapt and transform an old building into a library is not necessarily a bad substitute for a new building or a less than ideal solution. Librarians should be more open to the sustainability of re-use and should focus on the opportunity to transform a building to a high-level ecologically friendly library. To accept an old building may be the first step to reducing the library’s ecological footprint.

The experience of the projects mentioned above shows that nothing should be idealized. “Second hand” is in a positive sense cost-saving, but can also restrict creativity: for the planning librarian the pressure may become very hard
with possibly many preset conditions of the building. The risk is to expect too little for the new library in an old re-used building and therefore the librarians may demand too little. In some older buildings the load-bearing limits of the floor may not make them suitable as a library. But even academic libraries today are no longer focusing on compact shelving, they have said goodbye to the myth of fully flexible space. In the digital age there are very few libraries still mainly thinking of book stacks. On the other hand, many library projects benefit from the converted building because they suddenly get more space available than planned, because “second hand” does not necessarily mean a perfect fit.

We can learn from many projects that the re-use of a building is often a cheaper and realistic opportunity providing a surprising and positive result and may be an acceptable compromise when the alternative is a long and uncertain wait for a new building in the future.

6 Sustainability through LIS students’ education

Last but not least we think that sustainability should be taught to LIS students and librarians at the start of their careers, so that the new generation of librarians will adopt the ideas and goals of sustainability in library buildings by converting old buildings into high-quality library spaces.

In the Berlin School for Library and Information Science we used the model of project seminars. Every year the school offers a course called “Turning an idea into a book”. The goal is to publish a book related to any library and information science issue. The students’ task is to decide on an interesting subject and to find authors who are experts in their field. The students not only invite these authors to write an article on the chosen issue but they review the articles, rewrite them if necessary, and prepare the articles for print. Furthermore they have to find a publishing house willing to publish the book without any printing costs for the students and one that will allow open access alongside the printed version, following the Berlin Declaration on Open Access (2003) which was signed by the University – but that is not always easy to achieve.

After two book projects published on Library buildings and equipment in 2008–2009 (Hauke & Werner 2009) and Best-practice examples in library buildings and equipment in 2009–2010 (Hauke & Werner 2011a), the theme in 2010–2011 was Secondhand, but excellent! The re-use of old buildings for library use (Hauke & Werner 2011b). The exclamation mark in the book’s title should make clear, first that excellence is definitely a requirement, and secondly that the projects
described in the book are excellent examples of how to re-use an existing building for library use.

The students’ task was not only to find new best-practice examples of converted buildings in Germany, Austria and Switzerland, but also to invite and encourage the librarians and/or architects responsible to write an article about how they found an appropriate building, how they managed all the issues regarding location, the suitability of the building for library use, the capacity for heavy book shelves, the restrictions relating to the protection of historic monuments, and the implementation of sustainability in their professional work.

Fig. 10.6: A former railway factory’s packaging plant transformed into a “WOW” library. © K.U. Werner.

The students met the German-American architect Robert Niess, who also serves as Professor for the Architecture of Re-building in Düsseldorf, Germany.11 Together with his wife Rebecca Chestnutt, the architect has transformed an historic entertainment building in Berlin into a public library which was the winner of the competition for the Renovation and Expansion of the Landmark Buildings at Luisenbad for a Library in 1988.12 Since then his office has become renowned for innovative

designs for the restoration, refurbishment and expansion of historic buildings. These architects have also transformed a factory in Wildau near Berlin into a fascinating university library,\textsuperscript{13} a “Wow!” library – the 11th-top quality of good library space according to Andrew McDonald (2007).

As a result of that meeting, a very interesting interview about his points of view, his ideals, his experiences and also the critical points of re-using old buildings was published in the book (Niess 2011).

To make the book more useful for the target group – which includes librarians working on new libraries as well as architects and building authorities – a literature review of books and articles on that issue published nationally and internationally was added. About 150 references were chosen for the bibliography, including overviews in English and German as well as articles on best-practice examples from Germany, Austria and Switzerland.

Through different surveys about 750 examples of re-used buildings, mainly in Germany, Austria and Switzerland were identified. A selection of 150 interesting examples is listed in the book, including some details like the building’s former use, the year it was converted and the website.

The book was published in 2011 by the German LIS publishing house Bock + Herchen who also agreed to publish the preprint version at the Humboldt University’s edoc server\textsuperscript{14} – available on open access without any restrictions.

The students are rather proud of the seminar’s result. It was a lot of hard work for them. They got credits for the seminar, but they did more than they needed to do for the credits: they presented the project at the BOBCATSSS Symposium 2011 in Hungary and at the German Library Conference 2011 in Berlin, as well as at the IFLA Poster Session 2011 in San Juan, Puerto Rico.

7 Conclusion

We would like to recommend sustainability as a new criterion for good library buildings and to add sustainability to the “Top Ten Qualities of Good Library Space” by Andrew McDonald (2007). In our mind “sustainability” should be a key quality for good library space and an overall goal: the 12th factor if added to McDonald’s list if you include an 11th factor, which has been described as “wow!” or “oomph!” for exciting features of the building. Sustainability may not seem so


fascinating at first sight, but it is extremely important for the future – important enough to be added to the list of the top qualities of good library space!

References


