

Version 26.3.20

## **Circular disposal of water - a study focusing on sustainability**

### **1 Project in a nutshell**

The project is aimed at small and medium-sized enterprises and their employees. SMEs from various sectors are predestined to make decisive contributions to solving current environmental problems. At the same time, the environmental sector is a growth area that offers excellent national and international market opportunities.

The environmental sector is affected by areas of outstanding environmental importance, requiring strong innovation, with particular relevance for SMEs and strong future growth. For that, existing qualification deficits should be reduced and urgently needed junior managers and specialists recruited for SMEs. Hence, in the project curricula are developed and implemented in accordance with the principles of dual education at 3 levels: initial training and further education as well as studies. Moreover, a permanent network of actors for the ongoing coordination between educational offers and qualification requirements, and for the elimination of qualification deficits will be established.

### **This study includes:**

**1.1 Work package 4 Implementation and realization initial vocational training: Training C Greywater and rainwater utilization technologies**

**1.2 Work package 4 Implementation and realization initial vocational training: Training D Technologies decentralised wastewater treatment**

**1.3 Work package 5 Implementation and realization of further vocational training: C Waste water, treatment and recycling management**

This document contains an approach to the above mentioned pilot project solution, first of all the overall learning outcomes, (chapter 3) followed by qualifications and competences obtained in order to deal with the challenges of water, waste water and waste (chapter 7). The candidates for this study are qualified craftspeople, with certificates and four years of experience, or real competence of six years or more in companies working in the fields of plumbing, landscaping, heavy machinery professionals in landscaping and building constructions.

The document also includes an outline of how these tasks will be carried out in an established Norwegian administrative learning system, including curricula, exams, practical arrangements as to e-learning, classes and related topics.

*Management and Technologies of Water, Waste Water, Waste  
and Circular Economy – WW&CE*

**It is, basically, a set of simple rules to secure solutions for future secure use of water. The sum of these rules might, however, be complex, since solutions belong to a wide picture.**

**Content overview:**

- 1 Project Study**
- 2 Technical related terms used for the course.**
- 3 Overall learning outcomes**
- 4 Qualifications needed for entry (Level EQF 5)**
- 5 European cooperation**
- 6 Literature and technical assistance**
- 7 Curricula/Topics of learning**
- 8 Water handling and specialisation through practise.**
- 9 Examination**
- 10 Real competence assessment of applicants, required practical background.**

**Introduction to a cooperation between Vea and crafts federations.**

Vea is a green vocational school in Norway, certified vocational school, contributing to a more environmentally and climate friendly society. Work is based on UN's 17 sustainability goals, both in the operation of the school and in teaching. By emphasizing sustainability in education, Vea contributes to increased sustainability thinking in the industries and thus a more environmentally and climate friendly Norway.

By completing this training, the students will acquire the necessary expertise to be able to make more sustainable choices in the execution of duties.

Sustainability is a key part of the vocational school's circular disposal of water. The need to handle water in new ways and to use this as a resource is largely based on the climate and environmental changes we are facing. By cleaning, disposing, utilizing and handling water using new technologies and methods, the student will gain insight into how the various industries can work together and find multidisciplinary solutions to reuse water and use the blue-green toolbox to reduce the large challenges in handling water, waste water and waste thus helping to achieve several UN's sustainability goals, including 50% reduction of the proportion of untreated wastewater and substantially increase the proportion of recycling and safe reuse. (UN goal 6.3) and better utilization of water in all sectors by 2030 and ensure sustainable extraction of and access to fresh water to deal with water scarcity and reduce the number affected by water shortages. (UN goal 6.4)

## **2 Technical related terms used for the course.**

Official documents are used as source, in some instances technical terms used by companies and professionals are not available.

### **Sustainable,**

Sustainability is the ability to meet the needs of the present without compromising the ability of future generations to meet their own needs.

This is the definition of sustainability as created by the United Nations World Commission on Environment and Development.

### **Circular economy,**

Circular economy is a tool that keeps the resources in circulation through (eco) design, reuse, repair and material recycling in combination with conversion of energy sources and utilization. The goal is to avoid misplaced resources, in practice waste, litter and other pollution

### **Joint management Lead,**

For the total transport of sanitary and industrial wastewater and overwater.

### **Wastewater.**

Sanitary and industrial wastewater. Especially used for wastewater discharged into own pipes by separation system.

### **Blackwater.**

Wastewater from toilets, urinals or similar

### **Gray water.**

Wastewater from the kitchen, separate shower, laundry room or similar

### **Overwater/stormwater.**

Surface runoff due to rainfall or melt water.

Local overwater disposal

SUDS=Sustainable, Urban, Drainage, System

### **Surface water, contaminated.**

Precipitation that hits untreated and treated surfaces such as asphalt, roof, pavement or other

### **Surface water, not contaminated.**

Precipitation that has not been in contact with pollutant surfaces

### **Drain water.**

Water that is led away from the ground below terrain surface.

### **Consumable water.**

Water used in household and industry

*Management and Technologies of Water, Waste Water, Waste  
and Circular Economy – WWW&CE*

**Drinking water.**

Purified water that is so pure that it can be drunk without damaging the human body.

**Infiltration.**

Water infiltration into solids or cracked mountains.

**Infiltration capacity.**

Different masses' capacity to supply water to ground and groundwater layers

**Triple strategy = Three step strategy.**

Combination of measures that infiltrate, delay and divert overwater to recipient safely.

**Distribution network.**

Municipal water and sewer pipes in the municipal network

**Permeable Covers.**

Covers that pass through water with the intention of infiltrating or reusing

**Delay Measures.**

that delay runoff through collection.

**Rainwater harvesting.**

Collecting rainwater in magazines and ponds.

**Local Water Disposal.**

Local Water Disposal is a measure that infiltrates and / or slows down water

**Hydrology.**

The science of water occurrence, circulation and distribution, as well as the physical and chemical properties of water

**Urban hydrological cycle**

Local water movement in cities and towns.

### **3 Overall learning outcomes**

#### **3.1 Knowledge**

1. The candidate has insight into the importance of new forms of water use for the benefit of the environment and to increase the competitive advantage of his own company in the markets.
2. The candidate has knowledge of measures and technology to reduce the proportion of wastewater and overwater and increase the proportion of recycling and safe reuse of water.
3. The candidate has insight into current public regulations, relevant standards and industry standards for work with wastewater and overwater.
4. The candidate has insight into the work areas of the gardener, plumber and construction worker and how the crafts use various measures and technologies to reduce the proportion of wastewater and overwater and increase the degree of safe reuse. Through this, the capacity for good ordering skills and tenders increases.
5. The candidate understands the role of his / her own subject, has good professional knowledge and knows how his / her own professional field can contribute to sustainable water management through his / her own work and interdisciplinary cooperation and understands the importance of performing well-skilled craftsmanship.
6. The candidate can update his / her professional knowledge through literature, websites, courses, seminars and professional literature such as reports and mentoring from organizations and agencies and through interaction with the relevant crafts and industries.

#### **3.2 Skills**

7. The candidate can apply professional knowledge to help in planning and designing measures for sustainable water management in his / her industry.
8. The candidate can use relevant professional tools to calculate, dimension and describe sustainable water management measures, and can apply municipal technical solutions and methods during work related to water management and technologies for circular use of water.
9. Within the field of water management, the candidate can find the relevant information and can evaluate various materials, methods and measures and, based on this, choose scientifically sound and environmentally sound solutions.
10. The candidate can assess water management measures by reading drawings and descriptions, and can reveal inappropriate solutions and help to choose environmentally sound and professionally sound solutions.

#### **3.3 General competence**

11. The candidate understands the principles of water management in order to reduce the level of contaminated water and increase the proportion of water reuse.

*Management and Technologies of Water, Waste Water, Waste  
and Circular Economy – WWW&CE*

12. The candidate understands the importance of various measures and routines in health, environment and safety work.
13. The candidate has developed an ethical attitude in the practice of water management in his own industry and understands the importance of sustainable measures in his own subject and related disciplines and has respect for these relevant disciplines.
14. The candidate can plan and coordinate work on the construction of sustainable water disposal measures and can attend to the need for necessary documentation.
15. The candidate can build relationships with relevant professional groups and others who contribute with innovative measures in water management.
16. The candidate can develop and exploit the potential of the subject area in circular economics and has a conscious attitude towards the UN's relevant Sustainability Goals.

## 4 Qualifications needed for entry (Level EQF 5)

**Admission requirements** (MUST BE REPLACED by national and local requirements and regulations)

Landscaping gardening profession with certificate  
Construction machinery profession with certificate  
Plumber with vocational education certificate.  
Road and civil engineering profession with certificate  
Plumbing profession with certificate (subject is being prepared, to be introduced in august 2020, real competence assessment, based on practical experience. In companies in these markets. See chapter 10)

### 4.1 Content of the study

Table 1 below gives an overview of the course topics and scope. In addition, the distribution is shown between student work hours, which are self-working hours, credits and teaching hours given by the vocational school.

Location-based teaching requires physical attendance at the specified place of study. The online teaching can be given as evening teaching online, tutoring and online teaching.

### 4.2 Organization and working methods

The study is online with 4 site-based sessions each semester, each of 3 days. The study starts with the first session in September and ends in April.

The teaching will partly take the form of traditional classroom teaching, online teaching, tutoring, field trips and practice.

Place-based education will mainly be carried out at Veia, but place-based education may be relevant elsewhere.

Online teaching will take place between the sessions to ensure professional input, dialogue, guidance and progress. Online meetings can be held at times agreed with the class and assignments and learning materials will be available in the learning platform. Answers and tests are submitted and evaluated. Guidance can be provided via email, Teams, Skype or other digital tools agreed with the class.

In order to follow the web-supported teaching and to complete the compulsory assignments, it is assumed that the student has basic ICT knowledge, including knowledge of the Office365 package. Students are trained in the use of a learning platform and task writing at the start of their studies.

There will be contact between the students and one of Veia's professional teachers at least once a week and students will have access to support throughout the program.

Total number of teacher-controlled hours per student. collection week is 24 hours every 45 minutes. It is calculated approx. 634 student work hours, including practice 10 days. Student work hours are hours students must calculate to use for their own work at the study.

The total number of hours worked in the program is 1000 hours of 45 minutes. This meets



*Management and Technologies of Water, Waste Water, Waste  
and Circular Economy – WWW&CE*

NOKUT's (**the Norwegian Agency for Quality Assurance in Education**) requirements for six months of study with 30 credits of a minimum of 750 working hours of 60 minutes. ***This total applies to Norway only.***

Details as to WWW & CE project requirements are covered in chapter 7.

### **4.3 Use of learning platform**

The vocational school uses, among other things, Class Notepad in OneNote and Teams to disseminate information as a digital learning tool, to administer submissions, conduct web tests and other things.

Response time and feedback:

- The current response time is 48 hours
- Time teacher is not available for response, made clear to students at the start of study.
- Deadline for assessment and feedback on:

work requirement is 3 weeks

Minor exercises: Depending on the scope, but shorter than three weeks.

**Demands to the student, practice and exams to be included. (according to national and local rules)**



## **5 European cooperation**

This vocational school study was prepared as part of the European project: Management and technologies of Water, Wastewater, Waste and circular Economy -WWW & CE. The Hanse-Parlament in Hamburg, lead partner of the European project WWW & CE, consists of 50 craft organizations in 11 countries. The Norwegian partner is the Nordic Craft Forum, chaired by Harry Bjerkeng. The project has the support of Erasmus + and Norway collaborates with six countries on quality goals for education.

One of Veia's overarching goals is to have professional development cooperation with national and international environments. Veia is affiliated with an exciting European network, FLORNET, [www.flornet.eu](http://www.flornet.eu). There is collaboration on the placement of students and teachers, participation in various seminars, workshops and much more.

Students at Veia have the opportunity to use this network for your own professional development through participation in international activities or placement with one of our partners. The vocational school facilitates that students from other countries can also visit Veia. They will then participate in the teaching of the Veia classes that have relevant study content. The teaching for the current period will be in Norwegian / English and the activities will be adapted accordingly.

These are activities that both students and teachers experience as enrichment for the learning environment. In addition, it is a unique opportunity to connect with international contacts and networks.

## **6 Literature and technical assistance**

(Separate document will be ready at a later stage)

The study emphasizes that students can retrieve subject material themselves through the use of library databases, journals, on the Internet and in professional books. Norwegian, Swedish, Danish and English literature may be relevant.

Students should all have their own laptop with Windows operating system. Several digital programs will be presented along the way that work best with Windows.

## 7 Curricula/Topic content

### 7.1 Circular disposal of water

62 Tutorials, 108 student working hours.

### 7.2 Remedial action and function for sustainable water management

122 Tutorials, 64 student working hours

### 7.3 Water and drainage technology

56 Tutorials, 284 student working hours

### 7.4 Water allocation in own industry, specialisation through practice

16 Tutorials, 50 student working hours

## 7.1 Circular disposal of water

### Learning outcomes

#### Knowledge

The candidate:

1. Has insight into the challenges of water consumption and existing pipes and wiring in Norway and can apply this knowledge to the need for sustainable measures. (1,2,4)
2. Has insight into the costs to society that Norway incurs from floods and overwater, and how the flood level classification is built up in Norway. (2)
3. Have knowledge of different uses for water and what kind of quality of water is sufficient for the variety of projects (1,4)
4. Has knowledge of the need for better utilization of water through the reuse of gray water and about the disposal of overwater to reduce the extent of damage in case of heavy rainfall. (1-4)
5. Has insight into market strategic arguments for offering sustainable services and products and knows what competitive advantages companies can offer this. (2-4)
6. Knows about the topographic and climatic differences in Norway, and the variation in groundwater levels. (2,4)

#### Skills

7. The candidate knows the UN's relevant sustainability goals and can carry out work so that relevant sustainability sub-goals are met through the disposal of water. (1,4)

### General competence

The candidate:

8. Has knowledge of how he/she can develop services and products related to water disposal in his own industry to become more sustainable through circular economic thinking. (2,4)

### 7.1.1 Curricula/topic content, themes

#### **History and development**

- A. Municipal technology in Norway from 1900 to the present
- B. Today's situation
- C. Needs of the future
- D. Water deposits
- E. Water consumption

#### **Social benefits**

- A. Social costs
- B. Flood levels
- C. Pollution contained in overwater
- D. Purification of water and air and waste disposal in urban environment
- E. Biodiversity
- F. Recovery and reuse of overwater

#### **Water**

- A. Water quality
- B. Basic hydrology and geology
- C. The water cycle
- D. Access of water

#### **Future-oriented and sustainable development.**

- A. Industry requirements
- B. Environment certification
- C. Contract requirements
- D. UN sustainability goals
- E. Need for new solutions and technological development.
- F. Market strategic arguments
- G. Sustainable products and services

#### **Reuse**

- A. Irrigation
- B. Carwash
- C. Toilet water
- D. Cleaning of streets / courtyards

#### **Water types**

- A. Gray water
- B. Black water
- C. Wastewater
- D. Contaminated water
- E. Stormwater

### 7.2. Remedial action and function for sustainable water management.

## Learning outcomes

### 7.2.1. Knowledge

The candidate:

1. Understands the importance of natural open waterways, reopening of old waterways, ponds, wetlands and has insight into the importance of preserving these and knows how various local overwater disposal measures can be connected to with these recipients. (1.2)

2. Has knowledge of how blue-green overwater disposal measures contribute to the triple strategy and about the measure's ability to biological purification of water. (Technology challenge-2) (First Flush). (1-3)

*3. Know how to make delay pools and reservoirs for water and how this water can be used for various purposes. (Technology challenge-1)*

4. Know the use and purpose of check valves and vortex chambers for emissions.(4)

*5. Has knowledge of today's uses for drinking water and how technology and technical solutions can separate waste water, purify it, reuse and utilize the water in a circular economic process and know the capacities and areas of applications of various plumbing measures. (1,4,5) (Technology challenge-2)*

6. Knows the design of rain deposits and dams beds and understands the different functions of a rain deposits and dams and knows the importance of operation and maintenance of rain deposits and dams. (1-3)

*7. Has knowledge of the importance and function of vegetation in local overwater deposits measures, as well as knowledge of how grass and landscapes can be designed to be used as infiltration areas, waterways and areas under control against flooding. (1-3) (Technology challenge-1)*

8. Has knowledge of the principles of infiltration and differences in infiltration capacity for different growth media and suitable masses. (3)

9. Have knowledge of the design, function and applications of permeable covers. (1)

*10. Has knowledge of how his/her own professional field can handle water circular economically by using technology in purification and reuse techniques or through blue-green solutions for water disposal (1-6) (Technology challenge-2)*

*11. Has knowledge of the triple strategy and how this is used when planning overwater management. (2) (Technology challenge 2)*

*12. Can update their professional knowledge through literature on relevant websites, through courses and seminars, using fact sheets and guides from various relevant professionals or through interaction in their own or nearby industries and crafts. (1-3)*

### 7.2.2 Skills

The candidate:

13. Can apply current public regulations, relevant applicable standards and norms in the work with wastewater and overwater. (1-3)

*14. Knows about the different measures for handling and storage of water and disposal of water, and can participate in planning various measures for the precipitation field. (2)  
(Technology challenge-1)*

15. Can calculate rainfall intensity from rainfall tables, calculate the runoff factor for a rainfall areas and blue/green for measures (2)

16. Can propose solutions and make simple calculations of dimensions and capacities for small local overwater handling measures. (2)

17. Can identify and assess the complexity of interdisciplinary quality assurance of the measure(2,7)

18. Has an overview of measures for the disposal of water and can suggest measures that are appropriate for the area in question and select materials that meet relevant quality measures. (1-7)

### 7.2.3 General competence

The candidate:

19. Understands the importance of systematic work and focus on both health and security as well as having good knowledge of the environmental aspects of water disposal. (2)

20. Understands the importance of following the rules and regulations of work and showing respect for neighbouring disciplines, crafts and industries. (2)

21. Knows national and local regulations relating to FDVU documentation and can prepare documentation when working with local water disposal measures for FDVU documentation. (2)

22. Understands the importance of cooperation and can plan the use of interdisciplinary expertise in a local water disposal facility. (1-3)

23. Can use relevant digital calculation models for pipe dimensioning and water handling and disposal. (2)

24. Can interact with relevant professional groups when choosing solutions and environmentally friendly materials to ensure the functioning and quality of local water disposal facilities. (1-3,7)

25. Has knowledge of water-reducing measures and can use this to reduce water consumption in a household. (4,6)

## **7.2.4 Curricula/topic content, themes**

### **1. Various local overwater measures**

- A. Green roofs
- B. Green walls
- C. Rain garden
- D. Ponds and wetlands
- E. Open waterways
- F. Areas for controlled, temporary flooding
- G. Terrain and landscaping basins
- H. Permeable covers
- I. Alternative floodways
- J. Water reservoirs

### **2. Planning and calculation**

- A. Topography
- B. Rain areas
- C. Design rainfall intensity
- D. Runoff factors
- E. Combination of measures to infiltrate, slow down and lead overwater away to recipients by applying safe measures (triple strategy)
- F. Assessment of water quality
- G. The cleansing capabilities of the measure
- H. Blue/green factors
- I. Recipient
- J. HSE, Regulations

### **3. Growth media and soil**

- A. Infiltration capacity
- B. Composition and structure
- C. Local soil
- D. Requirements and opportunities for use and reuse

### **4. Reuse of water**

- A. Reuse of water for various purposes
- B. Wastewater as a resource; the water, the nutrients, the heating.
- C. Challenges such as pathogenic microorganisms
- D. Contamination
- E. Pumps
- F. Water collection and storage
- G. Recover energy
- H. Small purification installments
- I. Separation of different water types
- J. Storing water



## **5. Purification of water**

- A. Biological purification
- B. Chemical purification
- C. Filter
- D. UV disinfection
- E. Running small purification installments
- F. Desalination of water (reverse osmosis)
- G. Run of ponds

## **6. Water Reducing measures**

- A. Water saving toilet
- B. Water saving shower
- C. Measures to prevent leaks
- D. Opportunities for reuse

## **7. Cooperation between different crafts and industries**

- A. Plan the use of interdisciplinary expertise
- B. Interaction with current professional groups
- C. Multidisciplinary quality assurance
- D. Where does one's own craft start and what do the relevant professional fields.
- E. Contribute in the area of circular disposal of water.

## **7.3 Water and drainage technology**

112 tutorials, 64 student work hours

### **7.3.1 Knowledge**

1. The candidate has knowledge of the most important Norwegian standards for pipelines and piping. (1-4)
2. The candidate has knowledge of pipes, fittings, valves and pipe parts on a wiring grid, which symbols are used and how they are used on a wiring diagram and in work drawings. (1)
3. The candidate has knowledge of water and drainage basins made of plastic and concrete, as well as the most important street goods. (2)
4. The candidate has knowledge of pipe penetrations and anchoring in basins, as well as safety routines in connection with work in the basins. (2)
5. The candidate has knowledge of how a trench is constructed, what different materials and zones it is divided into and what function they have. (4)

**6. Candidates should know the location of various pipelines and know where and how they are placed in the trench.**

### **7.3.2 Skills**

6. The candidate may install street materials and sinks in accordance with the installation instructions, production documentation and pre-accepted performance. (2)

7. The candidate can secure a manhole cover during the construction period. (2)

8. Candidate can connect mains pipes to mains for water and for drainage. (3)

9. The candidate can plan the preparation of a trench according to current municipality requirements and standards. (4)

### **7.3.3 General competence**

10. The candidate can plan municipal technical work in accordance with current requirements and regulations in a safe and professional manner. (1-4)

### **7.3.4 Curricula/topic content, themes**

#### **Construction of water and wastewater.**

- A. Symbols in water and drainage facilities
- B. Standards in the water and drainage sector
- C. Wire map
- D. Various components for wiring

#### **Assembly of basins and street materials.**

- A. HSE
- B. Various drainage sinks and manholes covers
- C. Key street materials
- D. Working in manhole covers

#### **Pipe materials and plumbing.**

- A. Installation instructions
- B. Pipe joints
- C. Plugs and main pipelines

#### **Establishment of pipe trench.**

- A. Regulation on work performance
- B. Securing personnel
- C. Construction of pipe trench

## **7.4 Water allocation, handling and disposal in own industry, specialization through practice Information on the topic**

16 Tutorials, 50 student working hours.

### **7.4.1 Learning outcomes**

*Management and Technologies of Water, Waste Water, Waste  
and Circular Economy – WWW&CE*

**Knowledge**

1. The candidate is familiar with relevant local regulations for the disposal of water and waste water management (1)
2. Has knowledge of innovative steps towards circular water disposal in his/her craft(2)

**7.4.2 Skills**

3. Can evaluate planned and implemented measures with regard to functionality and can propose changes with focus on circular water allocation. (2)

*4. Can read work drawings / descriptions / area plans, assess the interdisciplinary interaction around the functionality and be able to explain any change needs and propose possibilities for efficiency. (3)*

**7.4.3 General Competence**

5. Can propose change of practice in own industry by offering more sustainable products, services or sub-services related to water disposal in a circular economic perspective. (2)
6. Candidate is aware of the use of environmentally friendly materials and the importance of interdisciplinary cooperation in the execution of the work. (2, 3)

**7.4.4 Curricula/topic content, themes**

**Framework conditions**

- A. Plans, supervisors, norms, regulations, standards of the industrys

**Development**

- A. Innovation
- B. Needs for change
- C. Industrial development
- D. Product development
- E. Service development
- F. New technology

**Cooperation between crafts and industries**

- A. Interdisciplinary interaction
- B. New partners

## **8 Water handling and specialisation through practise.**

**Type of teaching and learning activities:** Lectures, web-supported teaching, guidance and practice

**Type of work requirements:**

A separate work requirement is given for the subject. The student will map the internship in terms of how water is handled and disposed of through the execution of the company's work. An assessment must be made of what it will mean for the company to carry out parts of the work in a way that makes the water more sustainable. It should be reflected on the extent to which it interacts with nearby professional fields around assignments and how the company can use more sustainable water management as an advantage in marketing.

