



Problems arising from the joints between building work carried out by owners and contractors

Summary Account

Research Study	Z 6 – 10.07.03-05.07 / II 13 – 80 01 05 – 07
Supported by	Bundesamt für Bauwesen und Raumordnung, Bonn
Conducted by	AIBAU Aachener Institut für Bauschadensforschung und angewandte Bauphysik gemeinnützige GmbH, Aachen
Project Manager	Prof. Dr. Rainer Oswald
Authors	Dipl.-Ing. Silke Sous Dipl.-Ing. Ruth Abel Dipl.-Ing. Matthias Zöller Dipl.-Ing. Johannes Kottjé
Assistants	Irmgard Schulz

1. Aims of the study

When the buyer of a newly-built house or flat carries out some pieces of work on his own, any instances of damage occurring later on the house or flat will often lead to disputes about who is responsible for them.

It was the aim of the research study to analyse typical cases of disputes and, on this basis, offer suggestions as to which kinds of work can be generally carried out by the owner without involving the risk of ensuing legal disputes, and which cannot. Furthermore, the study points out which directions a buyer should be given by the construction expert in order to prevent his work from becoming defective.

2. Focus of the study

As a rule, types of construction work requiring considerable technical knowledge and practical skills cannot be carried out by unqualified workers and are therefore not included in the study. Any work that is essential to the proper function of the building should also be executed by construction firms.

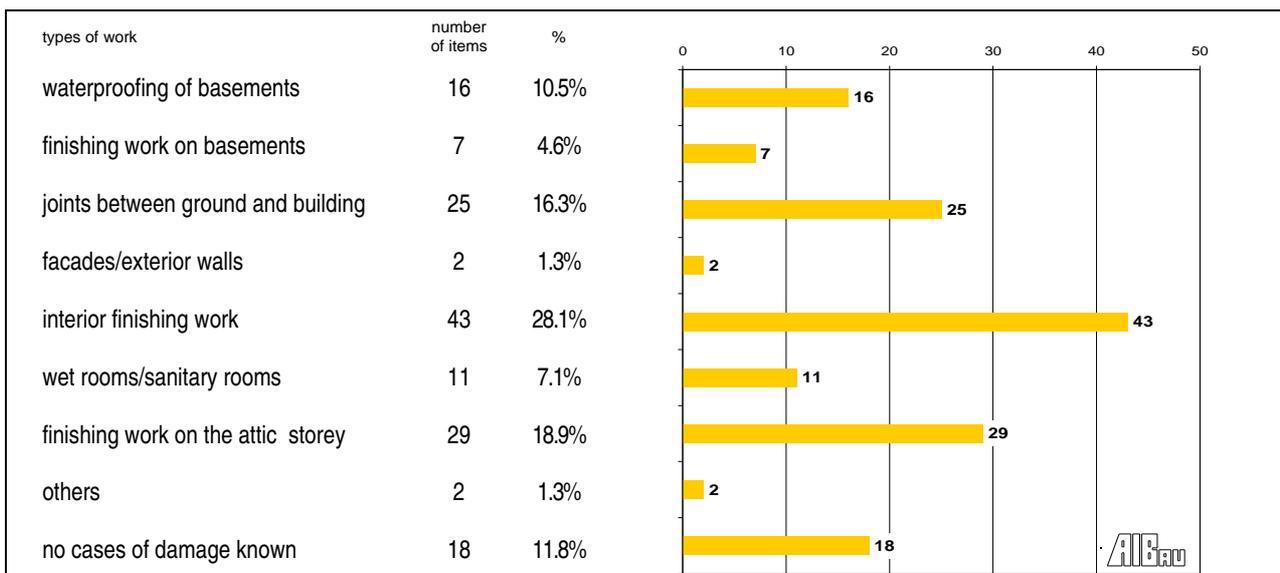
On the basis of a survey among architects and building experts, the research study specifies the types of work usually done by owners who are not skilled craftsmen.

The findings are recommended to the attention of designers and commercial building companies (*Bauträger*), who – as professionals – are responsible for defining in the contract the special types of work to be carried out by the contracting firm, not by the owner.

3. Methods of the research project

Apart from reviewing the relevant literature and drawing conclusions from expert reports made by this institute, a total of 568 questionnaires on typical legal disputes were sent to architects and building experts, of which 60 containing information on the issue were returned (i.e. 10.6 %). Though not statistically significant, the findings show that certain areas are particularly prone to damage.

