

Building Assessment Report For Multi-Family-House-Weimar (Germany)

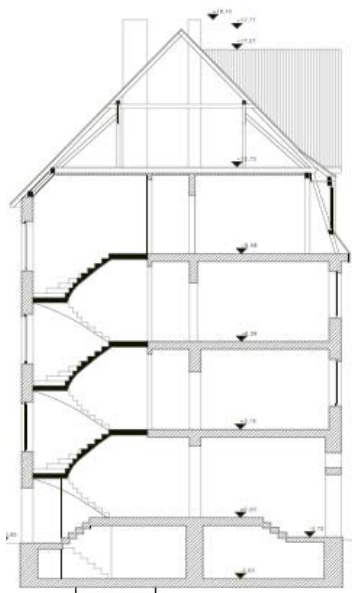
1. GENERAL INFORMATION



The **Multi-Family-House-Weimar** is a redeveloped 4-storey wilhelminian style multifamily residence in Weimar, Germany. It was originally built in 1914 and last redeveloped in 2003 by ALL Architects, Berlin. The estate area is 630m², the total floor area is 280m² and the total volume is 22,500m³.

Location

The estate is located in a quiet residential street, beside several social and shopping facilities. Near the building is the railway station as well as public transport link to the city centre, which run very regular. The travel time to the city centre is approximately 5 minutes by bus and 15 minutes walking time.



Materials

The external walls are of plastered brickwork; the inner walls probably consist of timber framing with inserted brickwork. The roof is made up of timber structure and is covered with tiles. The ceilings are of wooden beams except above the basement where it is a massive slab. All floors have a finish with planks, but are partly covered with ceramic tiles, carpets and PVC. The entrance area is covered with tiles. The only staircase is of timber. The basement floor is of concrete. The front door is of timber; the back door is of plastic. The windows are of different types, some are double-glazing already, others are even single glazing wooden windows. The wall covering consists mostly of wallpaper; the kitchens and bathrooms have tiles or mirrors.

Scoring

	Germany	EU wide
Overall performance rating	C	D
Environmental performance	B	C
Social performance	C	D
Economic performance	D	D

Important note: The purpose of this table is to present a developed format of scoring. Figures however are partly notional due to the limited number of actually assessed sub-issues (30 on 56) and the limited scope of weighting exercise.

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2. BUILDING HIGHLIGHTS

Re-use of previously developed sites	A	B	C	D	E	F	G
External user amenity and	A	B	C	D	E	F	G
Provision of key amenities	A	B	C	D	E	F	G
Occupants satisfaction	A	B	C	D	E	F	G

Re-use of previously developed sites

As the building was refurbished no horizontal extension took place. Nearly 100% of the proposed refurbishment have been located on the previously developed area. This is in accordance with the local building regulations.

External user amenity and provision of key amenities

The building scored a final benchmark of “A”, i.e. ‘excellent’ for both sub issues ‘external user amenity’ and ‘provision of key amenities’. The estate is located in a quite residential street close to the area can be categorized as a residential area, beside several restaurants, social, infrastructural, religious and shopping facilities. There is a good public transport link to the city. Those facilities are necessary for a well working social and economic life balance.



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Energy efficiency

During the refurbishment the building was provided with a controlled ventilation system in all accommodation units. This ventilation system has been included in the suspended ceiling, covered with plasterboard. Thus, all rooms are supplied with fresh air in a controlled manner. These devices are coupled with heat converting system (decentralized in every flat). Therefore the system can save 40% of the consumed heat energy.

This is in accordance to the national development of the 'Energiepass', i.e. an assessment to analyse the use of energy. Focus is the use of primary energy as well as proposals of changes within the building.

The occupants are familiar with the use of the ventilation system and therefore the efficiency of the installation is guaranteed.



Occupants satisfaction

The building scored a final benchmark of 'B', i.e. 'good'. No questionnaire has been taken out, but due to the size of the building and the familiar contact between each tenant only the owner was interviewed. Although the building is refurbished and not new built, the occupants feel comfortable within the building.

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3. OPPORTUNITIES FOR IMPROVEMENT

Design quality	A	B	C	D	E	F	G
Site security and spatial arrangement	A	B	C	D	E	F	G
Building security	A	B	C	D	E	F	G
Responsible sourcing of major building elements	A	B	C	D	E	F	G

Design quality

No questionnaire regarding the sub issue 'design quality' was handed out to the public. It is assumed that this questionnaire will not be filled out by the owner or the architect as their judgement might be too subjective.

Site security and spatial arrangement and building security

The building scored a final benchmark of 'G' for both the sub issue 'Site security and spatial arrangement' and 'Building security'. This is due to the fact, that no crime assessment or evaluation has been commissioned. But still the design team raised this issue and discussed issues of site security. It was assumed that due to the size of the project and also due to the location of the building no assessment has been taken out.