**Rating:**

Guidance is given on work requirements and a grade is set.

Work requirements provide the basis for the grade in the course. An overall final grade is given for the study.

**Examination:**

The course is part of the final degree program

## 9 Examination

**Norwegian version (to be replaced by national and local rules and regulations).**

The exam will measure the extent to which the student has acquired the overall learning outcome of the study, and an overall final grade for the study shall be given.

Description of the study exam

The exam is an interdisciplinary, individual specialization assignment in which all four main subjects are represented.

The exam is an interdisciplinary case with a given water management problem. The student should describe what he can contribute to his industry and at the same time how he can solve interdisciplinary problems in collaboration with other industries.

The exam paper is published at the end of the course.

The grade is stated on the diploma.

The thesis must be submitted to the exam administration according to the given framework.

Examination period

The exam is conducted as a home exam, mainly for a two-week period after the last ordinary teaching session has been held. This is the study's exam period.

Guidance

No guidance is given during the exam.

### **Exam / assessment:**

The thesis will be assessed by subject teachers and external examiners. Grades A-F are placed on the examination paper. This is the final grade that shows the degree to which the student has reached the overall learning outcome for the study.

## **10 Real competence assessment of applicants, required practical background.**

### **Guidance to applicants on circular handling and disposal of water**

Applicants who do not meet the formal admission requirement may be assessed for real competence. This document should inform the applicant:

1. What real competence is (definition)
2. Who can be assessed for real competence
3. How the competence assessment is conducted
4. About prior competency assessment against the relevant vocational school study at Veia

#### **1. Definition**

Real competence is all competence acquired through formal, non-formal or informal learning. That is, all the knowledge and skills a person has acquired through education, paid or unpaid work, organizational experience, leisure activities or otherwise.

#### **2. Who can be assessed for real competence**

All applicants with relevant practice of a certain duration. For more detailed information on this, read under the requirements for real competence assessment for the current study.

#### **3. Implementation**

a) **PRACTICE STORY:** Applicant writes a practice narrative that describes how the applicant has acquired the various objectives in the curriculum that form the basis for the admission requirement. Practices or more formal competence acquisition described must be documented in the form of certificates, diplomas, certificates or the like.

The practice narrative is evaluated by the vocational school.

If the practice narrative does not reveal enough information, it may be appropriate to conduct an interview with the applicant:

b) **REAL COMPETENCE INTERVIEW** with applicant. Based on the received practice narrative and documentation, an interview with the applicant can be conducted to clarify whether the applicant is eligible for admission. The results of the interview are made visible in the real competence assessment document prepared by the vocational school.

c) **PRACTICAL EXAM:** In cases where the admission requirement is a professional letter, a practical test can be conducted, if the practice narrative and possible interview are not clear enough, to reveal further qualifications. Professionals who evaluate the work are appointed. This written documentation is attached to the grounds for the decision.

d) **INFORMATION FOR THE APPLICANT** The study administration will inform the applicant of decisions after the real competence assessment.

#### **4. About prior competence assessment on circular handling and disposal of water**

The competence to be gained in this study is at the level of the vocational certificate / upper secondary education. It is therefore important that applicants for real competence have relevant practices of such duration and nature that competence at the relevant upper secondary

level is acquired.

**5. Admission requirements** (MUST BE REPLACED with national requirements and regulations)

Landscaping gardening profession with certificate  
Construction machinery profession with certificate  
Plumber with vocational education certificate.  
Road and civil engineering subject with certificate  
Plumbing profession with certificate (subject is being prepared)  
or corresponding real competence

Reference is also made to the Regulations on vocational school education, chapter 2, at Norway's green vocational school - Veia, which can be found on the vocational school's website.

Teaching documents.

**A separate document will follow.**

Bibliography/support documents for students, including:

standard.no 500(Norwegian)

Building Research series 250(Norwegian)

NOU-Overwater in cities and towns as problem and resource, 2015(Norwegian)

From the web

Other information: Other legal data, supervisors, reports and fact sheets will be used during the course.



## **Teachers guide, first approach. 22.5.20.**

Wea will start with Official Norwegian Report 2015: 16 Overwater in cities and towns for the background of the study.

This, together with the UN's Sustainability Goal number 6, which runs on clean water and sanitation, will be the main pillars of the study. NOU2015: 16 addresses both economic, environmental, technical and framework conditions for water as a whole in Norwegian society, including calculations of today's pipeline and drainage networks, with our densification and development in population and our water consumption and the vulnerability around this. Otherwise, of course, a national bill, currently under consultation and scrutiny, is also important in our teaching activities.

1. A large part of the study will not only be about all the different solutions and possibilities that lie in circular disposition of water. It will also address the importance of why we should work on this, and anchor the to the situation in which society is in. To ensure circular disposal of water to take place, the various crafts and industries must put the topics we are facing higher on their agendas, and they must contribute to the development of it.
2. We are going to organize the course in multidisciplinary groups, where the various crafts and industries are represented to work on multidisciplinary tasks. Here we will work actively to bring out the core of our profession, and how the different professions can work in teams to get the best possible result. We are not making machine contractors into plumbers or plumbers into landscape gardeners, but focus on the importance of cooperation and joint contribution to achieve the best possible results.
3. We will hire professional lecturers from the crafts and industries who have pioneering experience in these topics, and we will look at what is happening within product and technology development for opportunities and solutions. The students will also develop more of this on their own as we set up practice towards our own company, so that there is a bridge between education and work situation.
4. We will mainly use the publications from Norwegian Water, Norwegian standard within blue-green factor and local overwater distribution measures. and the most relevant Building Research Papers as No. 311015, 515165, 514114, 515465, 553163. From SINTEF.

Publications on water, groundwater, energy, flood, etc, from The Norwegian Water Resources and Energy Directorate will also be important documents for us, and we will retrieve relevant data from various map services, open at [www.senorge.no](http://www.senorge.no)

## **References and teaching materials**

### **Building Research Papers**

311015: Urban Water - Overwater Management in Built Areas

515165: Small consumable water treatment installments

514114: Solution for local overwater handling in rural areas

515465: Ecological management of wastewater, separation according to source

553163: Energy efficient and water saving sanitary installations

### **Regulations on technical requirements for construction works**

See below.

### **The-planning-and-building-act**

See below.

---

# Regulations on technical requirements for construction works

---

An unofficial English translation of the regulation “Forskrift om tekniske krav til byggverk (Byggteknisk forskrift - TEK17)” for information purposes. Any disputes shall be decided on the basis of the formal regulation in Norwegian.

---

July 2017



## Content

Regulations on technical requirements for construction works .....	7
Chapter 1. Common provisions .....	8
Section 1-1 Purpose .....	8
Section 1-2 The Regulation's application to special projects.....	8
Section 1-3 Definitions .....	9
Chapter 2. Documentation of compliance with the requirements .....	11
Section 2-1 Documentation of compliance with the requirements. General requirements .....	11
Section 2-2 Verification of compliance with the requirements. Basis for detailed design and planning 11	
Section 2-3 Verification of compliance with the performance requirements. Production documents	11
Section 2-4 Documentation of execution .....	11
Chapter 3. Documentation of products .....	12
Section 3-1 Documentation of construction products .....	12
Chapter 4. Documentation for management, operation and maintenance (MOM) .....	13
Section 4-1 Documentation for the operating phase .....	13
Section 4-2 Preservation of documentation for the operating phase.....	13
Chapter 5. Degree of utilisation .....	14
Section 5-1 Determination of degree of utilisation .....	14
Section 5-2 Built-up area (BYA) .....	14
Section 5-3 Percentage of built-up area (% BYA).....	14
Section 5-4 Gross internal area (BYA) .....	14
Section 5-5 Percentage of gross internal area (% BRA) .....	15
Section 5-6 Minimum outside amenity area (MUA) .....	15
Section 5-7 Parking areas .....	15
Section 5-8 Building plots.....	15
Section 5-9 Height of buildings .....	15
Chapter 6. Calculation and measurement rules.....	16
Section 6-1 Number of storeys .....	16
Section 6-2 Height .....	16
Section 6-3 Distance .....	16
Section 6-4 Area .....	16
Chapter 7. Protection against acts of nature .....	18
Section 7-1 General requirements relating to protection against acts of nature .....	18
Section 7-2 Protection against flooding and storm surges .....	18
Section 7-3 Protection against landslides and avalanches .....	18

Section 7-4 Protection against landslides and avalanches. Exemption for tsunamis due to rock falls .	19
Chapter 8. Developed outside areas .....	20
Section 8-1 Developed outside areas.....	20
Section 8-2 Developed outside areas subject to universal design requirements .....	20
Section 8-3 Outside amenity areas .....	20
Section 8-4 General requirements relating to pedestrian access and walking lines.....	21
Section 8-5 Pedestrian access to buildings containing dwelling units.....	21
Section 8-6 Pedestrian access to construction works subject to universal design requirements.....	21
Section 8-7 Pedestrian access to outside amenity areas subject to universal design requirements ....	22
Section 8-8 Parking spaces, other standing spaces and vehicular access ways .....	22
Section 8-9 Developed outside areas.....	23
Section 8-10 Siting of construction works .....	23
Chapter 9. External environment.....	24
Section 9-1 General requirements for the external environment.....	24
Section 9-2 Substances hazardous to health and the environment .....	24
Section 9-3 Soil contamination .....	24
Section 9-4 Selected habitats.....	24
Section 9-5 Construction waste .....	24
Section 9-6 Waste management plans .....	24
Section 9-7 Surveys of hazardous waste and specification on decontamination and treatment of hazardous waste .....	25
Section 9-8 Waste separation .....	25
Section 9-9 Final report on actual disposal of waste .....	25
Section 9-10 Emissions requirements for wood-burning heaters .....	25
Chapter 10. Structural safety .....	26
Section 10-1 Life and material safety.....	26
Section 10-2 Structural safety .....	26
Section 10-3 Falling objects from and collisions with construction works .....	26
Chapter 11. Safety in case of fire .....	27
I. GENERAL REQUIREMENTS RELATING TO SAFETY IN CASE OF FIRE .....	27
Section 11-1 Safety in case of fire .....	27
Section 11-2 Hazard classes .....	27
Section 11-3 Fire classes .....	27
II. LOAD-BEARING CAPACITY AND STABILITY IN CASE OF FIRE AND EXPLOSION .....	28
Section 11-4 Load-bearing capacity and stability .....	28
Section 11-5 Safety in case of explosion .....	28
III. MEASURES TO PREVENT IGNITION AND THE DEVELOPMENT AND SPREAD OF FIRE AND SMOKE .	28
Section 11-6 Measures to prevent the spread of fire between construction works .....	28
Section 11-7 Fire sections .....	29
Section 11-8 Fire compartmentations .....	29
Section 11-9 The fire properties of products and materials.....	30
Section 11-10 Technical installations .....	30
IV. FACILITATING ESCAPE AND RESCUE .....	30

Section 11-11 General requirements relating to escape and rescue .....	30
Section 11-12 Measures that influence escape and rescue times .....	30
Section 11-13 Exits from fire compartments .....	31
Section 11-14 Escape routes .....	32
Section 11-15 Facilitating rescues of domestic animals .....	32
V. FACILITATING THE EXTINGUISHING OF FIRES .....	33
Section 11-16 Facilitating the manual extinguishing of fires .....	33
Section 11-17 Facilitating the work of rescue and firefighting personnel .....	33
 Chapter 12. Layouts of and building elements in construction works .....	34
I. INTRODUCTORY PROVISIONS RELATING TO LAYOUTS OF AND BUILDING ELEMENTS .....	34
Section 12-1 Requirements for layouts and universal design of construction works .....	34
Section 12-2 Requirements concerning accessible dwelling units .....	34
Section 12-3 Requirements for lifts in construction works .....	34
II. ENTRANCES, SAFETY IN USE, COMMUNICATION ROUTES, ROOMS AND SIMILAR .....	35
Section 12-4 Entrances .....	35
Section 12-5 Safety in use .....	35
Section 12-6 Communication routes .....	35
Section 12-7 Requirements for the design of rooms and other areas for people .....	36
Section 12-8 Entrance halls and cloakrooms .....	37
Section 12-9 Bathrooms and toilets .....	37
Section 12-10 Storage rooms and storage spaces .....	38
Section 12-11 Balconies, terraces and similar .....	38
Section 12-12 Waste system and separation of waste .....	38
III. BUILDING ELEMENTS .....	39
Section 12-13 Doors, gates and similar .....	39
Section 12-14 Stairs .....	39
Section 12-15 Balustrade design .....	41
Section 12-16 Ramps .....	41
Section 12-17 Windows and other glazed areas .....	42
Section 12-18 Signage, control and operating panels, handles, fittings and similar .....	42
 Chapter 13. Indoor climate and health .....	43
I. AIR QUALITY .....	43
Section 13-1 General requirements for ventilation .....	43
Section 13-2 Ventilation in residential buildings .....	43
Section 13-3 Ventilation in construction works for the general public and work buildings .....	43
II. THERMAL INDOOR CLIMATE .....	44
Section 13-4 Thermal indoor climate .....	44
III. RADIATION ENVIRONMENT .....	44
Section 13-5 Radon .....	44
IV. SOUND AND VIBRATIONS .....	44
Section 13-6 Sound and vibrations .....	44
V. LIGHT AND VIEWS .....	45
Section 13-7 Light .....	45
Section 13-8 Views .....	45
VI. DAMPNESS, WET ROOMS AND ROOMS WITH WATER INSTALLATIONS .....	45

Section 13-9 General requirements relating to damp .....	45
Section 13-10 Moisture from the ground .....	45
Section 13-11 Surface water .....	45
Section 13-12 Precipitation .....	45
Section 13-13 Moisture from indoor air .....	46
Section 13-14 Construction moisture .....	46
Section 13-15 Wet rooms and rooms with water installations .....	46
VII. CLEANING BEFORE THE BUILDING IS OCCUPIED .....	46
Section 13-16 Cleaning before a building is occupied .....	46
 Chapter 14. Energy.....	47
Section 14-1 General requirements .....	47
Section 14-2 Energy efficiency requirements .....	47
Section 14-3 Minimum requirements for energy efficiency.....	49
Section 14-4 Requirements for energy supply solutions .....	49
Section 14-5 Exceptions and requirements for special projects.....	49
 Chapter 15. Installations and plants.....	51
I. HEATING AND COOLING INSTALLATIONS .....	51
Section 15-1 General requirements for heating and cooling installations .....	51
Section 15-2 Central heating installations .....	51
Section 15-3 Flues and chimneys shall.....	52
Section 15-4 Heat pumps and cooling installations.....	52
II. INDOOR WATER AND DRAINAGE INSTALLATIONS.....	53
Section 15-5 Indoor water installations .....	53
Section 15-6 Indoor drainage installations .....	53
III. OUTSIDE WATER SUPPLY AND SEWERAGE INSTALLATIONS.....	54
Section 15-7 Outside water supply systems with mains network.....	54
Section 15-8 Outside sewerage installations with mains network. Surface water and drainage water	54
IV. LIFTING EQUIPMENT .....	55
Section 15-9 Lifts .....	55
Section 15-10 Rooms and shafts for lifts .....	55
Section 15-11 Unobstructed safety spaces for lifts .....	56
Section 15-12 Lifting platforms .....	56
Section 15-13 Escalators and moving pavements .....	56
Section 15-14 Stair lifts .....	57
Section 15-15 Connection between lifting equipment and harmonised standards.....	57
 Chapter 16. Lift safety inspections .....	58
Section 16-1 Lifting equipment. Administrative provisions.....	58
Section 16-2 Requirements for inspectors who perform periodic safety inspections .....	58
Section 16-3 Conditions for recognition as a lift safety inspector for lifts for people with professional	
qualifications from another EEA member state .....	59
Section 16-4 Temporary practice of safety inspections.....	62
Section 16-5 Language requirements .....	62
Section 16-6 Installation register .....	63



Section 16-7 Administrative cooperation .....	63
Section 16-8 Price adjustments.....	63
Chapter 17. Entry into force and transitional provisions .....	64
Section 17-1 Entry into force .....	64
Section 17-2 Transitional provisions .....	64

## Regulations on technical requirements for construction works

---

*Laid down by the Ministry of Local Government and Modernisation on June 19th 2017 pursuant to the Act of 27 June 2008 No. 71 relating to planning and the processing of building applications (Planning and Building Act) sections 11-1, 12-1, 21-2, 21-10, 23-8, 27-6, 28-1, 28-6, 28-7, 28-8, 29-3, 29-4, 29-5, 29-6, 29-7, 29-8, 29-9, 29-10, 30-1, 30-2, 30-3, 30-4, 30-5, 30-6, and 31-2; the Act of 16 June 1994 No. 20 relating to technical assessment bodies responsible for conducting conformity assessments, section 7; and the Act of 19 June 2009 No. 100 relating to the management of biological, geological and landscape diversity (Nature Diversity Act).*

*EEA references: The EEA Agreement, Annex II, chapter III, subsection 6 (Directive 2014/33/EU), Annex IV no. 17 (Directive 2002/91/EC), and Annex VII no. 1 (Directive 2005/36/EC, amended by Directive 2006/100/EC, Regulation (EC) 1430/2007, Regulation (EC) 755/2008, Regulation (EC) 279/2009, Regulation (EC) 213/2011 and Regulation (EC) 623/2012).*

# Chapter 1. Common provisions

---

## Section 1-1 Purpose

The Regulation is intended to ensure that projects are planned, designed and executed on the basis of good visual aesthetics, universal design, and in a manner that ensures that the project complies with the technical standards for safety, the environment health and energy.

## Section 1-2 The Regulation's application to special projects

(1) Agricultural buildings and equivalent non-agricultural buildings for domestic animals shall fulfil the requirements in:

chapters 1 to 7;

sections 8-1 and 8-4, first paragraph;

chapters 9 to 11;

sections 12-1, first paragraph, 12-4, first paragraph, 12-5, 12-6, first to fourth paragraphs, 12-7, first paragraph, 12-13, first paragraph and second paragraph (a) and (d), 12-14, first paragraph and fifth paragraph (b), 12-15, 12-16, first paragraph, 12-17 and 12-18, first and second paragraphs;

sections 13-1, first paragraph, 13-6, first paragraph (1), and third paragraph, 13-7 and 13-9 to 13-16;

chapter 14 with the exception of section 14-4; and

chapters 15 to 17.

(2) Leisure homes containing a single dwelling unit shall fulfil the requirements in:

chapters 1 to 7;

sections 8-1, 8-3 and 8-10;

chapters 9 to 11;

sections 12-1, first paragraph, 12-5, 12-7, first paragraph and second paragraph (c) and (d), 12-11, first and second paragraphs, 12-13, first paragraph and second paragraph (d), 12-14, first paragraph (a) to (d) and fifth paragraph (b), 12-15 and 12-17;

sections 13-1, first paragraph, 13-4, 13-5, 13-7 and 13-9 to 13-16;

chapter 14; and

chapters 15 to 17.

(3) The provisions in the second paragraph shall apply correspondingly to shelters for summer dairy farming, reindeer husbandry and forestry.

(4) The Regulation applies to permanent and temporary construction works and installations, with the exception of chapters 8, 12, 13 and 14, which apply insofar as they are appropriate.

(5) The Regulation applies to temporary buildings, with the exception of chapters 8, 12, and 13, which apply insofar as they are appropriate. In chapter 14, only section 14-3 applies.

(6) In buildings built as student accommodation by student welfare organisations and student housing associations that have been awarded grants for student accommodation pursuant to Regulation no. 424 of 28 January 2004 on grants for student accommodation:

it is sufficient that 20% of the dwelling units meet the requirements for accessible dwelling units in sections 12-7, fourth paragraph, 12-8, first paragraph, 12-11, third paragraph, and 12-18, third paragraph, and the requirements for the design of bathrooms and toilets in section 12-9, first paragraph;

the requirement for storage rooms pursuant to section 12-10, second paragraph, shall not apply; and all visitors shall have equitable access to a toilet in compliance with section 12-9, first paragraph, on each storey in buildings that are required to have a lift.

(7) The exceptions in the sixth paragraph also apply to other student accommodation if an encumbrance is registered on the property ensuring that the property must be used as rental accommodation for students for a period of at least 20 years from the issuance of a certificate of completion or provisional permission to use it. Verification that the encumbrance has been registered must be provided and the documentation must be approved by the municipality before project start-up permission can be given. The Ministry is the holder of the encumbrance.

(8) In the event of a change of use from an additional part to the main part or vice versa within a dwelling unit, the requirements in the Regulation apply with the exception of sections 12-2, 12-9, 12-10, second paragraph, 13-5, second and third paragraphs, 13-8 and 14-2 to 14-5. This provision only applies to changes of use of rooms that have a roof, wall or floor directly adjoining the main part of the dwelling unit. This provision only applies to changes of use in homes where construction of the home was applied for before 1 July 2011.

### Section 1-3 Definitions

The following definitions apply in this Regulation:

- a) *dwelling unit*: housing unit with all the primary functions and which will be used for residential purposes
- b) *construction work*: building, structure or civil engineering works
- c) *functional requirement*: general purpose or task that will be fulfilled in the completed construction work
- d) *pedestrian access*: footpath from a drivable road and parking to the entrance of a construction work and outside amenity area, and between these
- e) *primary functions*: living room, kitchen, bedroom, bathroom and toilet. This term is only used in connection with dwellings and requirements relating to accessible dwelling units.
- f) *entrance*: the construction work's access area by the main entrance door
- g) *equivalent standards*: standards covering the same subject area, which are based on the same assumptions, have the same validity and that similar qualities
- h) *mezzanine*: a level located between two levels with an open connection to the underlying level. An entresol can also be a mezzanine.
- i) *developed outside area*: prepared access routes, parking areas, outside amenity areas next to construction works and outside amenity areas for public use

- j) *pre-accepted performance level*: performance level specified by the Norwegian Building Authority as deemed to satisfy or helping to ensure compliance with one or more functional requirements in the Technical Regulations
- k) *production documents*: blueprints, descriptive texts, specifications and other documents that provide a basis for execution
- l) *room for continuous occupancy*: rooms for continuous occupancy in work or public buildings are work rooms and public rooms. Storerooms, corridors, hallways, cloakrooms, toilets, shower rooms and similar are not rooms for continuous occupancy. Rooms for continuous occupancy in dwelling units are living rooms and equivalent rooms, kitchens and bedrooms.
- m) *step-free*: surfaces that can have a maximum threshold height or difference in levels of 25 mm. A threshold height or difference in levels of between 20 mm and 25 mm is considered step-free if it has a chamfered edge no steeper than 45°.
- n) *performance level*: technical, functional or environmental quality, capacity or property of a construction work, building component, installation or outside area. A performance level is an interpretation and specification of a functional requirement and may be specified quantitatively or qualitatively.