4. Results of the survey among architects and building experts



Distribution of damage affecting work carried out by contractors and owners (total: 153 specified cases of damage)

Work done by owners typically concentrates on four areas:

- Interior work (43 of the cases described)

Frequently there is damage to the floor cover laid by unqualified workers (e.g. when composite parquet is applied to the screed too early), or there is insufficient sound insulation due to the flooring technique (e.g. when tiles are connected to masonry without edge joints).

Interior walls and ceilings may give rise to disputes over who has to smooth down the surfaces in dry construction.

- Interior work on the attic storey (29 items)

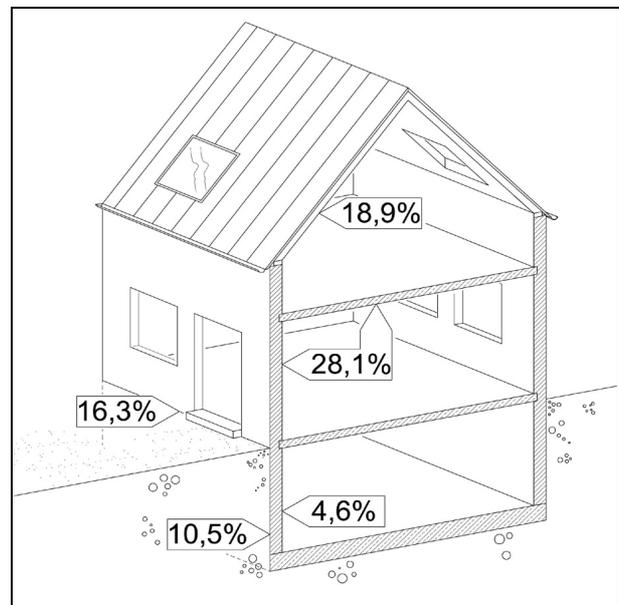
Here, disputes concern the question who is responsible for the air-tightness of the construction.

- Executing the joints between the ground and the building (25 items)

If the joint between the ground and the building is filled up too high, there may be problems caused by moisture. The filling of the building pit is likely to damage the waterproofing.

- Waterproofing of basements (16 items)

Since defects in basement waterproofing lead to serious damage, which is extremely difficult to repair, the study strongly argues against waterproofing being carried out by laymen. Therefore it does not make any further recommendations on this type of work.



Frequency of damage affecting areas of work by owners and contractors

5. Recommendations for types of work possibly to be done by the owner, and for avoiding disputes

As a rule, all types of work requiring sound technical knowledge or the use of special equipment should be carried out by the contractor in order to ensure the proper function of the building. Apart from that, the owner should not take on any job that must be appropriately finished within a fixed period of time, as building firms depend on it for further work. So the owner should only apply the finishing on surfaces.

When the building is inspected for approval, its condition should be documented in detail. The documentation should also state which technical information relevant to damage-free function was given to the owner.

Concerning the fitting out of interior rooms, the types of work suitable to be done by the owner are flooring work and finishing the surface of walls.

Regardless of the kind of floor cover chosen, one must make sure that the screed is sufficiently dry and smooth, and this should be tested and documented during inspection. The owner should be given the following instructions: Flooring has to take account of expansion joints or other joints surrounding floor sections. Furthermore, the insulating strips installed between the wall surface and the screed cannot be completely removed (for reasons of sound insulation).

With regard to the finishing of wall surfaces it is advisable to agree on specific quality standards for the different kinds of rendering as well as for the grouting of plaster boards. In this way it will be clear to all participants in the building process which finishing work has to be applied to the base surface.

As to the attic storey, the structural components essential to satisfactory function should be assembled by the contractor. This applies to the roof framework, to roofing work and draining layers, but also to thermal insulation and the application of a continuous airtight layer with joints and penetrations. On the other hand, interior lining, wall coating/papering and painting are well suited to be done by the owner.

The owner's work on outside areas should be restricted to garden design and landscaping, keeping to a distance of about 30 cm from the exterior walls of the building. Beyond that, any work in connection with the base course should be carried out by professionals, because it requires considerable experience with different skills as well as planning coordination.

When basement rooms are fitted up for dwelling (e.g. as guestrooms), the owner should be given sufficient information about thermal insulation and suitable floor covers. He should know that applying internal insulation involves the risk of thermal bridges between connecting walls and ceilings.

The findings of the study show that owners frequently overestimate their technical know-how and the amount of time and physical work they can invest in the project. Serious damage can be the consequence. Therefore the contractor should strongly advise the owner against undertaking construction work himself, with the exception of the types of work specified above. He should also be aware that he shares the responsibility with the owner if his own professional work depends on the owner's skills for adequate usability and damage-free function.