Responsible sourcing of major building elements

As the process of refurbishment is finished, it was not possible to check certification of major building materials used within the process of refurbishment. Those information have been handed over to the building owner. At this stage the information to fill out this sub issues are not available any more.

4. SPECIFIC FEATURES OF THE ASSESSMENT PROCESS

a) General remarks about the assessment

Generally most of the sub issues which have been used for this building have been developed in a user friendly way.

Some information could not be delivered within a reasonable time, i.e. questionnaire normally require more time of preparation, handling out the questionnaires, inform those person who take part in the questionnaire and also summarizing the results of the questionnaire.

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Also, due to the size of the redevelopment project (timeline of one year with a budget of 270,000 €), not all assessments have been taken out which might be necessary for an office development or a more complex residential project. Some sub issues where checking if an assessment (i.e. report) has taken out. Within this project all those issues have been covered by the architect or another responsible person within the team. Some issues have been solved in specific meetings and discussions without the actual production of a report.

Another problem was that some sub issues required information which has been already handed over to the building owner. Therefore it was difficult and sometimes not possible to get those information. Some sub issues might focus on the development of new buildings where those information are easier to collect. It is our opinion, that each sub issues should refer to the situation where those information are not available. This will result in an easier benchmarking of buildings which are in use since years.

b) Particular sub-issues in focus

Whole life costs – strategic level	A	B	C	D	E	F	G
Whole life costs – component level	A	B	C	D	E	F	G
Building Security	A	B	C	D	E	F	G
Site security & spatial arrangement	A	B	C	D	E	F	G
Design quality	A	B	C	D	E	F	G
Ease of maintenance	A	B	C	D	E	F	G
Exchange value	A	B	C	D	E	F	G
Function analysis	A	B	C	D	E	F	G
Internal user amenity	A	B	C	D	E	F	G
Neighbourhood impacts	A	B	C	D	E	F	G
Risk & value management	A	B	C	D	E	F	G
Social responsibility	A	B	C	D	E	F	G
< sub issue 2>	A	B	C	D	E	F	G
< sub issue 3>	A	B	C	D	E	F	G

Whole life value – strategic & component level

The quality of the life cycle costing calculations, the continuously focus of the costs during all phases of a project and also the presentation of the design vary largely between the project type and project size. The assessment should refer to the total building costs as it might be unfair to compare the life cycle cost assessment between projects with huge different in total costs.

Building Security and site security & spatial

Within both sub issues there is no reference to the type and the size of the building. The result of the sub issue does not refer to the opinion of the design team members who have thought about the security issue. But due to the project size and the local area of the building, no written report or assessment was taken out. The design team members have discussed the security issue. Therefore a redevelopment of those sub issues should take place.

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Design quality

Due to time problems the questionnaire focusing on the design quality has not handed out to the owner, the occupants and members of the public. First there was the idea that only the owner and the architect will fill out the questionnaire. But it is assumed that their opinion is rather subjective than impartial. The questions within this sub issue which should be solved are:

- How can I get opinions of a wider public to judge the assessment in a limited period of time?
- How can I make sure that the result of the sub issue is less a subjective opinion?

Ease of maintenance

It was not possible to finish the assessment of the sub issue 'ease of maintenance'. The assessment is very complex and time consuming. Another reason was, that it is assumed that the result indicate reality. As the specific project is a refurbishment, i.e. less components of the main structure have been refurbished. This could result in a distortion of costs. It our opinion that the sub issue is not focused on a refurbishment at all.

Exchange value

Within step 2 ('achievement of LEnSE points likely to improve exchange value') not all points within assessment could be achieved, as not all listed sub issues are related to a residential building and also because problems occur to finish the assessment of other sub issues.

It is noted that currently, as there is space for loft conversion, points are added during the assessment. But if the loft conversion already has taken place, no points could be added (see step 1).

Function analysis

It is our opinion that the process stages are more focussing on larger projects, e.g. contacting a third party (trained facilitator).

Internal user amenities

The levels A, B and C within the sub issue are not relevant for this project. In accordance with the local legislation all requirements are incorporated. But levels A, B and C do not refer to the local requirements.

Neighbourhood impacts

As the building was refurbished and no vertical and horizontal extensions have been taken place, the sub issue is not relevant for the building. It is felt that major

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renovations were taken out, but as there was no change in volume the assessment was not taken out.

Risk and value management

The sub issue 'risk and value management' has been finished but more with an objective justification.

It is our opinion that the process stages are more focussing on larger projects. Stage 3 ('alternative scenarios of different values have been drafted and the concept of risk has been introduced for every one of them'), stage 5 ('risk allowances') and stage 6 ('risk/value monitoring system') have not been developed within this project. None of those stages was required due to the size of the project.