## Chapter 2. Documentation of compliance with the requirements

---

### Section 2-1 Documentation of compliance with the requirements. General requirements

(1) Verification that the finished construction work complies with the requirements stipulated in the Regulation shall be provided.

(2) The verification shall be in writing.

(3) Compliance with requirements and pre-accepted performance levels may be verified by using Standards Norway's standards or an equivalent standard.

### Section 2-2 Verification of compliance with the requirements. Basis for detailed design and planning

(1) Compliance with performance levels stipulated in the Regulation is mandatory.

(2) Where performance levels are not stipulated in the Regulation, compliance with the functional requirements in the Regulation shall be verified either:

- a) by using pre-accepted performance levels; or
- b) by analyses that show that the performance levels comply with the functional requirements in the Regulation.

(3) If compliance with the Regulation's functional requirements is verified by analysis, it must be demonstrated that the method of analysis applied is suitable and valid for the purpose. The assumptions used shall be described and the reasons for using them given. The analysis shall state the necessary safety margins.

(4) The documentation shall describe how the construction work shall be designed and the performance levels that apply. The specified performance levels shall provide a sufficient basis for the detailed design and planning.

### Section 2-3 Verification of compliance with the performance requirements. Production documents

(1) Verification shall be provided showing that the designed solutions and production specifications comply with the specified performance levels

(2) Production documents that are sufficient for execution of the project shall be prepared.

### Section 2-4 Documentation of execution

Verification shall be provided showing that the execution and products chosen comply with the production documents.

## Chapter 3. Documentation of products

---

### Section 3-1 Documentation of construction products

- (1) The rules for documentation of products derive from the Regulation on sales and documentation of construction products.
- (2) Verification shall be provided, before products are incorporated into a construction work, showing that the products have the properties necessary to ensure the completed construction work will comply with the requirements in the Regulation.



## Chapter 4. Documentation for management, operation and maintenance (MOM)

---

### Section 4-1 Documentation for the operating phase

(1) The responsible designer and the responsible contractor shall, within their areas of responsibility, present the documentation required to the responsible applicant. The documentation shall provide the basis for the satisfactory commissioning, management, operation and maintenance of the construction work, technical installations and installations.

(2) In cases where such documentation is obviously superfluous, this requirement does not apply.

### Section 4-2 Preservation of documentation for the operating phase

Documentation for the operating phase shall be handed over to and preserved by the owner of the construction work.

## Chapter 5. Degree of utilisation

---

### Section 5-1 Determination of degree of utilisation

(1) The purpose is to regulate the volume of buildings above ground level and the total area of buildings in relation to the required outside amenity area, the impact on infrastructure and the relationship to the surroundings. The degree of utilisation shall be stipulated in the provisions of the land-use element of the municipal master plan or in the zoning plan for a specific area.

(2) The degree of utilisation shall be determined using one or more of the following methods:

- a) built-up area (BYA);
- b) percentage of built-up area (% BYA);
- c) gross internal area (BRA); or
- d) percentage of gross internal area (% BRA).

For areas regulated for shopping centres or shops, the degree of utilisation shall always be stipulated in terms of gross internal area (BRA).

### Section 5-2 Built-up area (BYA)

Built-up area is calculated on the basis of Norwegian Standard NS 3940:2012 Area and volume calculations for buildings, though such that parking areas are included in the basis for calculation in accordance with section 5-7. A building plot's built-up area shall be stated in m<sup>2</sup> BYA and given in whole numbers.

### Section 5-3 Percentage of built-up area (% BYA)

Percentage of built-up area indicates the ratio between the built-up area in accordance with section 5-2 and the building plot's area. Percentage of built-up area shall be stated as % BYA and given in whole numbers.

### Section 5-4 Gross internal area (BRA)

(1) The gross internal area for buildings on a building plot shall be stated in m<sup>2</sup> BRA and given in whole numbers.

(2) The gross internal area is calculated on the basis of Norwegian Standard NS 3940:2012 Area and volume calculations for buildings, though such that parking areas are included in the basis for calculation in accordance with section 5-7. The following also applies:

- a) For buildings with a storey height of more than 3 m, gross internal area is calculated as if a horizontal plane had been laid for every three metres. It may be stipulated in plans for land use that the gross internal area shall be calculated without the addition of hypothetical planes.
- b) Plan provisions shall stipulate how gross internal area that is fully or partly below ground level shall be included in degree of utilisation calculations. If the plan does not stipulate otherwise, the gross internal area below ground level shall be included in the gross internal area.

- c) When calculating gross internal area as a basis for energy calculations, the requirement to insert a hypothetical horizontal plane for every three metres for buildings with a storey height of more than 3 m shall not apply.

#### Section 5-5 Percentage of gross internal area (% BRA)

Percentage of gross internal area indicates the ratio between gross internal area in accordance with section 5-4 and the building plot area. Percentage of gross internal area shall be stated as % BRA and given in whole numbers.

#### Section 5-6 Minimum outside amenity area (MUA)

For dwellings, schools, kindergartens, etc. where the municipality has deemed it necessary to require a minimum outside amenity area, the planning provisions should indicate the minimum outside amenity area, inclusive of play areas. MUA is stated in whole m<sup>2</sup> per unit, dwelling, pupil, or child, etc. and is stated as m<sup>2</sup> MUA. Outside amenity areas are those parts of the building plot that are not built on or earmarked for driving or parking and that are suited to this purpose. The municipality may decide that all or parts of terraces and roof terraces that are covered may be counted as outside amenity areas.

#### Section 5-7 Parking areas

An application for a project shall show how parking is to be provided. Parking areas shall be included in the calculation basis for the degree of utilisation. The number of parking spaces and the intended parking solution shall be in accordance with the current zoning plan or the provisions of the municipal master plan.

#### Section 5-8 Building plots

In this chapter, a building plot means a space earmarked as an area for buildings and installations in the land-use element of a municipal master plan or in a zoning plan. Unless otherwise stipulated in the provisions for the individual plan, the stipulated degree of utilisation also applies to individual building plots.

#### Section 5-9 Height of buildings

Cornice and roof ridge heights shall be measured pursuant to section 6-2 and shall be specified with contour figures or in metres from graded ground. Deviations from the height provisions of section 29-4, first paragraph, of the Planning and Building Act shall be stipulated in the individual plan. The municipality may in the provisions of a plan, stipulate heights for various parts of a building.

## Chapter 6. Calculation and measurement rules

---

### Section 6-1 Number of storeys

The number of storeys in a building is the total number of measurable levels lying above one another and which constitute the main part and additional parts of the building. However, the following levels are not included in the number of storeys:

- a) basements that only contains an additional part that has a ceiling of less than 1.5 m above the average level of terrain around the building after grading;
- b) mezzanines with a gross internal area of less than  $\frac{1}{5}$  of the underlying full storey's gross internal area; and
- c) attics that only contain an additional part and with a gross internal area of less than  $\frac{1}{3}$  of the underlying storey's gross internal area.

### Section 6-2 Height

(1) Cornice height is the height to the intersection between the exterior surface of the outer wall and the roof surface. If the roof has a built up extension or a parapet that protrudes more than 0.3 m above the roof surface, the height is taken as the height to the top of the extension or parapet. Cornice height is measured relative to the mean height of the terrain around the building after grading is completed.

(2) Roof ridge height is the height to the intersection between two sloping roof surfaces. Roof ridge height is measured relative to the mean height of the terrain around the building after grading is completed.

(3) Height as described in section 29-4, second paragraph, of the Planning and Building Act is the average cornice height of the façade facing the boundary of an adjoining property.

(4) Municipalities may stipulate in their planning provisions that heights shall be measured relative to graded terrain, existing terrain, street level or a specified contour height. For buildings that extend across a block, the municipality decides which heights are to be used for the various parts of the building. The same applies to corner buildings and to construction works covering a very large area or that have an unusual shape.

### Section 6-3 Distance

Distance is measured as the shortest horizontal distance between the construction work's façade line and the neighbouring construction work's façade line or the boundary of an adjoining property. For construction works with protruding building elements, the distance is increased by an amount equivalent to the amount by which the building component protrudes in excess of 1.0 m from the façade line.

### Section 6-4 Area

Small projects pursuant to section 29-4, third paragraph (b), of the Planning and Building Act are buildings that have neither a total gross internal area nor a built-up area of more than 50 m<sup>2</sup> and

other small projects that cannot be measured using Norwegian Standard NS 3940:-2012 Calculation of areas and volumes of buildings.

## Chapter 7. Protection against acts of nature

### Section 7-1 General requirements relating to protection against acts of nature

(1) Construction works shall be sited, designed and constructed to ensure satisfactory protection against damage or significant nuisance from acts of nature.

(2) Projects shall be designed and constructed to ensure that construction works, building land and adjoining terrain are not exposed to damage or significant nuisance as a consequence of the project.

### Section 7-2 Protection against flooding and storm surges

(1) Construction works that would suffer particularly severe consequences due to flooding shall not be sited in areas prone to flooding.

(2) The flooding safety class of construction works in areas prone to flooding shall be stipulated pursuant to the table below. Construction works shall be sited, designed or protected against flooding such that the largest nominal annual probability in the table is not exceeded. If there is a risk to life, the same safety class as for landslides and avalanches shall apply, cf. section 7-3.

*Table: Safety classes for construction works in areas prone to flooding*

<b>Flooding safety class</b>	<b>Impact</b>	<b>Greatest nominal annual probability</b>
F1	slight	1/20
F2	moderate	1/200
F3	severe	1/1000

(3) The first and second paragraphs apply correspondingly to storm surges.

(4) Construction works shall be sited or protected such that damage due to erosion does not occur.

(5) Safety class F1 also includes the following projects where the project does not lead to reduced life safety and does not involve establishment of a new housing unit:

- a) one extension or one addition of up to 50 m<sup>2</sup> of gross internal area in the lifetime of the construction work; or
- b) change of use and conversion of up to 50 m<sup>2</sup> of gross internal area.

This provision does not apply to projects that result in the establishment of activities covered by section 7-2, first paragraph.

### Section 7-3 Protection against landslides and avalanches

(1) Construction works that would suffer particularly severe consequences due to a landslide or avalanche, including the secondary effects of a landslide or avalanche, shall not be sited in areas prone to landslides or avalanches.

(2) The landslide or avalanche safety class of construction works in areas prone to landslides or avalanches shall be stipulated pursuant to the table below. Construction works and their related

outside areas shall be sited, designed or protected against landslides or avalanches such that the largest nominal annual probability in the table is not exceeded.

*Table: Safety classes for siting construction works in areas prone to landslides or avalanches*

<b>Landslide/avalanche safety class</b>	<b>Impact</b>	<b>Greatest nominal annual probability</b>
S1	slight	1/100
S2	moderate	1/1000
S3	severe	1/5000

An equivalent level of safety shall be established in areas with a risk of quick-clay slides.

(3) Safety class S1 also includes the following projects where the project has little consequence for life safety and does not involve establishment of a new housing unit:

- a) one extension, one addition or underpinning of up to 50 m<sup>2</sup> of gross internal area in the lifetime of the construction work; or
- b) change of use and conversion of up to 50 m<sup>2</sup> of gross internal area.

The third paragraph does not apply to projects that result in the establishment of activities covered by section 7-3, first paragraph. The third paragraph does not apply to projects in areas with a risk of quick-clay slides.

#### **Section 7-4 Protection against landslides and avalanches. Exemption for tsunamis due to rock falls**

(1) Permission may nevertheless be granted to build construction works not covered by section 7-3, first paragraph, in areas prone to tsunamis due to rock falls in cases where all the following conditions are met:

- a) the consequences of building restrictions are severe and the development is socially vital;
- b) life safety is addressed by a proper emergency system based on real-time monitoring, warnings and evacuation, and a special assessment has been carried out of whether or not there should be restrictions concerning the construction of construction works that are difficult to evacuate. The warning period shall not be shorter than 72 hours and the evacuation time shall be a maximum of 12 hours;
- c) there are no alternative, appropriate, and safe building plots;
- d) physical safety measures against the secondary effects of rock falls have been clarified; and
- e) the development has been clarified in the regional master plan, land-use element of the municipal master plan or zoning plan (area zoning plan), including through an environmental impact assessment.

(2) Small extensions, additions or building below existing construction works may be permitted without the requirement for a plan pursuant to the first paragraph (e) and dispensation pursuant to chapter 19 of the Planning and Building Act, as long as the extension does not result in an increased risk to life and health.

## Chapter 8. Developed outside areas

---

### Section 8-1 Developed outside areas

Developed outside areas shall be designed such that they are sufficiently suitable for their function.

### Section 8-2 Developed outside areas subject to universal design requirements

(1) The following developed outside areas shall be universally designed pursuant to the provisions in the Regulation:

- a) outside areas for the general public;
- b) outside areas for residential buildings that require a lift;
- c) outside areas for construction works for the general public; and
- d) outside areas for work buildings.

(2) The first paragraph does not apply in cases where an outside area or parts of an outside area are, given their function, unsuitable for people with disabilities.

### Section 8-3 Outside amenity areas

(1) Outside amenity areas shall pursuant to their function be suitable for recreation, play and activities for various age groups.

(2) Outside amenity areas shall be sited and designed such that good quality is achieved with regard to:

- a) light and sun conditions; and
- b) noise and other environmental impacts.

(3) Outside amenity areas shall be designed such that people are not exposed to risks. The following shall, as a minimum, be complied with:

- a) Play areas shall be shielded from traffic.
- b) Differences in level shall be secured to prevent fall injuries.

(4) Pools, wells or similar in outside amenity areas shall be secured by means of a fence, cover or a similar barrier to prevent people from falling into them.

(5) The following apply to outside amenity areas to universal design requirements:

- a) Developed areas designated for play and recreation shall also have a horizontal field with a solid surface of at least 1.6 m x 1.6 m, which enables participation and equitable use.
- b) Differences in level in outside developed areas shall be marked with visual and tactile means.
- c) Columns, balustrades and similar shall visually contrast with their surroundings.
- d) There shall be room for a wheelchair where seating is constructed.
- e) Developed swimming areas shall be equipped or designed so that it is easy to enter and exit the water.



#### Section 8-4 General requirements relating to pedestrian access and walking lines

- (1) Pedestrian access ways must be safe and designed for the expected traffic and transport.
- (2) Key walking lines that cross open areas in larger squares and squares subject to universal design requirements must have clearly demarcated walking zones or guide lines. Surface patterns shall not convey misleading directional information.

#### Section 8-5 Pedestrian access to buildings containing dwelling units

- (1) Pedestrian access ways to buildings containing dwelling units shall:
  - a) be step-free;
  - b) have a gradient that is not steeper than 1:15, except for sections up to 5.0 m long, which may have a gradient that is not steeper than 1:12; and
  - c) have a resting platform with a minimum length of 1.5 m for every 1.0 m difference in height.
- (2) The first paragraph does not apply to buildings containing dwelling units that are not required to have a lift if the terrain is too steep to allow compliance with the gradient requirements.
- (3) Pedestrian access ways to buildings subject to accessible dwelling unit requirements shall have a minimum clearance width of 1.6 m. A minimum clearance width of 1.4 m is permitted for sections up to 5.0 m long.
- (4) Pedestrian access ways to buildings containing dwelling units that are required to have a lift shall also:
  - a) have a minimum clearance width of 1.8 m, except for sections up to 5.0 m long, which may have a minimum clearance width of 1.4 m;
  - b) have a maximum cross fall of 1:50;
  - c) have a solid, non-slip surface;
  - d) have visual and tactile demarcation; and
  - e) have the necessary lighting.

#### Section 8-6 Pedestrian access to construction works subject to universal design requirements

- (1) Pedestrian access ways to construction works subject to universal design requirements shall:
  - a) be step-free;
  - b) have a gradient that is not steeper than 1:15, except for sections up to 5.0 m long, which may have a gradient that is not steeper than 1:12;
  - c) have a resting platform with minimum dimensions of 1.6 m x 1.6 m for every 1.0 m difference in height;
  - d) have a minimum clearance width of 1.8 m, except for sections up to 5.0 m long, which may have a minimum clearance width of 1.4 m;
  - e) have maximum cross fall of 1:50;
  - f) have a solid, non-slip surface;
  - g) have visual and tactile demarcation; and
  - h) have the necessary lighting.

(2) If the terrain is too steep to comply with the gradient requirements in the first paragraph (b), a maximum gradient of 1:10 is permitted.

#### Section 8-7 Pedestrian access to outside amenity areas subject to universal design requirements

(1) In addition, pedestrian access ways to outside amenity areas subject to universal design requirements shall:

- a) be step-free;
- b) have a gradient that is not steeper than 1:15, except for sections up to 5.0 m long, which may have a gradient that is not steeper than 1:12;
- c) have a resting platform with minimum dimensions of 1.6 m x 1.6 m for every 1.0 m difference in height;
- d) have a minimum clearance width of 1.8 m, except for sections up to 5.0 m long, which may have a minimum clearance width of 1.4 m;
- e) have maximum cross fall of 1:50;
- f) have a solid, non-slip surface; and
- g) have visual and tactile demarcation.

(2) If there are several outside amenity areas with the same function, it is sufficient for at least one of these to have pedestrian access that complies with the requirements in the first paragraph (b). Other pedestrian access ways shall have a maximum gradient of 1:10.

(3) If the terrain is too steep to comply with the gradient requirements in the first paragraph (b), a maximum gradient of 1:10 is permitted.

#### Section 8-8 Parking spaces, other standing spaces and vehicular access ways

(1) Buildings containing dwelling units that are required to have a lift, construction works subject to universal design requirements, and outside areas for use by the general public shall have a sufficient number of parking spaces for people with impaired mobility where parking requirements are stipulated in, or pursuant to, the Planning and Building Act. The following apply to these parking spaces:

- a) the parking spaces must be close to the main entrance;
- b) the parking spaces must have adequate lighting; and
- c) the parking spaces must be clearly signposted and marked.

(2) Buildings containing dwelling units that are required to have a lift, construction works subject to universal design requirements, and outside areas for use by the general public shall have a sufficient number of standing spaces for wheelchairs, prams and similar as is suitable for the size and function of the construction work and the outside area.

(3) Buildings subject to accessible dwelling unit requirements and construction works subject to universal design requirements, for which no requirements for parking are stipulated in, or pursuant to, the Planning and Building Act, shall have satisfactory vehicular access ways.

### Section 8-9 Developed outside areas

- (1) Steps in outside areas must be easy and safe to navigate.
- (2) In addition, steps in outside area subject to universal design requirements shall also have:
  - a) an even gradient, and each riser shall have the same height;
  - b) handrails on both sides that follow the entire flight of stairs and are terminated with rounded off edges after the first and last step;
  - c) tactile and visual warning areas before the uppermost step;
  - d) an awareness area before and into the lowest step; and
  - e) a visually marked contrast area on the front edge of the other treads.

### Section 8-10 Siting of construction works

- (1) Construction works shall be well-adapted to the terrain with regard to good architectural design, visual aesthetic quality, nature adaptable conditions, safety, health, the environment, accessibility, usability and energy requirements.
- (2) Construction works shall be sited such that light and sun conditions, as well as sound and vibration factors, are taken into account.

## Chapter 9. External environment

---

### Section 9-1 General requirements for the external environment

Construction works shall be designed, constructed, operated and demolished in a manner that results in the least possible impact on natural resources and the external environment. Construction waste shall be handled accordingly.

### Section 9-2 Substances hazardous to health and the environment

Products that contain no, or a low content of, substances hazardous to health or the environment shall be chosen.

### Section 9-3 Soil contamination

Surveys shall be carried out to find out if there is any soil contamination when planning construction works.

### Section 9-4 Selected habitats

The following provisions apply when laid down in Regulations pursuant to sections 52 and 53, fifth paragraph, of the Nature Diversity Act concerning specific habitats, when such habitats occur in the municipality and the conditions of the habitat have not been clarified in a legally binding plan:

- a) The construction, siting and designing of the project shall take particular account of occurrences of a selected habitat to avoid diminishing the habitat's distribution and the occurrence's ecological status.
- b) Where the impact on the selected habitat has not been clarified pursuant to the rules concerning impact assessments in chapter 4 of the Planning and Building Act, the developer shall prepare an environmental impact assessment of the project's effects on the habitat.

### Section 9-5 Construction waste

(1) Construction works shall be ensured a satisfactory, intended lifetime such that the quantities of waste over a construction work's lifetime are kept to a minimum.

(2) Products suitable for reuse and material recovery shall be chosen.

### Section 9-6 Waste management plans

(1) Waste management plans shall be prepared for the following types of projects, providing an account of the planned management of construction waste by type of waste and quantity:

- a) construction, additions, extension and underpinning of a building if the project exceeds 300 m<sup>2</sup> of gross internal area;
- b) substantial modification, including façade alteration, or substantial repair of the building if the project affects more than 100 m<sup>2</sup> of the building's gross internal area;
- c) demolition of a building or part of a building that exceeds 100 m<sup>2</sup> of gross internal area; or
- d) construction, additions, extension, building below, modification or demolition of construction works and installations if the project generates more than 10 tonnes of construction and demolition waste.

(2) Projects consisting of more than one building, construction work or other civil engineering works shall be considered a single project.

#### Section 9-7 Surveys of hazardous waste and specification on decontamination and treatment of hazardous waste

(1) Projects in existing construction works shall require a survey to be carried out on building elements, installations, etc. that may constitute hazardous waste.

(2) A separate specification on decontamination and treatment of hazardous waste shall be drawn up for the projects listed in section 9-6, first paragraph, (b) to (d).

(3) The specification on decontamination and treatment of hazardous waste shall as a minimum contain information about:

- a) who carried out the survey;
- b) the date of the survey;
- c) the year of construction and previous use if known;
- d) the results of representative material tests and analyses;;
- e) the occurrence and quantity of hazardous waste by type;
- f) the location of hazardous waste in the building, indicated by a photograph or drawing in cases of doubt;
- g) how hazardous waste is identified by marking, signposting or other means;
- h) how it is planned to remove the hazardous waste;
- i) where it is planned to deliver the hazardous waste; and
- j) all findings of hazardous waste, compiled in a table.

#### Section 9-8 Waste separation

A minimum of 60% by weight of the waste generated by projects in section 9-6, first paragraph, shall be separated into different types of waste and delivered to an approved waste collection facility or directly to a resource recovery facility.

#### Section 9-9 Final report on actual disposal of waste

A final report describing the actual disposal of waste by type of waste and quantity shall be prepared for projects in section 9-6, first paragraph. Delivery to an approved waste collection facility or directly to a resource recovery facility shall be documented.

