Regulations concerning to the construction

Types of regulations
Hierarchy of legislation
Regulations in construction
Standards
Controlling
WHAT KIND OF REGULATIONS HAVE YOU GOT AT YOUR HOME COUNTRY?

WHAT IS REGULATED?

- acoustics
- heritage protection
- use safety
- fire safety
- application of the standards
- design process
- material quality
- access
- work safety
- construction process
- controlling process
1. **Hierarchy of Legislation**

- Constitution
- Acts
- Governmental order
- Ministerial order
- Local statutes – orders of the authorities
- Regulations of the institutes/companies, organizations

**STATUTES – LEVELS OF LEGISLATION**

2. **The Procedure of Construction Projects**

- Startup → Prepartion → Planning
  - Regulations for planning
  - Regulations for controlling
  - Regulations for implementation

- Permission of use → Handover → Construction → Contract
  - Building consent → Tendering
ARCHITECTURAL PLANNING PROCESS
WHAT IS REGULATED?

Limitations:
• building height
• gross built area
• minimum green surface
• functional limitations – building areas

Heritage protection
• world heritage sites
• national listed monuments
• local listed buildings
• protected heritage area

Technical requirements:
• use performances (light, air, access etc.)
• energy consumption
• endurance requirements
• material quality
• mechanical stability
• weather resistance

Safety rules
• fire resistance
• safeguarding
• work and use safety

Process
• documentation requirements
• process protocol
• licences
• requirement of consents

LIMITATIONS

Limitations:
• building height
• gross built area
• minimum green surface

• functional limitations – zones of utilization
  • urban central area
  • residential (various categories)
  • industrial
  • agricultural
# TECHNICAL REQUIREMENTS

**Use performances**
- light (windows, artificial light)
- air
- stairs
- room areas
- universal design (for disabled people)
- parking spaces
- standards for utilization (special functions)

**Material quality**
- certified product (by the producer / supplier)

**Energy consumption**
- thermal insulation
- thermal envelop
- building installation/mechanical system
- energy consumption of the building/
  - of the equipments /
  - of the production of the applied material

**Load bearing capacity**
- standards

**Access**
- overcome physical barriers
- size of entrances
- special equipments (e.g. toilets)
- signal system

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# PROCEDURE FOR BUILDING CONSENT

**Documentation requirements**
- What kind of documentations are required? In what form?
- What kind of consent/permission are required?
- What kind of drawings are required? In what form?

**Process protocol**
- Which authority is responsible for what measurements?
- What institutes/offices have to be involved?
- What are the regulated durations of the process protocols (min-max)?
- What are the taxes, fees and dues?
- Who is responsible for the controlling?
SAFETY REQUIREMENTS

- Fire safety
  - Materials
  - Structures
  - Fire extinguishing equipment
  - Emergency evacuations

- Use safety
  - Health protection
  - Built environment, ergonomics
  - Regulations and standards for building structures (railings, stairs)

- Work safety
  - Health protection
  - Safety equipment
  - Safe work processes
  - Preventive safety measurements

HERITAGE PROTECTION

- Blue shield (protected even in case of war)
- UNESCO world heritage sites
- International protection
- Altering legislation, altering process protocol for planning and construction
- Partially protected
- Local listed buildings
- National listed monuments
- Scheduled monuments
- Protected heritage areas
REGULATIONS FOR ARCHITECTURAL PLANNING IN HUNGARY (EXAMPLES)

acts e.g.:
• 1997 LXXVIII. Act – On the build environment
• 2001 LXIV. Act – On the protection of the cultural heritage

governmental orders e.g.:
• 253/1997 governmental order – On the national requirements of construction and shaping of settlements
• 312/2012. (XI. 8.) governmental order – On the procedures and controls of the construction supervision and the services of the construction authority

ministerial orders e.g.:
• 28/2011 (IX. 6.) Order of the Ministry for Home Affairs – On the regulation of fire protection

local orders e.g.:
• 47/1998 Order of the General Assembly of Budapest City – On the frame regulations about the building process and the urban shaping of Budapest

REGULATIONS FOR CONSTRUCTION PROCESS

Technical requirements:
• environmental requirements (waste management)
• use of standards
• sustainability

Safety rules:
• fire safety
• work safety
• environment protection

Process:
• documentation requirements
• process protocol
• protocol of controlling
### CONSTRUCTION PROCESS

#### (technical requirements)

**Construction management**
- environmental requirements (lifecycle of the applied materials, waste management)
- temporary structures (standards, duration)
- renting/using public territories

**Material quality**
- use of standards
- certifications
- performance

#### Documentation requirements

- construction logbook (now: e-logbook)
- certifications provided by the producers or the suppliers
- statement of completeness
- permission of use

#### Process protocol

- tender
- contract
- site arrangement – territories of responsibility
- cooperation with quality surveyor/client/architect
- hand over process

#### Control protocol

- application of standards
- controlling methods
- the work of quality surveyor
- to demand certifications from the producers or the suppliers
SAFETY REGULATIONS CONSTRUCTION PROCESS

environmental tasks
• treatment of chemicals / waste management

fire protection
• on the site

work safety
• protective equipment
• PPE (mechanical/chemical harm/radiation)
• organizational tasks (site management)

REGULATIONS FOR CONSTRUCTION PROCESS IN HUNGARY (EXAMPLES)

acts:
• 1997 LXVIII. Act – On the built environment
• 2001 LXIV. Act – On the protection of the cultural heritage
• 2011 CVIII. Act – On the public procurement

governmental orders:
• 191/2009 governmental order – On the construction process
DEF.: A technical standard is an established norm or requirement. It is a formal document that establishes uniform engineering or technical criteria, methods, processes and practices.