Socially responsible and ethical procurement of goods/service

At this stage the assessment of the sub issue could not be finished. The reasons are:

- Due to the fact that refurbishment has been finished and the responsible companies which have been involved in the refurbishment, could not be contacted anymore.
- It is our opinion that the questionnaire / declaration will give back no impartial opinion.

5. SUGGESTIONS FOR THE FUTURE DEVELOPMENT OF THE METHOD

Application of sub issues

Most of the sub issues seem to be well developed. But in focus of renovated / refurbished buildings there are additional information required. Therefore sub issues should be tested if they are applicable for each type of project, i.e. new building, existing building (occupied), refurbished building etc.

A few sub issues are difficult to assess if the building process is already finished. Especially for this building, some required information is not available as the refurbishment is finished and the building is occupied since years.

But it is assumed that generally the information should be available for the design team and in future responsible person might be keeping those information which are related to such an assessment.

It seems that a couple of requirements within the sub issues are more focused on larger projects. Due to the project type and project size some assessments are not required. Therefore sub issues should be developed in a way that they are also applicable for projects with a smaller scale where less assessment may be required.

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ANNEX: COMPLETE COUNTRY SPECIFIC SCORES & RATINGS ^a

a) Overall building performance

LEnSE rating:	C
Total achieved points:	608
Total available points:	825 ^b

Environmental performance:	B
Social performance:	C
Economic performance:	D

	Category	Rating	Points achieved	Available points
Environmental	Climate change	C		100
	Biodiversity	C		90
	Resource use	B		55
	Env. & Geophysical risk	A		100
Social	Occupant wellbeing	B		130
	Accessibility	B		55
	Security	F		40
	Social and cultural value	B		20
Economic	Financing and management	C		100
	Whole life value	D		95
	Externalities	B		30

^a As stated before, the sole purpose of this table is to present a developed format of scoring. Figures however are partly notional due to the limited number of actually assessed sub-issues (30 on 56; see following table) and the limited scope of weighting exercise.

^b Normally, there are 1000 points available in LEnSE methodology. However certain sub-issues may not be applicable to all buildings, thus this difference in total points.

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b) Sub-Issue specific Performance

Climate change		C
*	Building - depletion of non renewable primary energy	B*
	Transport - depletion of non renewable primary energy	n/a
*	Use of renewable primary energy	B*
*	Destruction of the stratospheric ozone layer	B*
*	Local tropospheric ozone formation	B*
Biodiversity		C
*	Minimise point sources of eutrophication	B*
	Land of low ecological value	A
	Mitigating impact on existing site ecology	n/a
*	Enhance native plant/animal species	B*
*	Habitat management/action plan	B*
Resource use		B
*	Depletion and use of renewable and non renewable resources (other than primary energy)	B*
	Responsible sourcing of materials	n/a
*	Non hazardous waste disposal	n/a
	Hazardous waste to disposal	n/a
*	Use of freshwater resources	B*
	Re-use of previously developed sites	A
	Development footprint	A
	Contaminated land, bioremediation and soil reuse	n/a

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Env. management & Geophysical risk		A
Certified Environmental Management System	A	
Minimising regional specific climatological risk	A	
* Minimizing regional specific geophysical risk	B*	
Occupant wellbeing		B
* Lighting comfort (artificial & natural)	B*	
* Thermal comfort	B*	
* Ventilation conditions	B*	
* Acoustic comfort	B*	
Occupant satisfaction	B	
Internal user amenities	D	
* Outdoor space	B*	
* Materials/substance exclusion	B*	
* Indoor air quality	B*	
* Quality of drinking water	B*	
* Building safety assessment	B*	
Internal user amenities	A	
Accessibility		B
Key amenities - provision and proximity	A	
Public transport accessibility	A	
* Provision of safe and adequate pedestrian route ways	B*	
Provision of safe and adequate cycle lanes and cyclist facilities	C	
Provision of car pooling facilities	n/a	

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Security		F
Site security and spatial arrangement	G	
Building security	B*	
Social and cultural value		B
Community impact consultation	B*	
* Social cost benefit analysis	B*	
* Socially responsible and ethical procurement of goods/services	n/a	
Considerate Constructors	B	
External 'neighbourhood' impacts	n/a	
Design quality	n/a	
Financing and management		C
Function analysis	C	
Risk & value management	D	
Whole life value		D
WLC appraisal - Strategic level	D	
WLC appraisal - Component level	D	
* Option appraisal	B*	
Exchange value	D	
Added value	n/a	
Building adaptability	E	
Design for maintainable buildings / Ease of maintenance	n/a	

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Externalities		B
Local employment opportunities/use of local services	n/a	
Specification/use of locally produced materials	A	
* Branding and external expression	B*	

** As other methods or tools already include and/or assess these sub issues, it was decided not to be developed as part of the LEnSE methodology to avoid research repetition. However, they are included in this report assessment in terms of structural completion given a notional rating directly by the assessor.*