#### Section 9-10 Emissions requirements for wood-burning heaters

(1) Enclosed wood-burning heaters shall be adequately designed to satisfactorily prevent pollution. Emissions from such a heater shall not exceed the values stipulated in Norwegian Standard NS 3059:1994 Enclosed wood heaters - Smoke emission - Requirements.

(2) In those cases where old heaters worthy of preservation are necessary out of consideration to the interior of buildings of cultural-historical, antiquarian or preservation value, heaters worthy of preservation may nevertheless be used.

## Chapter 10. Structural safety

---

### Section 10-1 Life and material safety

Construction works shall be sited, designed and constructed to ensure the attainment of an adequate level of safety for people and domestic animals and to ensure that any collapse or accident does not result in unacceptably great material damage or loss to society.

### Section 10-2 Structural safety

(1) The properties of materials and products in construction works shall ensure compliance with the fundamental requirements for the construction work's mechanical resistance and stability.

(2) Construction works shall be designed and constructed to ensure the attainment of an adequate level of safety against failure and sufficient rigidity and stability for loads that may occur during their intended use. This requirement applies to construction works under construction and completed construction works.

(3) The fundamental requirements relating to the construction works' mechanical resistance and stability, including ground conditions and safety measures during construction and upon completion, can be complied with by designing construction works in accordance with Norwegian Standard NS-EN 1990 Eurocode: Basis of structural design, and underlying standards in the series NS-EN 1991 to NS-EN 1999, with associated national additions.

### Section 10-3 Falling objects from and collisions with construction works

(1) Roof and façade materials with affixed equipment and devices must be executed and fastened to ensure they do not fall down under expected climatic conditions and design loads.

(2) Construction works shall be secured so that ice and snow cannot fall onto places where people and domestic animals may be.

(3) Distances from underlying terrain to roof protrusions and other overhead fixed or movable elements of construction works shall be satisfactory to ensure collisions are avoided.

# Chapter 11. Safety in case of fire

## I. GENERAL REQUIREMENTS RELATING TO SAFETY IN CASE OF FIRE

### Section 11-1 Safety in case of fire

(1) Construction works shall be designed and constructed to ensure the attainment of an adequate level of safety in case of fire for people present in or on the construction works, for material assets, and for environmental and societal factors.

(2) There must be adequate provisions to enable the rescue of people and domestic animals and for effective fire extinguishing.

(3) Construction works shall be sited, designed and constructed to ensure that the probability of fire spreading to other construction works is minimal.

(4) Construction works where fire may pose a serious environmental hazard or affect other material societal interests shall be designed and constructed to ensure that the probability of harm to the environment or other material societal interests is minimal.

### Section 11-2 Hazard classes

Based on the threat a fire could entail in relation to danger to life and health, construction works, or different areas of use in construction works, shall be categorised into hazard classes pursuant to the table below. The hazard classes shall provide a basis for design and construction to ensure escape and rescue in case of fire.

Table: Hazard classes

Hazard classes	Construction works designed for only the sporadic presence of people	People in the construction work are familiar with the opportunities for escape, including escape routes, and can get to safety unassisted	Construction works designed for overnight stays	Intended use of the construction work does not represent a serious fire hazard
1	yes	yes	no	yes
2	yes/no	yes	no	no
3	no	yes	no	yes
4	no	yes	yes	yes
5	no	no	no	yes
6	no	no	yes	yes

### Section 11-3 Fire classes

Based on the consequences a fire could entail in relation to danger to life and health, social interests and the environment, a construction work, or different areas of a construction work, shall

be categorised into fire classes pursuant to the table below. The fire classes shall provide a basis for design and construction to ensure the construction work's load bearing capacity in case of fire.

*Table: Fire classes*

Fire class	Impact
1	Slight
2	Moderate
3	Serious
4	Very serious

## II. LOAD-BEARING CAPACITY AND STABILITY IN CASE OF FIRE AND EXPLOSION

### Section 11-4 Load-bearing capacity and stability

(1) Construction works shall be designed and constructed to ensure that the construction works as a whole, as well as its individual parts, attain an adequate level of safety with regard to load-bearing capacity and stability.

(2) The thermal load from the energy of a fire and the expected progress of a fire in the construction work must be taken into account when designing for adequate load bearing capacity and stability in case of fire.

(3) Load-bearing systems in construction works in fire classes 1 and 2 shall be designed to maintain adequate load-bearing capacity and stability for a minimum of the time necessary to escape and rescue persons and domestic animals in or on the construction work.

(4) Main load-bearing systems in construction works in fire classes 3 and 4 shall be designed to maintain adequate load-bearing capacity and stability for the complete duration of a fire, insofar as this can be modelled.

(5) Secondary construction works and construction works that are only load-bearing for one storey or for the roof shall be designed to maintain adequate load-bearing capacity and stability for the time necessary to escape and rescue persons and domestic animals in or on the construction works.

### Section 11-5 Safety in case of explosion

Construction works whose intended use may pose an explosion hazard shall be designed and constructed with relief surfaces to maintain life safety and load-bearing capacity at an adequate level.

## III. MEASURES TO PREVENT IGNITION AND THE DEVELOPMENT AND SPREAD OF FIRE AND SMOKE

### Section 11-6 Measures to prevent the spread of fire between construction works

(1) Fires shall be prevented from spreading between construction works:

- a) in order to maintain the safety of people and domestic animals; and
- b) so that a fire does not cause unreasonably large financial losses or societal consequences.



(2) The distance between low-rise construction works shall be at least 8.0 m, unless measures are taken to prevent fires spreading between the construction works during the time required for escape and rescue in the other construction works. This provision does not apply to low-rise construction works that together comprise only one housing unit.

(3) When low-rise construction works are constructed with a distance of less than 8.0 m between them, the construction works' total gross external area shall be limited so that a fire does not result in unreasonably large financial losses, unless other measures are implemented to prevent such losses.

(4) High-rise construction works shall be a minimum distance of 8.0 m from other construction works, unless the construction works are constructed to ensure that fire will be prevented from spreading throughout the full duration of a fire.

(5) Firewalls shall be designed and constructed so that they prevent fire spreading from one construction work to another, regardless of the fire service's extinguishing efforts.

(6) Construction works that, either due to their inherent properties or the activity taking place in them, entail a particularly high probability of fire spreading shall be designed, constructed and protected or sited to ensure that the particularly high probability of fire spreading to other construction works is reduced to an acceptable level.

#### Section 11-7 Fire sections

(1) Construction works shall be divided up into fire sections in order to:

- a) preserve life and health where escape and rescue may take a long time;
- b) prevent unreasonably large financial or material losses; and
- c) help ensure that a fire, given the anticipated extinguishing efforts, is limited to the fire section in which it started.

(2) Sectioning walls shall be designed and constructed so that a fire, given the anticipated extinguishing efforts, can be limited to the fire section in which it started.

(3) Within a fire section, the properties of the fire barrier between parts of the construction work with different fire classes shall be determined by the highest fire class. An underlying storey shall have a fire class at least equal to the storey above.

#### Section 11-8 Fire compartmentations

(1) Construction works shall be appropriately divided into fire compartments. Areas posing differing risks to life and health or in which the risk of fire occurring differs shall be separate fire compartments unless the same level of safety can be obtained by other means.

(2) Fire compartments shall be constructed in a manner that prevents the spread of fire and conflagration gases to other fire compartments during the time necessary for escape and rescue.

### Section 11-9 The fire properties of products and materials

(1) Construction works shall be designed and constructed to ensure that the probability of fires occurring, developing and spreading is minimal. The use of the construction work and the time necessary for escape and rescue shall be taken into account.

(2) Products and materials shall not have properties that make an unacceptable contribution to the development of a fire. Particular consideration shall be given to the possibility of ignition, speed of heat transfer, smoke production, development of burning drops and time to flashover.

### Section 11-10 Technical installations

(1) Technical installations shall be designed and installed to ensure an installation does not substantially increase the risk of a fire occurring or fire and smoke spreading.

(2) Installations intended to perform a function during a fire shall be designed and constructed to ensure their function is maintained for the necessary period of time. This also includes the supply of water, electricity or signals needed to maintain the installation's function.

## IV. FACILITATING ESCAPE AND RESCUE

### Section 11-11 General requirements relating to escape and rescue

(1) Construction works shall be designed and constructed to allow speedy and safe escape and rescue. Account shall be taken of people with disabilities.

(2) The time available for escape shall be greater than the time required to escape from the construction works. An adequate safety margin shall be included.

(3) Fire compartments shall be designed and furnished in a way that facilitates speedy and efficient warnings, escape and rescue.

(4) Escape routes from peoples' whereabouts to the exits from a fire compartment must be clear and facilitate speedy and efficient escape.

(5) During the period of time a fire compartment or escape route shall be used by people escaping, no temperatures, concentrations of smoke gases or other circumstances shall occur that hinder escape.

(6) Signs, symbols and text showing escape routes and safety equipment must be able to be read and understood while escaping when fire or smoke are developing.

### Section 11-12 Measures that influence escape and rescue times

(1) In construction works that are designed for activities that could result in escape and rescue taking a long time, proactive measures shall be implemented that increase the available escape time. The following shall, as a minimum, be complied with:

- a) Construction works, or parts of construction works, in hazard class 4 and where a lift is required shall have an automatic fire extinguishing system. Parts of a construction work with and without automatic fire extinguishing system shall be different fire sections.
- b) Construction works in hazard class 6 shall have an automatic fire extinguishing system.

- c) In those cases where an automatic fire extinguishing system is required, other measures may nonetheless be used that provide the same level of safety by hindering, limiting or controlling a fire locally where it ignites.

(2) Construction works shall have equipment that enables the early detection of fires such that the necessary escape time is reduced. The following shall, as a minimum, be complied with:

- a) Construction works designed for activities in hazard classes 2-6 shall have a fire alarm system.
- b) In construction works designed for few people and smaller construction works, smoke detectors can be used if the escape conditions are particularly simple and clear. Smoke detectors shall be connected to the mains and have a battery backup system. In fire compartments needing more than one smoke detector, the detectors shall be connected in series. In construction works without power supplied by the mains, battery-operated smoke detectors may be used.

(3) In construction works in which escape and evacuation routes may be long and involve changes of direction or that are going to be used by large numbers of people, the escape routes shall be well lit and marked such that escape can be effected in a speedy and efficient manner. Large construction works and construction works designed for a large number of people, as well as construction works designed for activities in hazard classes 5 and 6, shall have a satisfactory guide system.

(4) Construction works in hazard classes 5 and 6, other construction works for the general public and work buildings, shall have evacuation plans drawn up for them before they are occupied.

(5) The location of technical fire installations of importance for escape and rescue efforts shall be clearly identified by signs, unless the installations are intended for people in a single housing unit and the people must be expected to be well acquainted with its location.

### Section 11-13 Exits from fire compartments

(1) Fire compartments shall have at least one exit to a safe location or exits to two independent escape routes or one exit to an escape route that has two alternative directions of escape that lead to independent escape routes or safe locations.

(2) Fire compartments in construction works in hazard class 4 with up to 8 storeys can have an exit to a stairwell designed as an escape route. This requires that each dwelling unit has at least one window or balcony that is accessible for rescue and fire extinguishing efforts, cf. section 11-17.

(3) Fire compartments consisting of more than one storey, or which have a mezzanine, shall have at least one exit from each storey. In construction works in hazard classes 1, 2, 3 and 4, the exits from these levels, besides the entrance level, may be windows that facilitate safe escape. In construction works in hazard class 4 that do not require a lift, the uppermost level may have its exit via the nearest underlying level, provided an automatic fire extinguishing system is installed in the fire compartment.

(4) In low-rise construction works intended for activities in hazard classes 1, 2, 3 and 4, the exit from a fire compartment may either lead to a safe location or to an escape route that has only one direction of escape, provided that each fire compartment has windows designed for and which can facilitate safe escape.

(5) Fire compartments for a large number of people shall have an adequate number of, and a minimum of two, exits leading to an escape route.

- (6) The exit from fire compartments designed for only the sporadic presence of people can pass through another fire compartment.
- (7) Doors to escape routes shall be designed and constructed to ensure speedy escape and avoid a risk of congestion. The following shall, as a minimum, be complied with:
- a) The door shall have adequate width and height, and must be easy to open without a key.
  - b) The door shall open outwards in the direction of escape. Doors to escape routes may nevertheless open inwards against the direction of escape if there is no risk of congestion during an evacuation.

#### Section 11-14 Escape routes

- (1) Escape routes shall, in a clear and easily understandable way, lead to a safe location. They shall be of adequate width and constructed as a separate fire compartment designed for speedy and efficient escape.
- (2) Where an escape route extends to more than one storey, the stairs shall be separated from the rest of the escape route and other fire compartments, so that the stairs' function as a safe escape route is safeguarded during the stipulated available escape time.
- (3) Escape routes that have two directions of escape shall be divided into appropriate units so that smoke and conflagration gases do not block both directions of escape.
- (4) Main entrances to construction works, or a part of construction works, for large numbers of people shall facilitate safe escape.
- (5) Doors in escape routes shall be designed and constructed to ensure speedy escape and avoid a risk of congestion. The following shall, as a minimum, be complied with:
- a) The door shall be adequately wide and high, and must be easy to open without a key.
  - b) The door shall open outwards in the direction of escape. Doors in escape routes may nevertheless open inwards against the direction of escape if there is no risk of congestion during an evacuation.
- (6) A roof-covered yard or street may be used as an escape route if it is designed for safe escape. There shall also be an alternative escape route besides the roof-covered space. Small fire compartments located at courtyard level may use the roof-covered area as an escape route from both exits, provided that the space is designed for safe escape.
- (7) Lifts and escalators may not be included as parts of evacuation or escape routes. Such devices shall come to a stop in a safe manner in the event of a fire alarm. Moving pavements specially designed for safe use can be included as part of an evacuation or escape route.

#### Section 11-15 Facilitating rescues of domestic animals

Construction works designed for domestic animals shall be designed and constructed to ensure the speedy and safe rescue of domestic animals.

## V. FACILITATING THE EXTINGUISHING OF FIRES

### Section 11-16 Facilitating the manual extinguishing of fires

- (1) Construction works shall be designed for the effective manual extinguishing of fires.
- (2) In or on all construction works where a fire may occur, there shall be fire extinguishing equipment that facilitates effective firefighting efforts in the initial phase of a fire. This is in addition to any automatic fire extinguishing system.
- (3) The fire extinguishing equipment shall be sited to ensure effective extinguishing efforts. In the case of small construction works designed for activities in hazard class 1, the equipment may be located in neighbouring construction works.
- (4) The location of fire extinguishing equipment must be clearly marked unless it is intended for people in a single housing unit and the people must be expected to be well acquainted with its location.

### Section 11-17 Facilitating the work of rescue and firefighting personnel

- (1) Construction works shall be sited and designed to ensure rescue and firefighting personnel, and their required equipment, are able to gain useful access to and inside the construction works for rescue and firefighting efforts.
- (2) Construction works shall be designed to ensure that fires can be easily located and fought.
- (3) Technical fire installations of importance for escape and firefighting efforts shall be clearly marked.

# Chapter 12. Layouts of and building elements in construction works

---

## I. INTRODUCTORY PROVISIONS RELATING TO LAYOUTS OF AND BUILDING ELEMENTS

### Section 12-1 Requirements for layouts and universal design of construction works

- (1) Construction works shall have a layout adapted to the construction works' function.
- (2) Construction works for the general public and work buildings shall be universally designed pursuant to the provisions in the Regulation, unless the construction work or parts of the construction work is, given its function, unsuitable for people with disabilities.

### Section 12-2 Requirements concerning accessible dwelling units

- (1) Dwelling units in a building that is required to have a lift shall have all the primary functions on the entrance level of the dwelling unit. The entrance level shall be accessible to people with disabilities pursuant to the provisions in the Regulation.
- (2) In a building subject that is required to have a lift, cf. section 12-3, it is nonetheless sufficient that at least 50% of the dwelling units with a gross internal area of up to 50 m<sup>2</sup> meet the requirement relating to accessible dwelling units and the requirement relating to the design of bathrooms and toilets in section 12-9, first paragraph. When applying for permit to build several buildings, the exemption applies to all the buildings together.
- (3) Dwelling units in a building that does not require a lift and that have all the primary functions on the entrance level of the building, shall be accessible at the entrance level pursuant to the provisions in the Regulation, unless the pedestrian access meets the conditions for exemption in section 8-5, second paragraph.

### Section 12-3 Requirements for lifts in construction works

- (1) Construction works for the general public and work buildings with two or more storeys shall have lifts. Construction works with up to three storeys and little traffic by people may have a lifting platform instead of a lift. Lifts and lifting platforms shall be designed in accordance with the Lifts Directive and the Machinery Directive, respectively. The following requirements apply in relation to sizes:
- a) In construction works with at least three storeys or more, at least one lift car shall have minimum interior dimensions of 1.1 x 2.1 m.
  - b) In construction works with two storeys, at least one lift car shall have minimum interior dimensions of 1.1 x 1.6 m.
  - c) Lifting platforms shall have minimum interior dimensions of 1.1 m x 1.6 m.
- (2) Buildings with three storeys or more containing dwelling units shall have lifts. Buildings with three storeys containing dwelling units may have a lifting platform instead of a lift. The lifting platform shall serve a maximum of six dwelling units. The following requirements apply in relation to sizes:

- a) At least one lift car shall have minimum interior dimensions of 1.1 m x 2.1 m.
  - b) Lifting platforms shall have minimum interior dimensions of 1.1 m x 1.4 m.
- (3) The requirement for a lift or lifting platform in the second paragraph does not apply to:
- a) small houses containing a single dwelling unit; and
  - b) where access from the entrance to the dwelling unit is not more than one storey.
- (4) When calculating the number of storeys in connection with the requirements relating to lifts, the exceptions in section 6-1 (a) to (c) do not apply.

## II. ENTRANCES, SAFETY IN USE, COMMUNICATION ROUTES, ROOMS AND SIMILAR

### Section 12-4 Entrances

- (1) Entrances shall be clearly visible, centrally located and easily understood in relation to access. Entrances shall be safe and easy to use.
- (2) Buildings subject to accessible dwelling unit requirements and construction works subject to universal design requirements shall comply with the following:
- a) The lighting installed in entrances shall ensure the entrance and main entrance doors are visible in relation to surrounding surfaces.
  - b) There must be a visual and tactile awareness area in front of main entrance doors.
  - c) Entrances shall be step-free.
  - d) There shall be a horizontal area with minimum dimensions of 1.5 m x 1.5 m outside main entrance doors. If the door is side-hinged, the area shall lie outside the swing radius of the door.
  - e) Automatic door opener buttons shall be located in a position accessible to people in wheelchairs and such that impact with doors are avoided.

### Section 12-5 Safety in use

Construction works shall be designed to ensure any risk of harm to people and domestic animals through collisions or falls is avoided.

### Section 12-6 Communication routes

- (1) Communication routes shall be safe and usable for the expected traffic and transport.
- (2) Communication routes shall be easy to find and orient oneself in.
- (3) Level differences shall be clearly marked and have the necessary lighting.
- (4) Openings in floors shall be secured to ensure that people and domestic animals are not exposed to risks.
- (5) Buildings subject to accessible dwelling unit requirements shall, in addition to the first to fourth paragraphs, comply with the following:
- a) Communication routes to accessible dwelling units shall be step-free.
  - b) Corridors and porticoes shall have a minimum clearance width of 1.5 m. Long corridors shall

have adequate space that allows two wheelchairs to pass each other. Sections shorter than 5.0 m, which have no doors, may have a minimum clearance width of 1.2 m.

(6) Construction works subject to universal design requirements shall, in addition to the first to fourth paragraphs, comply with the following:

- a) Communication routes shall be step-free. Gradients shall not be steeper than 1:15.
- b) Corridors and gallery access shall have a minimum clearance width of 1.5 m. Long corridors shall have adequate space that allows two wheelchairs to pass each other. Sections shorter than 5.0 m, which have no doors, may have a minimum clearance width of 1.2 m.
- c) There shall be signage and marking that provides the general public with necessary information. Signage and marking shall be easy to read and understand. There shall be a minimum visual luminance contrast of 0.8 between text and the background colour. Signage and marking shall be sited in an accessible location and be easily visible to seated people and pedestrians. The storey number shall be visually and tactilely readable on all storeys.
- d) Auditory information shall be supplemented with visual information.
- e) Dazzling lighting shall be avoided in communication routes.
- f) Columns and similar elements shall be sited to ensure they do not obstruct communication routes. Columns and similar elements shall have a minimum luminance contrast of 0.4 in relation to their surroundings or be marked at two heights with a minimum luminance contrast of 0.8 in relation to the background colour.
- g) Directional information shall be provided if necessary where the direction of travel changes. Repeated information shall be as identical as possible throughout the building.
- h) Large rooms, where the main walking lines cross open spaces, shall have defined walking zones or guide lines. Patterns in the floor that convey misleading directional information shall be avoided.

## Section 12-7 Requirements for the design of rooms and other areas for people

(1) Rooms and other areas for people shall be designed and have a ceiling height and space adapted for their function.

(2) Ceiling heights in dwelling units shall comply with the following:

- a) Rooms for continuous occupancy shall have a minimum height of 2.4 m.
- b) Rooms not intended for continuous occupancy shall have a minimum height of 2.2 m.
- c) Leisure homes containing a single dwelling unit shall have a minimum height of 2.2 m.
- d) Parts of a room may have a lower ceiling height where this does not affect the room's intended function.

(3) In connection with change of use in a dwelling unit from an additional part to the main part or vice versa, ceiling height may be lower than 2.4 m.

(4) Accessible dwelling units shall be dimensioned for wheelchairs on the entrance level. The following shall be complied with:

- a) Rooms shall have step-free access and turning space for wheelchairs.
- b) Rooms shall be designed to ensure that people in wheelchairs can operate necessary functions in a satisfactory manner.



- c) Rooms for continuous occupancy shall have access ways with a clearance width of 0.9 m to doors and windows outside furnished zones.

(5) Rooms and other areas for people in construction works subject to universal design requirements shall have:

- a) a design and dimensions that enable equitable participation; and
- b) step-free access and wheelchair turning spaces. Spaces for wheelchairs shall be sited to ensure people in wheelchairs can operate necessary functions in a satisfactory manner.

(6) Construction works subject to universal design requirements shall have a reception or noticeboard where necessary. Receptions and noticeboards shall be easy to find and centrally sited in relation to the main access point.

(7) In construction works subject to design for universal accessibility requirements that have a large number of rooms with the same function, it is sufficient for 1/10 of the rooms to be designed for universal accessibility pursuant to the provisions in the Regulation. However, this does not apply in cases where the expected use indicates that more or all rooms should be universally designed.

#### Section 12-8 Entrance halls and cloakrooms

(1) Entrance halls or entrances to accessible dwelling units shall have:

- a) an access way with a clearance width of 0.9 m outside the furnished zone; and
- b) space for a wheelchair turning area beyond the door's swing radius.

(2) In the case of construction works subject to universal design requirements, at least 1/10 of the cloakrooms shall have facilities with a maximum operating height of 1.2 m.

