



# Boverket

Myndigheten för samhällsplanering,  
byggande och boende

## Perspective from a building authority

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# About Boverket

- Issuing building regulations
- Analyses the housing market
- Supervising the municipal and country planning
- Market control



# What we do



## Plan and building act (2010:900)

Provisions on the planning of land and water areas, construction.

Promote societal progress, equal and proper living conditions, clean and sustainable habitat, people in today's society, future generations.

## Buildings

- Design requirements
- Technical characteristics

Minimum requirements (you can built better)

Some exceptions

## Planning

- Comprehensive plan
- Detailed development plan

# Building



Regeringen

Plan and building ordinance

A bit more detailed

PBL: 4. safety in use;

PBF: the construction works must be designed and constructed in such a way that, during its operation or use it does not present unacceptable risks of slipping, falling, collision, burns, electrocution, injury from explosion or other accidents.

# Building



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PBF: the construction works must be designed and constructed in such a way that, during its operation or use it does not present **unacceptable risks** of slipping, falling, collision, burns, electrocution, injury from explosion or other accidents.

Our job is to specify the unacceptable risks

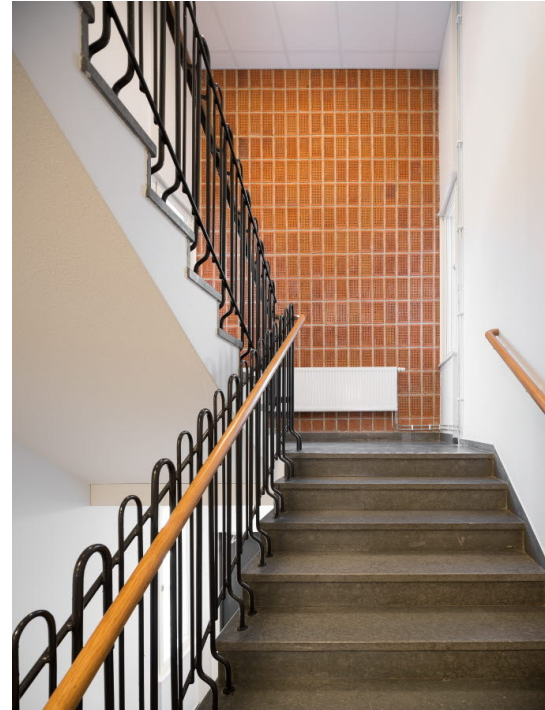
# Specified risks

## Performance based requirements

### Safety in use, protection against falling:

*“Flights of stairs, landings, ramps and balconies that are not bounded by walls shall have balustrades that limit the risk of personal injury as a result of falling. Balustrade padding and its attachments shall withstand the dynamic effect caused by people.*

*General recommendation: Balustrades on flights should be not less than 0.9 meters high.”*



# Planning – considerations/conflicts

Public – private interests

Planning should promote:

1. purposeful structure and aesthetically pleasing design of the built environment, green spaces, and transportation routes;
2. accessibility
3. land and water use, environment;
4. economic growth
5. housing

Suitability of land

Environmental protection act

Land use protection

Municipalities and county boards – different perspectives

# Structures

Partial factor format

Eurocode based

Health and safety

NA – approach the previous safety level

- Target reliability
- Partial coefficients
- Load models
- Material strength
- Verification models

$\beta$

Most buildings = 4,8

Small houses = 4,3

Garage etc. = 3,7



# Design and execution

## Collapses

Design shall be professional – no formal requirements

Design checks lacking

The developer has responsibility for fulfilling the demands

Do we have an adequate safety level?



# Existing structures

Same safety level as new structures

But, PBL admits deviation:

- Cost outweighs benefit
- Protect cultural values
  
- Health and safety still acceptable
  
- Not much guidance – up to the structural engineer to judge the risk
- In practice, few do this



# Future

- Design and execution checks – what will happen?
- Existing structures – specify accepted risks? Risk assessments?
- New eurocodes – adjust safety level?
- Climate change – new or changed risks?
- Climate declarations, energy demands – impact?