

Material selection, procedures and agreements, seen from the point of view of a responsible bricklayer, Øyvind Buset

There are high expectations of a craftsman's knowledge and skills.

A craftsman must have knowledge of building physics, statics, knowledge of materials, logistics, economics, HSE, legislation and regulations, law and lots of standards.

If he is an employer, he is subject to roughly the same responsibility for employees as a company with 100 employees.

In terms of skills, he must and can perform his profession with good craftsmanship. The industry organizations together with the employee organizations are experts and set the standard for what should be expected. This is expressed, among other places, in the Norwegian standard. But, an important part of good craftsmanship is fulfilling the contract. What is agreed. One is welcome to agree to a much higher standard of craftsmanship than normal.

On the other hand, the customer's knowledge is variable. There is everything from a professional actor to a layman.

Ordering skills are often deficient. It affects the order and the contract. A craftsman should put a lot of effort into explaining/helping the customer. This is clear in, among other things, the Craftsmanship Act. Ordering expertise is a major shortage and really belongs in a separate professional group.

Roles

It is important in a construction case that all roles are clearly assigned and that everyone has the necessary skills and is aware of their role and responsibilities. In particular, it must be stated who has decision-making authority.

Some roles and responsibilities in a normal construction case:

- Builder: Owner of the construction or the person authorized by the owner.
- Project management: The person who leads the various project companies/persons. The points of intersection between each project section should be clarified.
- Responsible designer - there should be a match between the responsibility of the Planning and Building Act and the real responsibility.
- Consulting engineer; masonry. Gives advice. It is important that they have the right competence and responsibility.
- Construction manager. Their responsibility should be specified in the contract. They like to have decision-making authority.
- The mason/craftsman/contractor's responsibilities must be uniform based on both planning and building law, NS contracts and the specific contract provisions.

When it comes to building protection, a new interest is added

- Building conservation, antiquarian considerations - Either these are only advisory (can express themselves, but do not have final authority) or they must be included in a normal planning agreement

The conditions in the normal professional construction industry are often that a client describes a desired quality. In construction law (NS standards), there is a form of planning for each stage and a responsibility in each stage.

The various actors then respond to this.

The process in a building case is (simplified) somewhat like this for a craft company:

Ex:

In a new apartment building, you have several designers based on area of expertise. The wet room can be carried out by a person in charge, who projects slope and is responsible for using products within a quality standard or environmental standard, with products that satisfy the legal and regulatory requirements in Norway.

When it comes to Building Protection and antiquarian interests, this changes

Consultants in building protection have a different point of view than a craftsman. A craftsman must choose the best for the building and execute accordingly. Advisors for building conservation will choose antiquarian values that may conflict with this. We see contracts for the renovation of older buildings that are so detailed in their project description that there is little that a craftsman can carry out on his own initiative. This applies to execution, such as cleaning/scraping, application, use of a specific type of product.

Then there is little that can resemble an ordinary performance responsibility for the performer.

We see that the technical description from the antiquarian authority may contain a description of material use, execution and new treatment contains a number of "must" requirements.

This limits the executor's course of action. When you also outline a "production" of a product/material, you must place the responsibility for the production itself.

The craftsman should not automatically take responsibility for this.

later/additional statements/recommendations

In addition, there will be later/further statements/recommendations from the antiquarian consultants during the process.

Thesis: The executor has practical knowledge but cannot make decisions if the planner and consultant have announced a course of action that conflicts with the executor's knowledge.

The question then is what responsibility the contractor should actually have and take on, if all planning, documentation, requirements for execution and requirements for the product have been given. Then you may not want a contract type that fits the NS series. The series is based on each section being responsible for its share of the project.

Considerations for building protection make the relationship of responsibility unclear.

In the tender documents for restoration, there is not necessarily a match between the assignment of responsibilities according to the Planning and Building Act, areas of responsibility according to NS standards, and the special responsibilities that exist in other contract documents, such as from antiquarian authorities or antiquarian consultants.

This is particularly evident when choosing a product that is not declared according to the production standards, for example burning lime.

How to get good results with lime mortars

We have standards for binder, finished mortar and a description of execution.

The standard for binders exists so that they can declare quality, but perhaps primarily so that the manufacturer can repeat production with the same quality over and over again. This does not give a correct picture of the finished mortar. A mortar must then be produced and an aggregate added to the binder. The same purpose, knowing what you are making, with consistently the same quality. Again, this is not a final product, it takes place during the work on the construction site, but the declaration in the previous paragraphs states the quality of the products he has chosen.

Then there is the complex matter of getting adequate conditions on the construction site. Lime mortars in particular are demanding. They have a long curing time. Lime requires RH 55-70%RH around 10 degrees temperature over a longer period. When it comes to the mortar (not necessarily the binder) we also need compressive strength, porosity and elasticity. Preferably also adhesive strength. Conditions on the construction site are demanding.

Mandatory choice of materials and execution that is "correct" in relation to antiquarian considerations can be detrimental to the building, in the way that antiquarian execution may require greater maintenance intervals than if one chooses the craftsman's recommendations. If the necessary maintenance is not followed up, the building will deteriorate faster than "newer" products and construction.

If there is not a sufficient maintenance budget, the operator of the building will be left with a building that he cannot maintain. The decay will be faster than if you chose products and execution of better "newer" quality.