#### Section 12-9 Bathrooms and toilets

(1) Dwelling units shall have at least one bathroom and toilet that comply with the following:

- a) The size and layout must be such that there is unobstructed floor space for a wheelchair turning area in front of the toilet, a minimum of 0.9 m unobstructed floor space on one side of the toilet and a minimum of 0.2 m on the other side. There shall be an access way with a minimum clearance width of 0.9 m to the unobstructed space at the side of the toilet.
- b) It shall be possible to install a step-free shower zone. There shall be an access way with a minimum clearance width of 0.9 m to the shower zone.
- c) Walls in the shower and toilet zone shall enable the subsequent mounting of the necessary equipment.

(2) On storeys with a bathroom or toilet in construction works subject to universal design requirements, 1/10, and a minimum of one of these bathrooms and toilets shall be designed in compliance with the following:

- a) The flooring and walls shall have a visible colour contrast. Fixed equipment shall have a visible contrast in relation to the flooring and walls.
- b) The size and layout shall ensure there is unobstructed floor space for a wheelchair turning area in front of the toilet and a minimum of 0.9 m free floor space on both sides of the toilet. There shall be an access way with a minimum clearance width of 0.9 m to the unobstructed space at the side of the toilet. Toilets shall have hand supports on both sides.
- c) There shall be adequate unobstructed space under the wash hand basin.

- d) Shower zones shall be step-free and minimum 1.6 m x 1.3 m. The heights of showerheads shall be adjustable, and shower zones shall enable the mounting of the necessary equipment.

#### Section 12-10 Storage rooms and storage spaces

- (1) Dwelling units shall have adequate, suitable space for storing clothing and food.
- (2) Dwelling units shall have a storage space or a storage room of a minimum of 5.0 m<sup>2</sup> of gross internal area for bicycles, sports equipment, prams and similar. Dwelling units with a gross internal area of up to 50 m<sup>2</sup> shall have storage space of at least 2.5 m<sup>2</sup> of gross internal area.
- (3) Dwelling units subject to accessibility requirements shall have step-free access to the storage space or storage room. The required storage space or storage room shall be accessible when using a wheelchair.

#### Section 12-11 Balconies, terraces and similar

- (1) Balconies, terraces and similar shall have adequate safety features and quality of use.
- (2) Level differences greater than 0.5 m shall be secured with balustrades, cf. section 12-15.
- (3) Buildings subject to accessible dwelling unit requirements and construction works subject to universal design requirements shall comply with the following:
  - a) Access ways to balconies, terraces, outside spaces and similar shall be step-free in work buildings and public buildings and on the entrance level of dwelling units.
  - b) Balconies, terraces and similar shall have unobstructed floor space for a wheelchair turning area.

#### Section 12-12 Waste system and separation of waste

- (1) There shall be facilities for separation of waste according to source . Semi-underground waste containers, pneumatic disposal units or other waste systems shall be designed and constructed to prevent bothersome noise, odours or other nuisances.
- (2) Common waste systems for residential buildings subject to accessible dwelling unit requirements and construction works subject to universal design requirements shall be easily accessible, have step-free access and have a maximum disposal height of 1.2 m.

### III. BUILDING ELEMENTS

#### Section 12-13 Doors, gates and similar

(1) Doors, gates and similar elements shall be easy to see and use and shall be designed in a way that prevents harm to people, domestic animals or equipment.

(2) Their width and height shall be designed for the expected traffic and transport, including escape in case of fire and shall, as a minimum, comply with the following:

- a) Entrance doors and doors in communication routes shall have a minimum clearance width of 0.86 m. The minimum clearance width in construction works designed for large numbers of people shall be 1.16 m.
- b) Internal doors in dwelling units shall have a minimum clearance width of 0.76 m.
- c) Internal doors in construction works subject to universal design requirements shall have a minimum clearance width of 0.86 m. Doors to bathrooms in overnight rooms that are exempt from universal design requirements pursuant to section 12-7, seventh paragraph, shall have a minimum clearance width of 0.76 m.
- d) Doors in saunas, refrigerated storage rooms, and deep-freeze storage rooms shall open outwards and be able to be opened from the inside without a key.
- e) Doors shall have a minimum clear height of 2.0 m.

(3) Buildings subject to accessible dwelling unit requirements shall comply with the following:

- a) The maximum opening force required to open doors to, and in, access and escape routes that are designed to be opened manually shall be 30 N.
- b) Automatic door opener buttons shall be installed outside the swing radius of the door. Buttons shall be clearly visible and located at an operating height of between 0.8 m and 1.2 m above the floor. Door opener buttons shall be sited at a sufficient distance from inside corners.
- c) Doorsills shall be step-free.
- d) Sliding doors and side-hinged doors shall have enough side clearance to allow people in wheelchairs to open and close the door. This requirement does not apply to doors with an automatic door opener.

(4) In addition to the first to third paragraphs, the following apply to construction works subject to universal design requirements:

- a) The requirement relating to the opening force for doors in the third paragraph (a) only applies to doors to, and in, the main access way and the main escape route.
- b) Doors shall be visible relative to the surrounding walls. The minimum luminance contrast shall be 0.4.

#### Section 12-14 Stairs

(1) Stairs must be easy and safe to use. The width and height of stairs shall be designed for the expected traffic and transport, including escape in case of fire. The following shall, as a minimum, be complied with:

- a) Stairs shall have safe edges and handrails on both sides.

- b) The upper edge of at least one handrail shall be between 0.8 m and 0.9 m above the floor or steps.
- c) Flights of stairs shall have a regular gradient, and the risers shall be the same height for the entire length of the flight of stairs.
- d) Treads in the walking line shall be a minimum of 0.25 m. Treads in straight flights of stairs shall have the same tread depth.
- e) Landings shall be large enough to prevent and halt falls. Height differences of more than 3.3 m require a landing.
- f) Stairwells shall be well lit so that the steps are visible.
- g) Treads shall have a non-slip surface.
- h) Straight flight of stairs shall have a minimum clearance width of 0.90 m and minimum clearance height of 2.1 m. Straight, internal flights of stairs in dwelling units shall have a minimum clearance width of 0.80 m and minimum clearance height of 2.0 m.
- i) Flights of stairs that are not straight shall have a minimum clearance width that is 0.10 m wider than the requirement in (h).

(2) In addition to the first paragraph, the following apply to main flights of stairs that serve more than one dwelling unit:

- a) Straight flights of stairs shall have a minimum clearance width of 1.10 m and a minimum clearance height of 2.1 m.
- b) Handrails shall:
  - 1. be at the same height, with an upper edge height of 0.8 m, or at two heights, with upper edge heights of 0.9 m and 0.7 m respectively, measured from the tread's front edge;
  - 2. continue beyond the top and bottom steps and have rounded ends; and
  - 3. follow flights of stairs continuously, including around mid-level landings.
- c) Treads shall be marked such that a minimum luminance contrast of 0.8 is attained in relation to the colour of the steps. The marking on treads shall span the entire width of the step and be a maximum of 0.04 m deep.
- d) The depth of landings from the front edge of a step or from the bannister to the opposite wall shall be a minimum of 1.5 m.
- e) Treads in curved flights of stairs shall have a minimum width of 0.15 m along the inside walking line. In curved flights of stairs in escape routes for large numbers of people, the minimum tread width along the inside walking line shall be 0.20 m.

(3) In addition to the requirements in the first and second paragraphs, the following apply to construction works subject to universal design requirements:

- a) Main flights of stairs shall have a minimum clearance width of 1.20 m.
- b) Handrails shall have a minimum luminance contrast of 0.8 in relation to the background colour. At the beginning of each storey, the storey indicator shall be marked. Handrails shall continue 0.3 m beyond the top and bottom steps and have rounded ends.
- c) There shall be a warning area in front of the top step and an awareness area in front of and up to the bottom step spanning the entire width of the flight of stairs. The warning area and awareness area shall be tactilely and visually marked with a minimum luminance contrast of 0.8 in relation to the background colour.

(4) Handrails in buildings subject to accessible dwelling unit requirements and construction works subject to universal design requirements shall be designed to provide a good grip.

(5) The following exceptions apply to the requirements stipulated in the first to fourth paragraphs:

- a) Handrails are not required on both sides where they would obstruct access to seating and standing room in amphitheatres, sports arenas, etc.
- b) Stairs and ladders used exclusively in connection with the operation of the construction work shall be designed to be functional, based on their intended use, and such that user safety is maintained, but are otherwise exempt from the provisions in this section. This exception does not apply if stairs or ladders are part of an escape route.

### Section 12-15 Balustrade design

(1) The design and height of balustrade shall prevent falls and collisions, and balustrades shall be designed to prevent climbing.

(2) Balustrades in flights of stairs and ramps shall have a minimum height of 0.9 m above the floor or steps. The height requirement also applies to balustrades and bannisters on landings and mid-level landings.

(3) Balustrades in or on balconies, terraces, stands in arenas, passageways and similar shall have a minimum height of:

- a) 1.2 m where the height difference between levels is more than 10.0 m; or
- b) 1.0 m where the height difference between levels is up to 10.0 m.

(4) If the difference in height to the terrain or underlying level is less than 3.0 m, other acceptable safety devices than balustrades can be used.

(5) Openings in balustrades shall be a maximum of 0.10 m up to a minimum height of 0.75 m. In balustrades over 1.0 m, openings in the balustrades shall be maximum 0.10 m up to a height of at least 0.25 m below the top of the balustrade. The maximum horizontal distance between a building component and the balustrades affixed to its outer surface shall be 0.05 m.

### Section 12-16 Ramps

(1) The width of ramps shall be adapted to the expected transport. The minimum width shall be 0.9 m.

(2) Ramps shall have an even, non-slip surface and a maximum gradient of 1:15. A maximum gradient of 1:12 is permitted for sections of up to 3.0 m. For each 1.0 m of difference in elevation, there must be a horizontal resting level with a length of a minimum of 1.5 m.

(3) Ramps shall have handrails on both sides at one height, with the upper edge 0.8 m above the surface, or at two heights, with the respective upper edges 0.9 m and 0.7 m above the surface. Handrails shall visually contrast with the walls and balustrades. Handrails shall be designed to provide a good grip.

(4) In construction works subject to universal design requirements, the start of a ramp shall be marked across the entire span of the ramp with a minimum luminance contrast of 0.8 between the marking and the background.

## Section 12-17 Windows and other glazed areas

(1) Windows and other glazed areas that if broken could cause harm to people or domestic animals shall be protected against collisions and falls up to a minimum height of 0.8 m above the floor. Such protection may take the form of a parapet, safety glass or some other acceptable method. In general the following apply:

- a) In buildings with dwelling units, glazed areas facing balconies, terraces and similar shall be protected. In addition, windows and other glazed areas in exterior walls more than 6.6 m above the terrain or an underlying surface shall be secured.
- b) In construction works subject to universal design requirements, windows and other glazed areas in exterior walls above the terrain shall be protected. In schools and kindergartens, all windows and other glazed areas shall be secured in places where children may be present.
- c) Glazed areas in entrances and communication routes shall be protected in the direction of traffic.

(2) Glazed areas in entrances and communication routes where there may be a risk of collision shall be contrast-marked with glass markings that are visible on both sides and at two levels, with their centres at 0.9 m and 1.5 m above the floor. Patterns in glass markings on doors shall be different from those in glass markings in nearby glazed areas.

(3) Windows in construction works where children may be present shall have a child-safety catch if the window is more than 3.3 m above the terrain or underlying surface.

(4) Windows and glazed areas shall be able to be cleaned and maintained without risk.

## Section 12-18 Signage, control and operating panels, handles, fittings and similar

(1) Signage, control and operating panels, handles, fittings and similar shall be easy to understand and operate.

(2) Information shall be easy to read and understand. There shall be a visible contrast between text and its background, with a minimum luminance contrast of 0.8. Important information shall be accessible via text and sound. Sound may be replaced by tactile signs.

(3) Buildings subject to accessible dwelling unit requirements and construction works subject to universal design requirements shall also comply with the following:

- a) Operating panels shall be located at an operating height of between 0.8 m and 1.2 m above the completed floor.
- b) Handles shall be placed at an operating height of between 0.8 m and 1.2 m, be designed with a functional grip and require an operating force that makes them easy to use.
- c) Wash hand basin and shower fixtures shall be able to be operated using one hand. Shower fixtures shall have a thermostat. These requirements do not apply to buildings subject to accessible dwelling unit requirements.
- d) In those cases where, pursuant to the Regulation, there shall be openable windows, at least one window must be able to be operated using one hand. The handle shall require little operating force and be located where it can be reached from a sitting position. This does not apply to construction works for the general public.
- e) In rooms and other similar areas where, from a safety perspective, it is acceptable, a sufficient number of power sockets shall be installed such that they can be operated by people with disabilities.

# Chapter 13. Indoor climate and health

---

## I. AIR QUALITY

### Section 13-1 General requirements for ventilation

- (1) Buildings shall have ventilation that ensures satisfactory air quality through:
  - a) ventilation adapted to the rooms' design, intended use, pollution and humidity loads;
  - b) satisfactory air quality in the building with regard to odour; and
  - c) indoor air that does not contain harmful concentrations of pollutants that pose health hazards or cause irritation.
- (2) Buildings and buildings' ventilation systems shall be sited and designed to ensure the quality of supply air. If the quality of the outside air is unsatisfactory it shall be purified before being piped into the building to prevent health risks or the risk of fouling ventilation equipment.
- (3) Ventilation shall be adapted to the pollution loads from people.
- (4) Air shall not be piped from rooms with lower air quality requirements to rooms with higher air quality requirements.
- (5) Air inlets and outlets shall be designed and sited to ensure that pollution from outlets does not re-enter inlets and such that the air entering the inlet is as unpolluted as possible.
- (6) Circulating air shall not be used if this results in the transfer of pollutants between rooms where people are present.
- (7) Products for construction works shall emit low levels of or no pollution into the indoor air.

### Section 13-2 Ventilation in residential buildings

- (1) Dwelling units shall have ventilation that ensures an average supply of fresh air at a minimum rate of 1.2 m<sup>3</sup> per hour per m<sup>2</sup> of floor space when the dwelling unit is occupied.
- (2) Bedrooms shall be supplied with a minimum of 26 m<sup>3</sup> of fresh air per hour per planned bed space when the room is in use.
- (3) Rooms not intended for continuous occupancy shall have ventilation that ensures at least 0.7 m<sup>3</sup> of fresh air per hour per m<sup>2</sup> of floor space.
- (4) Kitchens, toilets and wet rooms shall have satisfactorily effective vents.

### Section 13-3 Ventilation in construction works for the general public and work buildings

- (1) An average supply of fresh air at a minimum rate of 26 m<sup>3</sup> per hour per person shall be supplied due to the pollution caused by people performing light activities. If activities other than light activities are to be performed, the supply of fresh air shall be adapted such that the air quality is satisfactory.
- (2) The minimum supply rate of fresh air due to pollution from materials, products and systems shall be:
  - a) 2.5 m<sup>3</sup> per hour per m<sup>2</sup> of floor space when the housing unit or rooms are in use

- b) 0.7 m<sup>3</sup> per hour per m<sup>2</sup> of floor space when the housing unit or rooms are not in use.
- (3) Rooms with polluting activities and processes shall have adequate extraction to maintain satisfactory air quality.

## II. THERMAL INDOOR CLIMATE

### Section 13-4 Thermal indoor climate

- (1) The thermal indoor climate in rooms intended for continuous occupancy shall be regulated in a manner that promotes health and satisfactory comfort when the rooms are used as intended.
- (2) In rooms for continuous occupancy it must be possible to open at least one external window or door.
- (3) The second paragraph does not apply to rooms in work buildings and public buildings where openable windows are undesirable in light of their use.

## III. RADIATION ENVIRONMENT

### Section 13-5 Radon

- (1) The annual average radon concentration in buildings with rooms for continuous occupancy shall not exceed 200 Bq/m<sup>3</sup>.
- (2) Buildings with rooms for continuous occupancy shall:
- a) have a radon barrier against the ground; and
  - b) be designed for pressure reducing measures in the ground below the building that can be activated when the concentration of radon in the indoor air exceeds 100 Bq/m<sup>3</sup>.
- (3) The second paragraph does not apply if it can be documented that the measures are unnecessary to satisfy the requirements in the first paragraph.

## IV. SOUND AND VIBRATIONS

### Section 13-6 Sound and vibrations

- (1) Acoustic conditions shall be satisfactory for people inside construction works and in outside amenity areas designated for recreation and play. Requirements relating to acoustic conditions apply on the basis of their intended use and can be met by ensuring compliance with sound class C in Norwegian Standard NS 8175: 2012 Acoustic conditions in buildings - Sound classification of various types of buildings.
- (2) For student accommodation covered by section 1-2, sixth and seventh paragraphs, there is adequate airborne sound insulation between rooms for continuous occupancy in dwelling units and communal areas or communication routes if the minimum weighted, field-measured sound reduction rating ( $R_w$ ) is 45 decibels.
- (3) Vibration conditions shall be satisfactory for people inside construction works and in outside amenity areas designated for recreation and play.



(4) Construction works for the general public and work buildings shall have sound and voice transmission equipment, unless it can be documented that this is unnecessary to achieve good speech intelligibility. Entrances to rooms with amplified audio and speech transmission shall be clearly marked.

## V. LIGHT AND VIEWS

### Section 13-7 Light

- (1) Construction works shall have adequate access to light.
- (2) Rooms for continuous occupancy shall have adequate access to daylight.
- (3) The second paragraph does not apply to rooms in work buildings and construction works for the general public where the intended use indicates otherwise.

### Section 13-8 Views

- (1) Rooms for continuous occupancy shall have a window that provides a satisfactory view.
- (2) The first paragraph does not apply to rooms in work buildings and construction works for the general public where the intended use indicates otherwise.

## VI. DAMPNESS, WET ROOMS AND ROOMS WITH WATER INSTALLATIONS

### Section 13-9 General requirements relating to damp

Groundwater, surface water, precipitation, service water and humidity shall not penetrate and lead to damp damage, mould and fungi growth or other hygiene problems.

### Section 13-10 Moisture from the ground

Necessary measures shall be put in place around building elements below ground level and under floors on the ground to divert seeping water and prevent moisture from penetrating into the construction works.

### Section 13-11 Surface water

The terrain around construction works shall have an adequate slope away from the construction work, unless other measures have been taken to divert surface water, including roof water.

### Section 13-12 Precipitation

- (1) Façade cladding, windows, doors, and installations that penetrate walls shall be designed to allow precipitation that penetrates them to be drained away and moisture to dry out without damage occurring.
- (2) Roofs shall be designed and constructed with sufficient pitch and drainage so that rain and melt water drain away. Rain, melting snow and ice shall not result in damage to the construction works.
- (3) In ventilated roof construction works where condensation can occur on the underside of the roofing material or where the roofing material is not sufficiently impermeable to prevent the penetration of water, the underlying construction work shall be protected by a watertight sheathing.

### Section 13-13 Moisture from indoor air

Building elements and construction works shall be designed and constructed to ensure that moisture damage does not arise as a result of condensed water vapour from indoor air.

### Section 13-14 Construction moisture

Products and construction works shall be so dry at the time they are built in or sealed that problems from mould and fungi growth, decaying organic materials or increased degassing do not arise.

### Section 13-15 Wet rooms and rooms with water installations

(1) Wet rooms shall be designed and constructed to ensure damage does not occur to construction works or products because of service water, water spills, leaking water and condensation.

(2) The following shall, as a minimum, be complied with in wet rooms:

- a) The room shall have a gully.
- b) Floors shall be sufficiently sloped towards the gully so that service water is led away.
- c) Leaking water shall be made visible and led to the gully.
- d) Underlying construction works that may be adversely affected by moisture shall be protected by a suitable watertight layer. Ducts and similar shall not compromise the tightness.

(3) Other rooms with water installations shall comply with the following:

- a) Floors and walls that may be subjected to water spills, leaking water or condensation shall be made from moisture-resistant materials.
- b) Rooms shall be designed so that any leaks are made visible.
- c) Building elements with built-in cisterns or similar installations shall be protected against moisture penetration from leaks from the installation.

## VII. CLEANING BEFORE THE BUILDING IS OCCUPIED

### Section 13-16 Cleaning before a building is occupied

Surfaces in rooms, ducts and similar shall be cleaned before a building is occupied. Surfaces shall be free of visible dust and grease.

## Chapter 14. Energy

### Section 14-1 General requirements

- (1) Buildings shall be designed and constructed such that satisfactory energy performance is facilitated.
- (2) The energy requirements apply to the building's heated gross internal area (BRA).
- (3) U-values shall be calculated as the mean for the various elements of the building.
- (4) The energy requirements do not apply to buildings or parts of buildings that are going to maintain a low indoor temperature, provided its energy needs are kept at a reasonable level.
- (5) In the case of projects where compliance with the requirements in this chapter is incompatible with the preservation of monuments of cultural and/or antiquarian value, the requirements apply insofar as they are appropriate.

### Section 14-2 Energy efficiency requirements

- (1) The building's total net energy requirement shall not exceed the energy requirement levels in the table in (a) and shall at the same time satisfy the requirements stipulated in section 14-3.

a)

*Table: Energy budgets*

Building category	Total net energy requirement [kWh/m <sup>2</sup> heated gross internal area per year]
Small houses and leisure homes with more than 150 m <sup>2</sup> of heated gross internal area	100 + 1,600/m <sup>2</sup> heated gross internal area
Block of flats	95
Kindergarten	135
Office building	115
School building	110
University/university college	125
Hospital	225 (265)
Nursing home	195 (230)
Hotel building	170
Sports building	145
Commercial building	180
Cultural building	130
Light industry/workshop	140 (160)

- b) The requirements stated in parentheses apply to floor spaces in which heat recovery and ventilation air pose a risk of spreading pollutants or contagions.

(2) For residential buildings, the requirement for energy efficiency as an alternative to the first paragraph may be met by following the steps 1-9 in the table. The energy-saving measures may be departed from, provided that the building's thermal loss figures do not increase and the requirements in section 14-3 are met.

*Table: Energy-saving measures*

	<b>Energy-saving measures</b>	<b>Small house</b>	<b>Block of flats</b>
1.	U-value outer walls [W/(m <sup>2</sup> K)]	≤ 0.18	≤ 0.18
2.	U-value roof [W/(m <sup>2</sup> K)]	≤ 0.13	≤ 0.13
3.	U-value floors [W/(m <sup>2</sup> K)]	≤ 0.10	≤ 0.10
4.	U-value windows and doors [W/(m <sup>2</sup> K)]	≤ 0.80	≤ 0.80
5.	Proportion of window and door areas of heated gross internal area	≤ 25%	≤ 25%
6.	Annual mean temperature efficiency ratio for heat recovery systems in ventilation systems (%)	≥ 80%	≥ 80%
7.	Specific fan power (SFP) in ventilation systems [kW/(m <sup>3</sup> /s)]	≤ 1.5	≤ 1.5
8.	Air leakage rate per hour at 50 Pa pressure difference	≤ 0.6	≤ 0.6
9.	Normalised thermal bridge value, where m <sup>2</sup> is stated as heated gross internal area [W/(m <sup>2</sup> K)]	≤ 0.05	≤ 0.07

(3) Multifunctional buildings shall be divided up into zones based on building category, and the respective energy budgets shall be complied with within each zone.