**STANDARDS**

**HIERARCHY OF STANDARDS**

- for a product
- for a procedure

- international standards
- national standards
- local standards
- company standards
- guidelines (used by a group of company)

ANSI, NS, TSE, SA, MSZ, DIN, ON, BS, CE, EN
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CITATION OF THE STANDARDS

...in regulations...

• in general -> all the concerning standards are prescribed

• with name -> a specific standard (the latest version) is compulsory

• with name and date -> a specific standard (the cited version) is compulsory

THE PRINCIPAL OF APPLICATION OF STANDARDS

• the use of the standards is *not obligatory* – BUT only positive alteration is accepted

  ↓

  to ensure the chance for development
STANDARDS OF THE EUROPEAN UNION

National standards

Have to be harmonized with the EU regulations (standards)!

If harmonized standard exists and it is applied, the conformance mark can be used...

...on the market in the European Economic Area (EEA)

CONFORMANCE MARK

CE = conformance mark

The manufacturer on his sole responsibility declares, that the product met the EU consumer safety requirements.

Building construction

The building is met with the EU consumer safety requirements if all used material / structural element is met with the EU consumer safety requirements:

are marked with CE marking.

or

are uniquely certified.
Basic requirements for construction products

- mechanical resistance and stability
- safety in case of fire
- hygiene, health and environment
- safety and accessibility in use
- protection against noise
- energy economy and heat retention
- sustainable use of natural resources

...for all products at which at least one of the above mentioned must be applied.

UNIQUE CERTIFICATIONS

International certifications e.g.:

ETA = European Technical Approval
in the basis of ETAG = European technical approval guideline
by EOTA = European Organization for Technical Approvals

National certifications e.g.:

EME = Építőipari Műszaki Engedély
(Hungarian national certification by the ÉMI institute)
CPR (Construction Product Regulation) 305/2011/EU

- after 30/06/2013
- for all construction products in the EU
- if there is a harmonised European Standard or an ETA exists

Declaration of Performance (DoP) must be issued!

CONTROLLING PROCESSES

<table>
<thead>
<tr>
<th>participant</th>
<th>controlling process</th>
<th>controlling aspect</th>
</tr>
</thead>
<tbody>
<tr>
<td>client</td>
<td>quality surveyor</td>
<td>every aspect</td>
</tr>
<tr>
<td>designers</td>
<td>architectural supervision</td>
<td>aesthetical quality/ accordance with the plan</td>
</tr>
<tr>
<td>contractor</td>
<td>daily controlling routine</td>
<td>every aspect</td>
</tr>
<tr>
<td>authority</td>
<td>before the construction, after the hand over</td>
<td>accordance with the plan</td>
</tr>
<tr>
<td>state</td>
<td>during the construction</td>
<td>every legal aspect</td>
</tr>
</tbody>
</table>
INTERNAL CONTROLLING PROCESS

client

project manager

controlling by the contractor

standards

controlling by the contractor

architectural supervision

QMS

quality surveyor

standards

the activity is regulated by the law

aesthetic control

CONTROLLING BY QUALITY SURVEYOR

Controlling tasks

• control of the plans in accordance with the standards and the regulations
• control of the assignment of the building
• control of the conformance of the applied material (CE, etc.)
• ensure the prosecution of the prescribed tests (e.g. soil mechanics)
• controlling quality prescribed by the standards
• controlling hidden structures and volume of the completed work before getting covered (e.g. reinforcement)
• controlling volume of the completed work
CONTROLLING BY QUALITY SURVEYOR

Administrative tasks

- continuous control of the construction logbook
- note all failures (deficiencies and faults) in the construction logbook
- informs the client if the completed work is according to the contract (volume, standards, prescriptions, etc.) – (Is it suggested for the client to pay all the bills or not?)
- take part in the hand over process

EXTERNAL CONTROLLING PROCESS

Local authority

- building consent

construction supervision by the state

- permission of use

compulsory site control involved into the procedure, before any construction work are performed

compulsory site visit during the procedure (control of the fulfilled building – control all aspects, that have to be authorized)

probable site visit during the construction process
## SOURCES

<table>
<thead>
<tr>
<th>Source</th>
<th>URL/Details</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Historic Scotland Edinburgh, 2007. P. 66</td>
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