(4) Buildings' energy requirement and heat loss figures shall be calculated in accordance with Norwegian Standard NS 3031:2014 Calculation of energy performance of buildings – Method and data.

(5) An energy budget must be calculated for non-residential buildings using the actual figures for the specific building. These calculations are in addition to control calculations made using standardised values.

(6) Blocks of flats with a central heating system and non-residential buildings shall have dedicated energy meters for heating and hot water.

### Section 14-3 Minimum requirements for energy efficiency

(1) The following requirements must be met:

*Table: Minimum requirements*

<b>U-value outer walls [W/(m<sup>2</sup> K)]</b>	<b>U-value roof [W/(m<sup>2</sup> K)]</b>	<b>U-value floors on ground and facing open air [W/(m<sup>2</sup> K)]</b>	<b>U-value windows and doors, including frames [W/(m<sup>2</sup> K)]</b>	<b>Leakage figures at 50 Pa pressure differential [air change per hour]:</b>
≤ 0.22	≤ 0.18	≤ 0.18	≤ 1.2	≤ 1.5

(2) Pipes, equipment and ducts connected to the building's heating system shall be insulated. The thickness of the insulation shall be economically optimal, calculated in accordance with a Norwegian standard or an equivalent European standard.

### Section 14-4 Requirements for energy supply solutions

(1) The installation of fossil fuel heating installations is not permitted.

(2) Buildings with a heated gross internal area of more than 1,000 m<sup>2</sup> shall:

- a) have multi-source heating systems; and
- b) be adapted for use of low-temperature heating solutions.

(3) The requirements in the second paragraph do not apply to small houses.

(4) Dwelling units in small houses must have a chimney. This requirement does not apply if:

- a) the dwelling unit has a water-borne heating system; or
- b) the annual net energy requirement for heating does not exceed the requirements for passive houses, calculated as specified in Norwegian Standard NS 3700:2013 Criteria for passive houses and low energy buildings – Residential buildings.

### Section 14-5 Exceptions and requirements for special projects

(1) For freestanding buildings with a heated gross internal area of up to 70 m<sup>2</sup> only sections 14-1, 14-3 and 14-4, first paragraph, of this chapter apply.

(2) Leisure homes with a heated gross internal area of up to 70 m<sup>2</sup> are exempt from the requirements in chapter 14.

(3) For leisure homes with a heated gross internal area of between 70 m<sup>2</sup> and 150 m<sup>2</sup>, only the requirements in sections 14-1, 14-3 and 14-4, first paragraph, of this chapter apply.

(4) Residential buildings and leisure homes with log outer walls are exempt from the requirements in sections 14-2 and 14-3. Leisure homes with a heated gross internal area of between 70 m<sup>2</sup> and 150 m<sup>2</sup> and log outer walls are also exempt from the requirements in section 14-4, fourth paragraph. The following requirements apply regarding energy efficiency:

- a) Leisure homes with a heated gross internal area of more than 150 m<sup>2</sup> and residential buildings with log outer walls

Table: Residential buildings and leisure homes

<b>Dimension external walls:</b>	<b>U-value roof [W/(m<sup>2</sup>K)]</b>	<b>U-value floors on ground and above open air [W/(m<sup>2</sup>K)]</b>	<b>U-value windows and doors, including frames [W/(m<sup>2</sup>K)]</b>	<b>Leakage figures at 50 Pa pressure differential (air change per hour)</b>
≥ 8" logs	≤ 0.13	≤ 0.10	≤ 0.80	≤ 4.0

- b) Leisure homes with a heated gross internal area of between 70 m<sup>2</sup> and 150 m<sup>2</sup> and log outer walls

Table: Leisure homes

<b>Dimension external walls:</b>	<b>U-value roof [W/(m<sup>2</sup>K)]</b>	<b>U-value floors on ground and above open air [W/(m<sup>2</sup>K)]</b>	<b>U-value windows and doors, including frames [W/(m<sup>2</sup>K)]</b>	<b>Leakage figures at 50 Pa pressure differential (air change per hour)</b>
≥ 8" logs	≤ 0.13	≤ 0.15	≤ 1.2	≤ 4.5

For applications for leisure homes of more than 70 m<sup>2</sup> and up 150 m<sup>2</sup> that the municipality receives before 1 January 2018, the developer can choose to comply with the provisions in section 14-6 of the Regulation of 26 March 2010 No. 489 on technical requirements for construction works (TEK10), which applied before 1 January 2016.

(5) The general requirement relating to energy efficiency in section 14-2, first paragraph, may be increased by up to 10 kWh/m<sup>2</sup> of heated gross internal area per year. This requires that renewable electricity for the building is produced on the property, at least 20 kWh/m<sup>2</sup> heated gross internal area per year.

# Chapter 15. Installations and plants

---

## I. HEATING AND COOLING INSTALLATIONS

### Section 15-1 General requirements for heating and cooling installations

(1) Heating and cooling installations shall be designed and constructed such that:

- a) they comply with safety and indoor environment requirements;
- b) they perform as intended;
- c) they can be regulated and are adapted for energy-efficient operation;
- d) they do not increase the risk of fire and explosions;
- e) heat loads on building elements do not pose a risk of fire or impair the performance of building elements;
- f) they are protected against leaks; and
- g) they have safe, facilitated access for easy and efficient cleaning and maintenance of the installation, including safe sweeping.

(2) Closed systems for heating and cooling installations shall be pressure tested before delivery to the end user.

(3) Heating installations shall:

- a) be installed on a base that can withstand the expected weight of the installation;
- b) have sufficient distance between the installation and flammable materials to prevent ignition; and
- c) be constructed to ensure protection against damage or injury due to high surface temperature.

(4) Heating installations that are documented for use without a flue shall only be sited in rooms with adequate ventilation.

(5) Heating installations based on combustion shall:

- a) be energy-efficient under normal operating conditions;
- b) be connected to a flue unless it can be documented that such connection is not necessary;
- c) have an acceptable flue-gas temperature;
- d) be adapted to the temperature class of the flue or chimney; and
- e) be installed in a furnace room, unless they are designed for installation in another room.

(6) Fireplaces shall not be sited in rooms where combustible gases or dust particles can occur that could result in dust explosions, unless the fireplace is designed for this.

(7) Open fireplaces without doors shall have a tight fitting flue gas damper.

### Section 15-2 Central heating installations

(1) Central heating installations shall:

- a) be leak-tight at the maximum pressure that can occur;
  - b) have the necessary safeguards against excessively high pressures and temperatures; and
  - c) have satisfactory sectioning and shut-off capabilities.
- (2) Connection to the water supply system shall be effected in a manner that prevents backflow from the central heating installation.
- (3) Supply air for hot air units located in furnace rooms shall be taken from outside through an airtight duct.

#### Section 15-3 Flues and chimneys shall

- (1) Flues and chimneys shall be designed and constructed to ensure heating installations can function satisfactorily.
- (2) Flue gases shall be conducted out from construction works in a manner that does not pose a risk of igniting the construction works or neighbouring construction works.
- (3) Chimney flues shall have a constant cross-section from base to top.
- (4) Moulded or brick-lined chimneys shall be constructed on a load-bearing structure of incombustible materials.
- (5) Flues and chimneys shall:
- a) be sufficiently leak-tight;
  - b) have outer surfaces that are sufficiently accessible for cracking to be detected;
  - c) be able to move freely in relation to adjoining building elements; and
  - d) have satisfactory opportunities for sweeping and clearing out soot.

#### Section 15-4 Heat pumps and cooling installations

- (1) Heat pumps and cooling installations shall be designed and constructed to prevent harm occurring to people, the environment, installations or construction works.
- (2) Installations shall:
- a) be leak-tight and have the necessary safeguards against abnormal operating conditions;
  - b) be able to be regulated automatically and be adapted for energy-efficient operation; and
  - c) have a sectioning system with a stop valve for gas and fluid.
- (3) Machinery, refrigerated storage rooms and deep-freeze storage rooms with large quantities of refrigerants, as well as other rooms that may be exposed to leaks of refrigerants, shall have:
- a) gas detectors; and
  - b) an emergency ventilation system.



## II. INDOOR WATER AND DRAINAGE INSTALLATIONS

### Section 15-5 Indoor water installations

- (1) Installations shall be designed and constructed to ensure good health is safeguarded through:
  - a) choosing products that do not release substances that may degrade the quality of drinking water or pose a risk to health;
  - b) prevention of bacterial growth;
  - c) water temperatures that cannot cause scalding injuries; and
  - d) the installation being protected against backflow and penetration by impure fluids, substances or gases and against back-suction and penetration by water from other water sources.
- (2) Equipment and pipes shall perform as intended at normal operating pressure.
- (3) Installations shall:
  - a) be designed for future maintenance and be easy to replace;
  - b) withstand internal and external loads and chemical impacts;
  - c) be protected against frost; and
  - d) be sufficiently leak-tight.
- (4) Leaks shall be easy to detect and not result in damage to other installations and building elements.
- (5) There shall be a satisfactory means of shutting the installation off with stopcocks that are readily accessible and marked.

### Section 15-6 Indoor drainage installations

- (1) Installations shall:
  - a) be designed and constructed to ensure waste water is drained at the same rate as the water is supplied;
  - b) be designed for a high level of operational reliability and for efficient operation and maintenance;
  - c) withstand internal and external loads and chemical impacts;
  - d) be protected against frost; and
  - e) be sufficiently leak-tight.
- (2) All equipment connected to the waste water mains shall have water traps or an equivalent function.
- (3) The water level in the lowermost trap shall be at the height above the inside top of the common main at the branching point necessary to prevent backflow.
- (4) Drainage installations shall have a minimum of one air duct leading out to the open air without a water trap, unless it can be documented that the drain can function satisfactorily when another solution is used.

(5) Installations shall have the necessary cleaning points for cleaning. Waste water pipes shall be self-cleaning.

### III. OUTSIDE WATER SUPPLY AND SEWERAGE INSTALLATIONS

#### Section 15-7 Outside water supply systems with mains network

(1) Installations shall be designed and constructed to ensure good health is safeguarded through:

- a) choosing products that do not release substances that may degrade the quality of drinking water or pose a risk to health;
- b) the water mains being protected against backflow and penetration by impure fluids, substances or gases.  
This also applies to back-suction and penetration by water from another water source or installation.

(2) Installations shall be dimensioned to ensure sufficient volumes and sufficient pressure to meet water requirements, including for firefighting.

(3) Water-supply installations shall:

- a) be designed for a high level of operational reliability and for efficient operation and maintenance;
- b) withstand internal and external loads and chemical impacts;
- c) be protected against frost; and
- d) be sufficiently leak-tight at the maximum operating pressure.

(4) Connecting pipes for water-supply installations that are no longer in use shall be disconnected.

#### Section 15-8 Outside sewerage installations with mains network. Surface water and drainage water

(1) Surface water and drainage water shall, as far as possible, be infiltrated or managed locally in some other manner to ensure water balance in the area and avoid overburdening sewerage installations.

(2) Surface water and drainage water shall be drained in a manner that ensures overflowing or other nuisances do not occur at design rain loads.

(3) Construction works shall be protected against overflows due to high water levels or overpressure in sewerage pipes. Bothersome odours shall not arise.

(4) Sewerage installations shall:

- a) be designed and constructed to ensure that waste water is drained at the same rate as the water is supplied and in a manner that safeguards good hygiene and health;
- b) be designed for a high level of operational reliability and for efficient operation and maintenance;
- c) be self-cleaning and have the necessary points for inspection and cleaning;
- d) withstand internal and external loads and chemical impacts;
- e) be protected against frost; and

f) be sufficiently leak-tight.

(5) Connecting pipes for sewerage installations that are no longer in use shall be disconnected.

## IV. LIFTING EQUIPMENT

### Section 15-9 Lifts

(1) The safety features designed into lifts, including accessibility requirements, shall comply with the Regulation on the sale and documentation of lifts and safety components for lifts.

(2) Where a lift is required pursuant to section 12-3, the lift shall be adapted for people with disabilities. The size of the lift car shall be dimensioned for its intended use. The clearance width in a lift's door opening shall be a minimum of 0.9 m. The surrounding walls shall be sufficiently visible in relation to the lift.

(3) Lift installers and the enterprises responsible for construction, shall ensure that they provide each other with the necessary information of relevance for the design and dimensioning of the lift systems and structural engineering factors. The exchange of information shall ensure the proper operation and safe use of lifts.

(4) Installations, rooms and shafts for lifts shall not be exposed to temperatures and environments that could create operating problems or make maintenance difficult.

(5) Lifts shall be fitted with an alarm connected to a 24-hour monitoring system.

(6) Lifts shall be designed and constructed such that:

- a) they do not expose users and personnel performing overhauls, repairs and safety inspections to risks; and
- b) do not damage building elements.

### Section 15-10 Rooms and shafts for lifts

(1) Lift shafts, machinery rooms and rooms that are used for other equipment shall:

- a) shall be easily accessible for operation, maintenance and safety inspections;
- b) be kept locked;
- c) have surfaces that are light and easy to keep clean; and
- d) have a ventilation system, which is also satisfactory in the event of shutdowns.

The ventilation systems shall not be used to ventilate smoke from rooms that do not form part of the lift installation.

(2) Lift shafts shall also:

- a) not contain pipe installations, cable installations or equipment other than what is necessary to ensure the proper operation and safe use of lifts; and
- b) have satisfactory ventilation.

(3) Machinery rooms and rooms that are used for other equipment shall also:

- a) have clearly marked access points;
- b) be dimensioned to allow the replacement of lift equipment;
- c) have satisfactory room height;
- d) have outwards opening doors; and
- e) have hatches in the floor that are secured.

Machinery rooms and machinery cabinets for hydraulic lifts shall be ventilated to the open air through separate ducts and shall be constructed to ensure any oil leaks are discovered and collected.

#### Section 15-11 Unobstructed safety spaces for lifts

(1) There shall be an unobstructed safety space above and below the lift's upper and lower positions.

(2) In existing buildings where it is not possible to achieve satisfactory safety spaces, other appropriate means for avoiding the risk of injury to personnel shall comply with the Regulation on the sale and documentation of lifts and safety components for lifts. When new lifts are installed in existing buildings, existing safety spaces shall not be reduced.

#### Section 15-12 Lifting platforms

(1) The safety features designed into lifting platforms shall comply with Directive 2006/42/EC (Machinery Directive).

(2) Lifting platforms shall:

- a) have an alarm connected to a 24-hour monitoring system; and
- b) have a ventilation system, which is also satisfactory in the event of shutdowns.

(3) The size of the load carrier shall be dimensioned for its intended use. The clearance width in a lifting platform's door opening shall be a minimum of 0.9 m. The surrounding walls shall be sufficiently visible in relation to the lifting platform.

(4) Installations, rooms and shafts for lifting equipment shall not be exposed to temperatures and environments that could create operating problems or make maintenance difficult.

#### Section 15-13 Escalators and moving pavements

(1) The safety features designed into escalators and moving pavements shall comply with Directive 2006/42/EC (Machinery Directive).

(2) On the floor in front of the start of moving pavements and escalators there shall be a tactile warning area that is sufficiently visible. On the floor after the end of moving pavements and escalators there shall be a tactile awareness area that is sufficiently visible.

(3) If escalators and moving pavements are located in open spaces such that the fall height from the facility's balustrade exceeds 3.0 m, suitable safeguards against falls shall be installed.

(4) Escalators and moving pavements shall not be exposed to temperatures and environments that could create operating problems or make maintenance difficult.

### Section 15-14 Stair lifts

- (1) The safety-related design of stair lifts shall comply with Directive 2006/42/EC (Machinery Directive).
- (2) Stair lifts shall not be subjected to temperatures and environments that may create operating problems or make maintenance difficult.

### Section 15-15 Connection between lifting equipment and harmonised standards

- (1) The provision applies to lifts and other lifting equipment that are defined in the Regulation of 13 April 2016 No. 373 on marketing and documentation of lifts and safety components for lifts and section 16 of the Regulation of 17 December 2013 No. 1579 on documentation of construction products.
- (2) Lifts and other lifting equipment that comply with a harmonised standard are also assumed to satisfy the basic health, safety and usability requirements covered by this standard. For lifts, the basic health, safety and usability requirements are stipulated in Appendix 1 of the Regulation of 13 April 2016 No. 373 on the marketing and documentation of lifts and safety components for lifts. For other lifting equipment, the basic health, safety and usability requirements are stipulated in Annex 1 of Directive 2006/42/EC (Machinery Directive).
- (3) A supplier may also choose to comply with only parts of a harmonised standard, although in these circumstances the assumption concerning compliance with the basic health, safety and usability requirements shall only apply to those parts of the standard that are complied with.
- (4) If lifts or other lifting equipment do not comply with a harmonised standard, the supplier must verify in some other manner that the products meet the basic health, safety and usability requirements in the relevant Directive.

## Chapter 16. Lift safety inspections

---

### Section 16-1 Lifting equipment. Administrative provisions

(1) In addition to the requirements pursuant to section 29-9 of the Planning and Building Act, the following apply to lifts, escalators, moving walkways, lifting platforms and stair lifts:

- a) The municipality shall issue permission for operation before lifting equipment is used.
- b) Lifting equipment shall not be used after an accident, remodelling or being moved until a safety inspection body has performed a safety inspection and the municipality has issued an operating permit.
- c) When faults in an installation may pose an immediate danger to user safety, the lifting equipment shall be taken out of service and the matter reported to the municipality and owner.
- d) Owners shall immediately report accidents to the municipality and safety inspection body. The safety inspection body shall report accidents and incidents to the national installation register.
- e) Completed repair work shall be logged in a logbook kept for each piece of lifting equipment. The logbook shall be available during safety inspections.
- f) Owners shall ensure safety inspections are carried out at least every second year when the lifting equipment is in operation. Safety inspections may also be carried out as spot checks of lifting equipment in operation.
- g) In the event of a change of owner and when an installation is permanently taken out of service, the owner shall report this to the municipality and national installation register.

(2) The following apply to lifting platforms and stair lifts inside a dwelling unit:

- a) Owners may install lifting platforms or stair lifts inside dwelling units themselves, cf. section 4-1, first paragraph, point (b) (4), of the Regulation of 26 March 2010 No. 488 relating to building applications.
- b) Owners of lifting equipment are responsible for ensuring lifting equipment in use is in safe working order and that it is maintained and inspected.
- c) Owners shall immediately report accidents/incidents to the municipality and national installation register.

(3) When a fault in the installation may pose a danger to user safety, the lifting equipment shall be taken out of service.

### Section 16-2 Requirements for inspectors who perform periodic safety inspections

(1) Periodic safety inspections may be performed by:

- a) safety inspectors employed by municipal lift inspection schemes;
- b) national lift inspection schemes with authorisation from the Ministry;
- c) national lift inspection schemes that carry out safety inspections on a temporary basis; and
- d) the Norwegian Building Authority.

(2) Safety inspectors shall be approved by the Norwegian Building Authority.

(3) Safety inspectors shall as a minimum have training and practical experience pursuant to the following table:

*Table: Qualification requirements for safety inspectors*

Alternative	Training	Practical experience
1	Diploma from a 3-year college of engineering, machinist or electrician course or equivalent	A minimum of 5 years' relevant experience in installing, maintaining and repairing lift installations
2	Diploma from a 2-year technical vocational school, relevant course or equivalent	A minimum of 5 years' relevant experience in installing, maintaining and repairing lift installations
3	Lift installer craft certificate	A minimum of 5 years' all-round, relevant professional experience after passing the examination

(4) Approval of the safety inspectors is given for 2 years and upon renewal is assessed i.a as follows

- a) if the applicant has worked as a safety inspector
- b) if the applicant can document updated knowledge of lifting equipment and related regulations.

#### Section 16-3 Conditions for recognition as a lift safety inspector for lifts for people with professional qualifications from another EEA member state

(1) The purpose of this provision is to implement the rights and obligations pursuant to Directive 2005/36/EC on the recognition of professional qualifications. The provision concerns approval to carry out periodic lift safety inspections for applicants who have acquired their professional qualifications in another EEA member state. This provision also pertains to the right to the temporary and incidental provision of services in Norway.

(2) The following definitions apply in this provision:

- a) *regulated profession*: A professional activity, access to which or the pursuit of which is subject, directly or indirectly, by virtue of legislative, regulatory or administrative provisions to the possession of specific professional qualifications.
- b) *professional qualifications*: Qualifications attested by evidence of formal qualifications, an attestation of competence referred to in article 11, point (a) (i) of the directive and/or professional experience.
- c) *evidence of formal qualifications*: Diplomas, certificates and other documentation issued by an authority in a member state designated pursuant to legislative, regulatory or administrative provisions of that member state. The evidence of qualifications shall document successful completion of professional training that is mainly acquired in the EEA. Evidence of formal qualifications issued by a third country shall also be regarded as evidence of formal qualifications if the holder has 3 years' professional experience in the profession concerned on the territory of the member state that recognised the evidence.

- d) *professional experience*: The actual and lawful pursuit of the profession concerned in a member state.
- e) *probationary period*: The pursuit of a regulated profession in the host member state under the supervision of a qualified member of that profession.
- f) *aptitude test*: A test limited to the professional knowledge of the applicant, conducted by the competent authorities of the host member state with the aim of assessing the ability of the applicant to pursue a regulated profession in that member state.

(3) Nationals of an EEA member state have the right to recognition as a periodic lift safety inspector if this derives from the rules of Directive 2005/36/EC, even if they do not have qualifications equivalent to the requirements in section 16-2, third paragraph. Recognition as a safety inspector shall be granted if the activity concerned has previously been pursued:

- a) for 6 consecutive years on a self-employed basis or as a manager of an undertaking, or
- b) for 3 consecutive years on a self-employed basis or as a manager of an undertaking, where the beneficiary proves that he has received previous training of at least 3 years for the activity in question, evidenced by a certificate recognised by the Member State or judged by a competent professional body to be fully valid, or
- c) for 4 consecutive years on a self-employed basis or as manager of an undertaking, where the beneficiary can prove that he has received, for the activity in question, previous training of at least at 2 years' duration, attested by a certificate recognised by the Member State judged by a competent professional body to be fully valid, or
- d) for 3 consecutive years on a self-employed basis, if the beneficiary can prove that he has pursued the activity in question on an employed basis for at least 5 years, or
- e) for 5 consecutive years in an executive position, of which 3 years involved technical duties and responsibility for at least one department in the company, of the beneficiary can prove that he has received, for the activity in question, previous training of at least 3 years' duration, as attested by a certificate recognised by the Member State or judged by a competent professional body to be fully valid.

(4) In cases (a) to (d) in the third paragraph, the activity must not have ended more than 10 years before the date on which the complete application was submitted.

(5) Applicants who do not satisfy the requirements in section 16-2, third paragraph, can apply for alternative approval as a periodic lift safety inspector. The applicant shall submit evidence of qualifications that are as a minimum equivalent to the level of qualifications immediately below the qualification requirements pursuant to section 16-2, third paragraph. In addition, equalisation measures such as those described in the seventh paragraph can be required in such cases. The following five levels of qualifications apply when comparing levels of training:

A – evidence of formal qualifications

B – certificate of completion of upper secondary education



C – examination certificate from education of at least 1 year after upper secondary education

D – examination certificate from education of at least 3 years and at most 4 years at university or other institution of higher education

E – examination certificate from education of at least 4 years at university or other institution of higher education

(6) The qualification requirements pursuant to section 16-2, third paragraph, alternative 1 correspond to level D, alternative 2 corresponds to level C, and alternative 3 corresponds to level B. Applicants who have worked as a lift safety inspector in an EEA member state where this profession is not regulated are entitled to recognition if the applicant has pursued the profession on a full-time basis for at least 2 years, or for an equivalent period on a part-time basis, during the past 10 years. Applicants must submit evidence of professional qualifications that document that the applicant can work as a periodic lift safety inspector.

(7) For approval pursuant to the fifth and sixth paragraphs, the applicant may be required to complete a probationary period of at most 3 years or pass an aptitude test, if:

- a) the duration of the training of which the applicant provides evidence under the terms of section 16-2, third paragraph, of the Regulation is at least 1 year shorter than that required by the host member state, or
- b) the training that he has received covers substantially different matters than those covered by the evidence of formal qualifications required in the host Member State, or
- c) the regulated profession in the host member state includes one or more regulated professional activities which do not exist in the equivalent profession in the applicant's home state, cf. Directive 2005/36/EC, article 4 no. 2, and that difference consists of specific training which is required in the host member state and which covers substantially different matters to those covered by the applicant's attestation of competence or evidence of formal qualifications.

(8) If the host member state makes use of the option for equalisation measures, it must offer the applicant the choice between a probationary period and an aptitude test.

(9) The approving authority shall require an applicant to submit the following in order to approve professional qualifications:

- a) proof of the person concerned's nationality
- b) copies of certificates of qualifications or of the evidence of formal qualifications that entitle the person concerned to pursue the regulated profession, as well as certification of the person concerned's professional experience.

(10) The Norwegian Building Authority shall process applications as quickly as possible. Reception of the application shall be confirmed within 1 month after receipt of the application and the applicant informed of any missing documents. A decision shall be taken no later than within 4 months after all the necessary documentation has been presented. Even if a person satisfies the qualification requirements stipulated for approval as a periodic lift safety inspector, the Norwegian Building

Authority can reject an application for approval on the basis of inadequate documentation. Rejections of applications can be appealed by parties or others with a legal appeal interest.

#### Section 16-4 Temporary practice of safety inspections

(1) Periodic lift safety inspections can be carried out on a temporary and incidental basis by people legally established in another EEA member state with a view to carrying out such activities there, cf. article 5. The service provision's temporary nature shall be assessed from case to case based on the service's duration, frequency, regularity and continuity. Service providers shall inform the Norwegian Building Authority the first time they provide the service or if a material change occurs to the situation substantiated by the documents, by submitting a written provisional report accompanied by the following documents:

- a) proof of the service provider's nationality
- b) attestation certifying that the person concerned is legally established in another EEA member state for the purpose of pursuing the activities concerned, and that the person concerned is not at the time of submission prohibited from practising, even temporarily
- c) professional qualifications
- d) if the profession is not regulated in the state in which the service provider has established his activities, any means of proof that the service provider has pursued the activity concerned for at least 2 years during the previous 10 years.

(2) The Norwegian Building Authority shall be notified each year the service provider wishes to pursue the profession. The Norwegian Building Authority may verify the service provider's professional qualifications before the service is provided for the first time to prevent serious harm to the health or safety of the service recipient due to deficient professional qualifications. This verification shall not exceed what is necessary for the purpose. The Norwegian Building Authority shall inform the service provider of whether or not his professional qualifications will be verified within 1 month after receiving the necessary documentation or of the results of such verification. In those cases where difficulties exist that will result in delays, the service provider shall be informed of the reasons for them and the schedule for a decision. The decision does not need to be taken within 2 months of receipt of complete documentation. A service provider who has not received a decision regarding verification of professional qualifications by this deadline is entitled to pursue the profession.

#### Section 16-5 Language requirements

The Norwegian Building Authority may require a person granted approval as a lift safety inspector pursuant to section 16-3 or who will practise temporary service provision pursuant to section 16-4 to document that he or she has adequate knowledge of Norwegian to practise the profession.

### Section 16-6 Installation register

A register shall be kept of installed lifting equipment and accidents involving lifting equipment. Owners of lifting equipment shall report installations to the municipality and the body that maintains the register. The register-keeping body shall be nominated by the Norwegian Building Authority.

### Section 16-7 Administrative cooperation

(1) The Norwegian Building Authority shall, insofar as it is feasible, inform the competent authority of another EEA member state where the applicant performs tasks as defined in the Regulation should the professional be subject to administrative reactions, penal sanctions or any other serious circumstances that may have consequences for the performance of their profession. If a competent authority in another EEA member state has requested information, such information shall be given as soon as possible and not later than 2 months following the receipt of the request.

(2) The relevant authorities in the host country and the country of origin shall ensure close co-operation and the exchange of all information necessary in order to facilitate the application of directive 2005/36/EC. The exchange of information shall be treated confidentially.

### Section 16-8 Price adjustments

The Ministry may in Regulations set a maximum price for safety inspections of lifts if this is deemed necessary to avoid disproportionate regional price differences and provided this may be considered by the Ministry to have consequences for user safety.

## Chapter 17. Entry into force and transitional provisions

---

### Section 17-1 Entry into force

(1) The Regulation shall enter into force on 1 July 2017.

(2) From the same date, the Regulation of 26 March 2010 No. 489 on technical requirements for construction works shall be repealed.

(3) From 1 July 2021, section 8-10 Siting of construction works shall be repealed.

### Section 17-2 Transitional provisions

(1) For applications that the municipality receives before 1 January 2019, the developer may choose whether the entire project shall comply with this Regulation or with the provisions of the Regulation of 26 March 2010 No. 489 on technical requirements for construction works. Developers who choose Technical Regulations (TEK10) shall indicate this in the application for permission for a project.

(2) On application, the municipality may also permit compliance to be based on the provisions of the Regulation of 26 March 2010 No. 489 on technical requirements for construction works for applications received after 1 January 2019. This only applies to projects where planning has commenced before 1 July 2017 and where the application of this Regulation will result in extensive and expensive alterations.



Pbl, byggeselsdet 21. 2011

### **§ 20-1. Projects that require an application and permission**

Unless otherwise specified in Sections 20-3 and 20-4, the following projects on or in the land, in watercourses or in sea areas must not be executed without having sent an application, and an application for dispensation if applicable, to the municipality beforehand and thereafter having been granted permission:

- a) erection, addition to, or extension, underpinning or positioning of a building, structure or installation
- b) a significant alteration or significant repair of projects mentioned under a.
- c) alteration of the exterior
- d) change of use or significant extension or significant alteration of previous operation of projects mentioned under a
- e) demolition of projects mentioned under a
- f) erection, alteration or repair of technical installations
- g) division or combination of occupancy units in dwellings and other reconstruction intended to convert dwellings to another purpose
- h) erection of fencing by a road
- i) positioning of signs or advertising devices
- j) positioning of temporary buildings, structures or installations
- k) significant encroachment on the terrain
- l) construction of roads, parking places and landing areas
- m) establishment of new real property, new installation property, or new jointly owned common land, or establishment of new leased land for leasing out that may apply for more than 10 years, or area transfer, cf. the Act relating to Property Registration. This kind of permission is not necessary when a project pursuant to the first sentence is taken in the course of land consolidation in accordance with a legally binding plan.

Application, design, execution and control of projects as mentioned in the first paragraph shall be managed by enterprises with the right to accept responsibility in accordance with provisions specified in Chapters 22 and 23 unless otherwise specified by Sections 20-2 or 20-3. This does not apply, however, to projects mentioned in the first paragraph, *litra m*.

The Ministry may lay down regulations specifying which projects are covered by these provisions.

Effective 1 July 2010, cf. Section 34-3. According to Royal Decree no. 896 of 18 June 2010, installation of a new fireplace up to 1 July 2011 is exempted from requirements concerning an application and permission, cf. first paragraph, *litra f*, if the work is controlled by a qualified controller.

Added by Act no. 27 of 8 May 2009, amended by Act no. 48 of 25 June 2010.

### **§ 20-2. Projects that require an application and permission and that may be managed by the developer**

The following projects that require an application pursuant to Section 20-1 are exempted from the rules in Section 20-1, second paragraph:

- a) minor projects on developed property
- b) general agricultural buildings
- c) temporary buildings, structures or installations as specified in Section 20-1, first paragraph, litra j and that shall not be in place for a period of more than two years
- d) other minor projects that, in the opinion of the municipality, may be managed by the developer.

The Ministry lays down regulations specifying which projects are covered by these provisions.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

**Section 20-3. *Projects that do not require an application and permission***

For the following projects, an application and permission pursuant to Section 20-1 is not necessary if they are in accordance with a plan:

- a) small exposed building that is erected on developed property and that cannot be used as a dwelling
- b) small exposed structures related to the operation of agricultural, forestry and reindeer husbandry areas
- c) minor projects in existing structures
- d) minor outdoor projects
- e) alteration of the exterior that does not result in any change in the nature of the building, and restoration of the exterior to a previously documented design
- f) other minor projects that the municipality finds that there are grounds for exempting from the requirement to submit an application.

The Ministry lays down regulations specifying minor projects in litra a-d.

Permission is likewise not necessary for projects specified in Section 20-1, first paragraph, litra j, when the project shall not be left standing for more than two months.

The Ministry may also exempt in regulations other projects from the provisions of Section 20-1, including the positioning of construction workers' huts for more than two months in direct connection with building or construction plots where work is underway.

The developer is responsible for seeing that projects specified in the first and third paragraphs are executed in accordance with the requirements that otherwise comply with provisions specified in or pursuant to statute.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009, amended by Act no. 48 of 25 June 2010.

**Section 20-4. *Exemptions from statutory requirements for certain projects that are considered pursuant to other Acts and for secret military installations***

Projects specified in Section 20-1 do not require an application if the project is adequately considered pursuant to other laws. The Ministry lays down regulations

specifying which projects are exempted from the requirement to submit an application pursuant to the first sentence and the extent to which provisions in the Act apply here.

When an area, installation or structure has been declared secret pursuant to the Defence Secrets Act, it is incumbent on the appropriate military authority to ensure that provisions that are specified in or pursuant to this Act are complied with.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

## **Chapter 21. Requirements for the content and processing of applications**

### **Section 21-1. *Preliminary conference***

For further clarification of constraints and content in the project, a preliminary conference may be held between the developer, the municipality and other affected expert authorities. Other affected parties may also be invited. A preliminary conference may be requested by the developer or the planning and building authorities.

The Ministry may lay down regulations concerning the preparation and implementation of and minutes from the preliminary conference.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 21-2. *Application for permission***

An application for permission shall be in writing and be signed by the developer and the applicant. The application shall provide the information that is necessary in order for the municipality to grant permission to the project. It shall be specified in the application whether dispensation has been applied for, cf. Chapter 19.

If the project cannot be managed by the developer, cf. Section 20-1, second paragraph, an application shall be submitted, if necessary, for local approval of the right to accept responsibility for the responsible applicant, responsible designer, responsible contractor and responsible controller for design and execution, cf. Chapters 22 and 23, together with an application for permission. The application shall provide the information that is necessary in order for the municipality to delegate the right to accept responsibility. An application for local approval of the right to accept responsibility shall be signed by the enterprise that applies for the right to accept responsibility.

In addition, the application shall provide the information that is necessary in order for the municipality to decide whether the project shall be subject to independent control pursuant to Section 24-1.

Documentation so that neighbours are legally notified, together with a declaration, if there is one, concerning notification of those who have financial charges on a property for which an application has been submitted to demolish; cf. Section 21-3, shall be attached to the application. Any comments from adjoining or opposite neighbours, as well as an account from the applicant of what may have been done, if anything, in order to accommodate these comments, shall be attached.

Any decisions or statements obtained from other authorities shall also be attached to the application when the project requires them, cf. Section 21-5.

An application may be divided into an application for general permission and permission to start the work. The municipality may permit a division of the application for permission to start the work. Projects may not be initiated before permission to start the work has been granted.

Those who are mentioned in Section 9 of the Act relating to property registration may apply for permission to establish new real property, new installation property, new leased land or new jointly owned common land, or permission for area transfer. The application must designate how the unit is intended to be designed, including designating the boundary courses on a map. The application must show how the new units or the area transfer may be included in a future utilisation of the area in an appropriate way, also including the ways in which requirements for the size of the lot, common area and the positioning of the buildings may be met.

The Ministry may lay down regulations concerning requirements for applications, including application documentation and requirements for signatures.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 21-3. *Notice to neighbours***

Before an application is submitted, adjoining and opposite neighbours shall be notified by the applicant if they have not stated in writing that they do not have any comments on the application. In the notice, notification shall be given that any comments must have been received by the applicant by a time limit of at least two weeks after the notice has been sent and the basic material for the application has been made available. If the landowner's address is not known or is not provided in the Cadastre, notification is not necessary.

The municipality may exempt the applicant from notifying adjoining and opposite neighbours when their interests are not or are only slightly affected by the work. The municipality may require that other owners or lessees beside those who are mentioned in the previous paragraph shall also be notified.

If the application concerns demolition pursuant to Section 20-1, first paragraph, litra e, the applicant shall notify those who have financial charges on the property.

In the event of a divided application, a notice to neighbours shall only be sent for an application for general permission and an application for projects specified in Section 20-1, first paragraph, litra m, which have not been clarified in the general permission or the application to amend said general permission.

The Ministry may lay down regulations with further provisions concerning the notification of neighbours.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 21-4. *Processing of the application in the municipality***



When the application is completed, the municipality shall grant permission as soon as possible and no later than the time limit specified in Section 21-7 if the project does not contravene provisions specified in or pursuant to this Act. In its administrative procedures, the municipality shall base its decision on the developer's or the responsible enterprise's information about whether the project meets technical requirements unless the circumstances indicate otherwise.

Before the municipality makes a decision on the application, it shall assess whether there are grounds for requiring a new notice to adjoining and opposite neighbours.

The municipality shall decide applications for local approval of the right to accept responsibility, cf. Section 22-3 and the scope of independent control, cf. Chapter 24.

In accordance with the applicant's wishes, the permission may be divided into general permission and permission to start the work. Permission to start the work cannot be granted before conditions for the general permission have been met, the right to accept responsibility has been delegated and the extent of the control has been decided together with the granting of permission, if any, from other authorities, cf. Section 21-5, first paragraph. Permission to start the work may be divided up.

The municipality shall immediately provide written information about the decision to the applicant and to those who have offered comments. In the processing of divided applications, it is sufficient that only the applicant be informed of the permission to start the work.

The municipality may specify conditions in order to grant permission for fees to be paid pursuant to Section 33-1. Furthermore, the municipality may specify as conditions that:

- a) a survey be conducted when there is a need to clarify the borders for the unit(s) in the Cadastre to which the project applies
- b) properties that are to be used jointly be joined pursuant to the Act relating to Property Registration.
- c) the developer notifies the municipality when temporary projects of the type mentioned in Section 20-2, litra c are removed.

In the event of an application to establish new leased land for leasing out that may apply for more than 10 years, the municipality may specify as conditions for the permission that the ground leasehold interest shall apply to a specially limited area or that the unit will be established as real property.

The Ministry lays down in regulations more detailed provisions concerning the municipality's processing of the application.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009, amended by Act no. 48 of 25 June 2010.

### **Section 21-5. *The municipal building authorities' duty to coordinate***

When the project requires permission or consent from other authorities or when plans for the project shall be submitted to these authorities, the municipality may wait to decide the case until a decision has been made or consent has been given as

mentioned. The municipality may also grant general permission within its area of authority on the condition that permission to start the work will not be granted before the relationship to other authorities has been clarified; cf. Section 21-4, fourth paragraph. In cases as mentioned above, the municipality shall submit the matter to the authorities pursuant to the regulations if a decision or opinion has not been obtained in advance.

The Ministry specifies in regulations the authorities that are covered by the duty to coordinate.

Other authorities must make a decision or give an opinion within four weeks after submission. In special cases, the municipality may extend the time limit before it has expired. When the project does not require permission or consent from other authorities, the matter may be decided when the time limit has expired.

The Ministry may lay down regulations concerning the duty of the municipality to report to other authorities.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009, amended by Act no. 48 of 25 June 2010.

#### **Section 21-6. *Private-law matters***

Unless otherwise specified by this Act, the building authorities shall not make a decision about private-law matters in the processing of building applications. If it is evident to the building authorities that the developer does not have the private-law rights required by the application, the application may be rejected. Any permission granted pursuant to this Act does not entail any decision of private-law matters. The municipality may set a time limit for the developer for supplementing the application.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

#### **Section 21-7. *Time limits in special cases***

Applications for permission for projects pursuant to Sections 20-1 and 20-2, which do not entail dispensation from plans, shall be decided by the municipality within twelve weeks after a complete application is ready unless otherwise specified in the second and third paragraphs. In the event of failure to comply with the time limit, the municipality shall refund the building application fee in accordance with more detailed provisions in the regulations; cf. Section 21-8, third paragraph.

An application for permission for a project pursuant to Sections 20-1 and 20-2, where the project is in accordance with provisions specified in or pursuant to this Act, where there are not any comments from adjoining or opposite neighbours, and further permission, consent or opinions from other authorities are not necessary shall be decided by the municipality within three weeks. If the municipality has not decided the application by the expiration of the time limit, the permission will be regarded as granted.

An application for permission for a project pursuant to Section 20-2 where there have been protests from adjoining or opposite neighbours, but other terms and conditions in the second paragraph have been met, shall also be processed by the

municipality within three weeks, but in such cases permission will not be regarded as granted even if the municipality has not made a decision by the time limit.

A certificate of completion shall be issued by the municipality within three weeks after the requirement has been received together with necessary documentation. When the certificate of completion has not been issued by the time limit, the structure may be put to use.

In individual cases, a longer time limit than that which is specified may be agreed to in the individual paragraphs in this section.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 21-8. *Other time limits***

The Ministry may lay down regulations concerning time limits for holding a preliminary conference, processing an application for permission to start the work, an application for temporary use, an application for provisional permission for use, the municipality's decisions in matters involving refunds, the municipality's preparatory consideration of appeals and the administrative appeal body's consideration of appeals in planning and building matters.

In an individual matter, a longer time limit may be agreed to than that which is specified in the regulations.

The Ministry lays down regulations concerning the calculation of time limits pursuant to Sections 21-7 and 21-8, permission to extend time limits and consequences of failure to comply with a time limit.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 21-9. *Lapse of permission***

If the project has not commenced within three years after permission has been granted, the permission will lapse. The same applies if the project is suspended for more than two years. These provisions apply in the same way to dispensation. The time limits cannot be extended.

If a project is suspended for more than three months, the municipality may require that scaffolding and fences adjoining a street that is open to public traffic be removed and that the street and pavement be put in order.

If a project is suspended for more than one year, scaffolding shall be removed and the installation shall be brought into such a state as to cause the least possible unsightliness. If this situation lasts for more than two years, the municipality may require that the installations be removed completely and the land be cleared. If an alteration project is discontinued, the municipality will decide to what extent the structure shall be restored to its original state.

Permission for a project pursuant to Section 20-1, first sentence, *litra m* will lapse if a survey has not been requisitioned pursuant to the Act relating to Property

Registration within three years after the permission has been granted or if registration in the Cadastre will contravene the Act relating to Property Registration.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 21-10. *Final inspection and certificate of completion***

Projects that require an application shall be completed with a certificate of completion, which is issued by the municipality when the necessary final documentation and a declaration of completion from the developer or responsible applicant have been submitted. For projects that require independent control, there shall be documentation that a final inspection has been performed, cf. Section 24-2. The final documentation shall show that the project has been carried out in accordance with the permission and provisions in or pursuant to this Act. The municipality may also issue a certificate of completion in cases where there have been only trifling violations of requirements in or pursuant to this Act.

For a certificate of completion, there shall be sufficient documentation from the developer or the responsible enterprises of the properties of the structure, including the properties of the building products, as a basis for the management, operation and maintenance of the building. The Ministry may lay down regulations concerning the content, submission and storage of this documentation.

When only minor work remains, and the municipality finds it unobjectionable, provisional permission for use may be issued for the whole or parts of the project. In provisional permission for use, the work that remains and a time limit for completion shall be specified. The municipality may require that security be provided to ensure that the remaining work will be correctly completed. If the remaining work is not performed by the time limit, the municipality shall issue an order concerning completion, which may be implemented through sanctions pursuant to Chapter 32.

For technical installations, permission to operate may be granted before they are to be put to use. Such permission may be granted for a limited period and shall apply to that particular installation.

The Ministry may lay down regulations concerning exemptions from requirements for a certificate of completion for special projects, the completion of projects, final inspection, documentation for the municipality's processing of applications for certificate of completion and provisional permission for use.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009, amended by Act no. 48 of 25 June 2010.

## **Chapter 22. Approval of enterprises exercising the right to accept responsibility**

### **Section 22-1. *Central approval of enterprises exercising the right to accept responsibility***

Central approval of the right to accept responsibility is granted to enterprises that are qualified to undertake the function as a responsible applicant pursuant to Section 23-4, responsible designer pursuant to Section 23-5, responsible contractor pursuant

to Section 23-6 or responsible controller pursuant to Section 23-7. Approval is granted in different classes of projects.

An application for central approval of the right to accept responsibility shall be rejected if the enterprise does not meet the necessary qualifications for obtaining approval.

Such approval is granted by an approval body authorized by the Ministry and registered in a central open register.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 22-2. *Withdrawal of central approval of the right to accept responsibility***

Central approval of the right to accept responsibility shall be withdrawn in the event of serious or repeated violation of provisions or permission granted in or pursuant to this Act. Central approval of the right to accept responsibility shall also be withdrawn if an approved enterprise no longer possesses the necessary qualifications for obtaining approval of the right to accept responsibility. Before a decision is made about withdrawal, the enterprise shall be given notice with a time limit for expressing his/her opinion. When particularly extenuating considerations apply, withdrawal of central approval of the right to accept responsibility may still be omitted. For minor violations, a warning may be issued.

Withdrawal of central approval of the right to accept responsibility may occur until the enterprise can document through a new application that the circumstances that caused the withdrawal have been remedied and the remaining terms and conditions for approval have been met.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 22-3. *Local approval of enterprises exercising the right to accept responsibility***

Local approval of the right to accept responsibility for applications, design, execution or control of design and execution where the project or parts of the project so require, cf. Section 20-1, second paragraph, is granted to qualified enterprises. Approval is granted to different classes of projects. Local approval of the right to accept responsibility may not be granted for independent control unless central approval has been granted, cf. Section 23-7.

When the question of local approval of the right to accept responsibility arises, central approval of that right shall normally be accepted, provided that the approval duly covers the project in question.

The municipality shall ensure that the project is subject to responsibility and may require further applications for the right to accept responsibility, if such responsibility is incomplete. The municipality may require more or other responsible enterprises than those proposed by the applicant if the responsible enterprises lack qualifications, if there is reason to doubt the responsible enterprise's reliability and competence or if the enterprise has previously proven to be unqualified for similar functions.

Rejections of applications for the right to accept responsibility may be specially appealed by the enterprise that receives the rejection.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

#### **Section 22-4. *Withdrawal of local approval of the right to accept responsibility***

The municipality may withdraw local approval of the right to accept responsibility at any time if there should be any serious contravention of provisions or permission granted in or pursuant to this Act or if it finds that a responsible enterprise does not meet the requirements that have been specified for reliability and competence. Before a decision is made about withdrawal, the enterprise shall be given notice with a time limit for expressing his/her opinion. If the municipality finds it necessary, it may immediately invalidate the approval until the matter has been finally decided.

However, when particularly mitigating circumstances apply, the withdrawal of local approval of the right to accept responsibility may be dispensed with. For minor violations, a warning may be issued.

The municipality shall report withdrawal of local approval of the right to accept responsibility to the central approval body. The same applies to warnings that the municipality gives the enterprise.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

#### **§ 22-5. *Regulations concerning further rules about approval of enterprises***

The Ministry may lay down regulations concerning administrative procedures and requirements for approval, withdrawal, the extent and organisation of the system, time limits for central approval and consequences of failure to comply with a time limit and likewise concerning fees for approval, which may not exceed expenses incurred.

The requirements for approval shall relate to the enterprises' ability to meet the requirements of this Act, and may be concerned with requirements for the enterprises' organization, routines for meeting the requirements, and the competence of the enterprises' professional management, based on education and practical experience. Different levels of approval may be laid down relative to the degree of difficulty and the consequences of different classes of project.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009, amended by Act no. 48 of 25 June 2010.

### **Chapter 23. Responsibility in building matters**

#### **Section 23-1. *Responsibility in building matters***

In projects pursuant to Section 20-1, first paragraph, litra a to l, there shall be enterprises responsible for applications, design, execution and control. Responsible enterprises in building matters guarantee that the project will meet the requirements specified in or pursuant to this Act.

When it is so required by the project, cf. Section 20-1, second paragraph, the developer is obligated to transfer his/her responsibility to responsible enterprises. In matters where the project does not require specially qualified enterprises or in the areas of the project that are not sufficiently subject to responsible enterprises, the developer bears the sole responsibility.

The municipality may exempt enterprises from requirements relating to the right to accept responsibility in matters where this is clearly unnecessary.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009, amended by Act no. 48 of 25 June 2010.

### **Section 23-2. *Developer***

Pursuant to this Act, the developer is the person or enterprise on behalf of whom the project is executed. Any change of developer during the work shall be reported immediately to the municipality, both by the original developer and the new developer.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 23-3. *Extent and duration of the responsibility for responsible enterprises***

The right to accept responsibility is granted after an application, which shall comply with the application concerning the project, cf. Section 21-2. Responsible enterprises must be approved by the building authorities, cf. Sections 21-4 and 22-3. The enterprise is responsible to the building authorities for seeing that the Planning and Building legislation's requirements are met and documented for the area of responsibility that the enterprise has assumed through an application for local approval of the right to accept responsibility. The responsible enterprise's responsibility also includes sub-contractors' execution and design unless these have been granted local approval of the right to accept responsibility in the project.

The right to accept responsibility ceases with the issuance of a certificate of completion. However, the municipality may issue an order to remedy or improve a matter within five years after a certificate of completion has been issued if it discovers significant matters that contravene legislation or the granted permission and for which the responsible enterprise is responsible.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 23-4. *Responsible applicant***

The responsible applicant is the developer's representative to the municipality and is responsible for seeing that the application contains necessary information in order for the municipality to make a decision as to whether the project is in accordance with provisions and permission granted in or pursuant to this Act.

The responsible applicant shall coordinate the responsible designers, executors and controllers and see that all functions are subject to responsibility.

The responsible applicant is responsible for seeing that the project is completed by submitting the necessary information for the municipality's issuance of a certificate of completion.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 23-5. *Responsible designer***

The responsible designer is responsible for seeing that the project is designed in accordance with provisions and permissions granted in or pursuant to this Act. The assumptions and solutions on which the design is based shall be documented.

The responsible designer is responsible for the design of necessary safety measures pursuant to Section 28-2.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 23-6. *Responsible contractor***

The responsible contractor is responsible for seeing that the project is executed on the basis of and in accordance with the design, and in accordance with requirements or permits for the execution specified in or pursuant to this Act.

The responsible contractor is responsible for the implementation of necessary safety measures during the execution, pursuant to Section 28-2.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 23-7. *Responsible controller***

The responsible controller shall be independent of the enterprise that executes the work that is to be inspected. [The responsible controller shall have central approval pursuant to Section 22-1.]<sup>1</sup>

The responsible controller for the design is responsible for checking to ensure that the basis for the design and the designed solutions that have been prepared for the measure are documented and in accordance with requirements specified in or pursuant to this Act.

The responsible controller for the execution is responsible for seeing that the basis for execution has been sufficiently designed, that the execution is documented to be in accordance with requirements and permissions specified in or pursuant to this Act, and that the execution is in accordance with the basis for design.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

<sup>1</sup> This sentence enters into force on 1 July 2011, cf. Section 34-3 with note.

### **Section 23-8. *Regulations concerning responsibility***



The Ministry may lay down supplementary regulations concerning the content, delegation, implementation and withdrawal of responsibility and the right to accept responsibility.

The Ministry may lay down regulations specifying that the developer may build his/her own dwelling and leisure home, and concerning rules governing responsibility and documentation about such matters.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

## **Chapter 24. Quality assurance and control of design and execution of projects**

### **Section 24-1. *Quality assurance and control of design and execution***

The responsible designer and responsible contractor shall have a system to ensure and document that the requirements of the Planning and Building Act have been met. In addition, an independent control shall be conducted by the responsible controlling enterprise when:

- a) [there are important critical areas and functions]<sup>1</sup>
- b) the municipality requires it after a specific assessment.

The municipality may grant exemptions from requirements concerning independent control pursuant to regulations laid down by the Ministry.

The Ministry lays down regulations concerning criteria for when an independent control shall be conducted pursuant to the first sentence, litra a and b. The Ministry may lay down regulations concerning independent control of special areas in the event of hazard or other socially important factors.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

<sup>1</sup> This litra enters into force on 1 July 2011; cf. Section 34-3 with note.

### **Section 24-2. *Implementation of control***

[Control shall be conducted independently and uniformly and shall take care of interfaces between different professional fields.

Control shall be conducted on the basis of plans for implementation of the project, which shall also include a final inspection. The extent, details and implementation of the control shall be adapted to the difficulty of the work, the risk of and consequences of errors, and the enterprises' reliability and competence.

The developer and the responsible enterprises are obligated to provide the information that is necessary for the implementation of the control. In the event of errors that have been pointed out by the controlling enterprise and that are not remedied and in the event of disagreement about technical solutions, the controlling enterprise shall inform the municipality.

The Ministry lays down regulations concerning the implementation of control.]<sup>1</sup>

Effective 1 July 2011, cf. Section 34-3 with note.

Added by Act no. 27 of 8 May 2009.

1 This Section enters into force on 1 July 2011; cf. Section 34-3 with note.

## **Chapter 25. Oversight**

### **Section 25-1. *Duty to provide oversight***

The municipality has a duty to oversee building matters by seeing that the project is implemented with specified permission and provisions specified in or pursuant to this Act.

The municipality shall carry out oversight to such an extent that it can detect violations of rules. The municipality shall carry out oversight on already issued orders and in cases where it becomes aware of offences that violate trifling matters. The municipality shall oversee special conditions pursuant to further regulations from the Ministry.

The municipality may cooperate with other municipalities or bodies on oversight.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 25-2. *The content of the oversight***

In addition to the duty to provide oversight in Section 25-1, the municipality decides the matters and areas in which oversight shall be carried out. The oversight is conducted in such a way, to such an extent and with the intensity that the municipality finds appropriate.

The municipality may conduct oversight at any time during the construction and for up to five years after the certificate of completion has been issued; cf. Section 23-3, second paragraph. If the oversight reveals significant failures that have not been attended to through independent control, the municipality may require expert assistance or conduct technical tests at the developer's expense. The oversight shall be completed with a final report.

The Ministry may lay down regulations concerning the content, implementation and reporting of oversight.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

## **Chapter 26. Establishment and change of property**

### **Section 26-1. *Establishment and change of property***

Establishment of new real property, new installation property or new jointly owned common land, or the establishment of new leased land for leasing out that may apply for more than ten years, cf. the Act relating to Property Registration, or a change of existing property boundaries must not be done in such a way that circumstances arise that contravene this Act, these regulations or this plan. In addition, establishment or change as mentioned in the first sentence must not be

done in such a way that lots are formed that are unsuitable for building because of their size, form or location pursuant to the rules in this Act.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

## **Chapter 27. Connection to infrastructure**

### **Section 27-1. *Water supply***

No building may be constructed or put to use for the purpose of housing humans or animals without proper access to hygienically safe and sufficient potable water, including water for fire-fighting. The same applies to the establishment or change of property for buildings of this sort. The right to lay a water main across someone else's land, or alternatively to hook up to a common network of pipes, shall be ensured through registered documents or in some other way that the municipality accepts as satisfactory.

When a public water main is laid across the property or in a road bordering upon it, or across a nearby area, any buildings located on the property shall be connected to the main. If in the municipality's opinion this will entail unreasonably high costs or special considerations so dictate, the municipality may approve some other arrangement.

In matters other than those mentioned in the second paragraph, the municipality may require that the building shall be connected to a public water main when special considerations argue for it.

The rules in the second and third paragraphs also apply to existing structures.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 27-2. *Sewers***

Before the establishment or alteration of property for buildings or the erection of a building is approved, the removal of wastewater shall be ensured in accordance with the Pollution Control Act. The right to lay a sewer pipe across someone else's land, or alternatively to hook up to a common network of pipes, shall be ensured through registered documents or in some other way that the municipality accepts as satisfactory.

When a public sewer pipe is laid across the property or in a road bordering upon it, or across a nearby area, any buildings located on the property shall be connected to the sewer pipe. If in the municipalities' opinion this will entail unreasonably high costs or special considerations so dictate, the municipality may approve some other arrangement.

In matters other than those mentioned in the second paragraph, the municipality may require that the building shall be connected to a sewer pipe when special considerations argue for it.

The rules in the second and third paragraphs also apply to existing structures.

Before the erection of a building commences, the drainage of ground water and surface water shall be ensured. The same conditions apply as for the maintenance of drainage of existing structures.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 27-3. *Connection to existing private installations***

The planning and building authorities may permit connection to private water and sewerage installations. In such cases, the owner of the installation may require that the party that will be connected to the installation undertake or pay for the extensions and alterations of the installation that the connection makes necessary or that security be provided for so doing. In addition, the owner may require a refund of the cost of the original construction and subsequent upgrades. The expenses and the refund shall be determined by judicial assessment. The expenses associated with judicial assessment shall be born by the party who is to be connected to the installation.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 27-4. *Access***

Before the establishment or alteration of property for buildings or the erection of a building is approved, the building lot shall either have been ensured lawful access to a road that is open to general traffic or by judicially registered document or in some other way have been ensured such road access as the municipality considers satisfactory. An exit road from a public road must be approved by the roads authority concerned, cf. Sections 40-43 of the Public Roads Act.

If, in the opinion of the municipality, a road connection cannot be provided without disproportionate difficulty or expense, the municipality may approve some other arrangement.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 27-5. *District heating plant***

If a structure shall be erected within an area to which a licence for district heating applies, and it has been decided in a plan that a project has an obligation to connect, the building shall be connected to the district heating plant.

The municipality may grant a complete or partial exemption from the obligation to connect when it is documented that the use of alternative solutions for the project will be environmentally better than connection.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 27-6. *Regulations concerning connection***

The Ministry may lay down regulations pursuant to Sections 27-1 to 27-5, including regulations concerning projects where connection to a district heating plant may be required and likewise arrangements for the use of district heating.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

## **Chapter 28. Requirements for building lots and undeveloped land**

### **Section 28-1. *Building land, environmental conditions, etc.***

Land may only be developed, or property established or altered, when there is adequate safeguard against hazard or significant inconvenience as a result of natural or environmental conditions. The same applies to land that is exposed to hazard or significant inconvenience as a result of a project.

For land that is not sufficiently safe, the municipality shall prohibit the establishment or alteration of property or the erection of structures, if necessary, or make special requirements for building land, buildings and outside area.

The Ministry may lay down more detailed regulations concerning the safety level and requirements for surveys, safety measures for persons or property, documentation of the project and special safety measures.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 28-2. *Safety measures for construction work, etc.***

Building or demolition work, excavation, blasting or filling may not be initiated unless the responsible parties have taken necessary measures to safeguard against injury to persons or damage to property, and to maintain the flow of public traffic.

Machinery, scaffolding and all equipment for construction work shall be properly designed and maintained, and the execution of the work shall be organized in such a way as to avoid any hazard to life or health. The municipality may issue such orders as it considers necessary to ensure that these provisions are complied with, including orders concerning investigations of ground conditions.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 28-3. *Measures on adjoining land***

If a structure can be exposed to damage due to seepage of water, an avalanche or a slide from adjoining land, the municipality may allow necessary preventive measures to be taken on the adjoining land.

The municipality may permit the use of adjoining land to the extent necessary for the execution of building and maintenance work - including the provision of access - if the work either cannot be performed in another way, or in the opinion of the municipality, other solutions would entail substantially higher costs. The municipality may also permit a chimney that abuts on a neighbour's property to be attached to a

wall or the roof of this property, or that access to the chimney shall be across the roof of the adjoining property.

The municipality may make the permission subject to conditions, including the provision in advance of such safety measures as the municipality decides.

Compensation to the neighbour for any expenses, damages or inconveniences are determined, if necessary, by judicial assessment. If the measures mentioned in the first paragraph are necessitated because the neighbour has neglected his/her obligation to drain away water or to prevent an avalanche or a slide, that party may be ordered by judicial assessment to compensate the owner for costs, damage or inconvenience.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

#### **Section 28-4. *Making fencing safe***

In urban areas and in areas where a plan so requires, a lot shall be fenced off from roads when not fully developed right up to the road line. The municipality may require that lots be fenced off from roads outside urban areas.

The municipality may issue an exemption from the duty to erect fencing unless the roads authority finds that there ought to be a fence pursuant to Section 44 of the Public Roads Act.

This provision also applies to existing structures.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

#### **Section 28-5. *Tidiness and use of undeveloped land. Safety measures in connection with structures, etc.***

Undeveloped land in urban areas shall be kept tidy and in proper condition. The municipality may prohibit the use of undeveloped land for storage or other purposes, if in the opinion of the municipality such use would make occupancy or traffic dangerous, be very unsightly or cause significant inconvenience. In cases where conditions connected to storage and other use or the terrain in the vicinity of the structure may make it dangerous to be present or move about, the municipality may order the owner to implement safety measures.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

#### **§ 28-6. *Making pools, wells and ponds safe***

Pools and wells shall at all times be made safe enough to prevent people from falling into them. The municipality may order wells or ponds that are deemed to be particularly hazardous to children to be filled in or made safe in some other way within a specified time limit. Such filling-in may not be done if the well or pond is required for water supply purposes. Ponds to which the Water Resources Act applies shall be made safe pursuant to the provisions of said Act.

The landowner is responsible for ensuring that installations are made safe as specified in the first paragraph. If the land is leased out for more than two years, the responsibility rests with the lessee. If the installations are used only by someone who is not responsible pursuant to the above regulations, the responsibility rests with the user.

The Ministry may lay down regulations with requirements for the safety level and safety measures for pools, wells and ponds.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009, amended by Act no. 48 of 25 June 2010.

### **Section 28-7. *The undeveloped part of the lot. Common area***

Within its function, the outside area should be universally designed in accordance with regulations specified by the Ministry. The outside area for work buildings should be universally designed in accordance with regulations specified by the Ministry.

The size, design and location, etc. of the outside area on the lot shall be secured to provide satisfactory open-air spaces for residents and provide necessary playgrounds, recreational areas, as well as exit roads and parking spaces for cars, motorcycles, bicycles, etc. Developed outside area on the lot may be used by everyone who is covered by the purpose of the permission. The municipality may agree that a common area be set aside for two or more properties.

It may be provided in the municipal master plan that the municipality may agree that, instead of a parking space on one's own land or in a common area, a sum of money be paid to the municipality in each case where a parking space is lacking for the purpose of building a parking facility. The Municipal Council will decide what rates shall apply at any time in such cases. Payments may only be used for the development of public parking facilities.

The provisions in the first to third paragraphs also apply if there is a change of use.

The Ministry may lay down regulations concerning the constraints for application of these provisions, including the use of funds paid in pursuant to the third paragraph.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 28-8. *Regulations concerning preservation of the environment***

The Ministry lays down regulations for the preservation of the environment, including biodiversity, in conditions that are covered by this chapter.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

## **Chapter 29. Requirements for the project**

### **Section 29-1. *Design of projects***

Pursuant to Chapter 20, each and every project shall be designed and carried out so that it is given a good architectural design in accordance with its function pursuant to the rules specified in or pursuant to this Act.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 29-2. *Visual qualities***

Pursuant to Chapter 20, each and every project shall be designed and carried out so that in the opinion of the municipality it maintains good visual qualities both inherently and with regard to its function and its constructed and natural surroundings and location.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 29-3. *Requirements for design for universal accessibility and reliability***

Within its function, projects pursuant to Chapter 20 should be universally designed in accordance with regulations specified by the Ministry. Projects pursuant to Chapter 20 that include work buildings should be universally designed in accordance with regulations specified by the Ministry.

Projects should not entail any hazard and should meet requirements for reasonable safety, including necessary evacuation, health and environmental requirements pursuant to statute.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 29-4. *Location of the structure, its height and distance from the boundary of adjoining property***

The location of the structure, including the level of location, and the height of the structure shall be approved by the municipality. The municipality shall ensure that the provisions of the Public Roads Act imposing limitations on building and unobstructed visibility are complied with. A building where the cornice height exceeds eight metres and the height of the roof ridge exceeds nine metres may only be built if authorized in a plan pursuant to Chapters 11 or 12.

Unless otherwise decided in a plan pursuant to Chapters 11 or 12, the distance of the structure from the boundary of adjoining property shall be equal to at least half the height of the structure and not less than four metres.

The municipality may approve that a structure be located closer to the boundary of adjoining property than the distance specified in the second paragraph, or on the boundary of adjoining property:

- a) when the owner (lessee) of the adjoining property has given his written consent,  
or
- b) when a garage, outhouse or similar small project is to be erected.



Further provisions, including rules concerning the distance between structures, the method for calculating height, the distance from the boundary of adjoining property and the area of any buildings mentioned in the second paragraph, litra b, shall be made in regulations.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009, amended by Act no. 48 of 25 June 2010.

### **Section 29-5. *Technical requirements***

Each and every project shall be designed and carried out in such a way that the completed project meets requirements for safety, health, environment and energy and in such a way that lives and material assets are protected.

Any building with rooms intended for human habitation shall be designed and carried out in such a way that requirements are met for satisfactory energy use, layout of the rooms and indoor environment, including outward view, lighting, insulation, heating, ventilation and fire prevention, etc.

In order to ensure that each project is given a satisfactory and intended useful life, special consideration shall be given in the design and execution to geographical differences and climatic conditions on location.

The Ministry may lay down supplementary provisions in writing concerning technical requirements for projects, including requirements for energy systems.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 29-6. *Technical installations and systems***

Technical installations and systems shall be designed and carried out so as to yield the performance required and tolerate the internal and external loads that normally occur. Section 29-3, first paragraph, applies correspondingly.

Technical installations and systems shall be erected or installed, operated and maintained so as to meet the requirements for satisfactory health, safety and the environment, including energy economising, specified in or pursuant to statute. The owner of the system shall see that necessary maintenance and repair are carried out by qualified personnel.

If in the opinion of the municipality, technical installations and systems are detrimental to their surroundings, the municipality may order the owner to take necessary measures. When special circumstances make that reasonable, it may be decided that the costs of such measures shall be paid wholly or in part by the owner of other property that has caused the order to be given.

This section also applies to technical installations and systems in existing structures.

The Ministry may lay down more detailed provisions by means of regulations; e.g. with regard to the erection or installation of installations and systems, the repair of systems that are in operation, and the system owner's obligations.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 29-7. *Requirements for construction products***

Each and every product that shall be included in a structure shall have satisfactory characteristics. The manufacturer or his/her representative shall ensure that the characteristics of the product are attested and is obligated to provide the supervisory authority with the information that is necessary for supervising the characteristics of the product. The Ministry will appoint the supervisory authority.

The Ministry may lay down regulations concerning technical specifications and the approval and control systems that are to be applied in regard to attestation and oversight, in pursuance of which the Ministry may lay down requirements concerning the marking of construction products (CE-marked product).

If the supervisory authority has grounds to suspect that a product is being sold that does not meet the requirements for attestation and the product is intended for use in a structure, it shall oversee the product and may issue an order for a temporary stoppage of the sale and use of the product.

If the supervisory authority finds that any product does not satisfy the stipulations relating to approval, oversight or marking, it may order that the sale of the product be stopped. The same applies to any product that may entail a hazard to life, health or the environment, even though it has been declared to be in conformity with the requirements. The supervisory authority may also prohibit the use of and order the recall of such products from the market or take other steps to ensure that the product is made to comply with the requirements if the product has already been sold. The supervisory authority shall be allowed such access to products, premises, ground or other areas as is necessary for exercising oversight.

The Ministry may lay down regulations concerning fees for supervisory work to ensure that the provisions and decisions made in or pursuant to this section are complied with. The payment of such fees is enforceable by execution.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 29-8. *Waste management***

Projects pursuant to Chapter 20 shall meet the requirements for satisfactory waste management pursuant to statute.

The Ministry lays down more detailed regulations concerning waste management, including documentation of waste management and of what is considered to be satisfactory waste management.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 29-9. *Lifts, escalators and moving pavements. Safety control***

Lifts, escalators and moving pavements shall be so designed, and the operation of such installations shall be so safe that use of the installation cannot cause injury to persons. Section 29-3, first paragraph, applies correspondingly.

The municipality may carry out safety control of an installation when it is in operation. A safety control may also be carried out by the Ministry or whomsoever the Ministry so authorizes. It may be required that expenses for the implementation of a safety control of an installation in operation be covered by the owner of that installation.

If a safety control reveals errors or deficiencies that may entail a hazard of injury to a person, the person who performs the safety control shall immediately put the installation out of operation until the municipality may make a decision on the matter.

The owner of the installation is responsible for seeing that:

- a) installations that are in use adequately comply with safety requirements
- b) maintenance, scrutiny, necessary repairs and safety controls of the installation are performed,
- c) maintenance and scrutiny are performed by qualified personnel and that a safety control is implemented by the municipality or the body that has been delegated special authority by the Ministry and
- d) for each individual installation, there is documentation of compliance with requirements specified in or pursuant to this Act, including the ways in which maintenance, scrutiny, necessary repairs and safety controls are planned and executed.

Installations cannot be put into operation unless a necessary permission has been granted pursuant to Section 21-10.

This section also applies to lifts, escalators and moving pavements in existing structures. Installations cannot be kept in operation unless the requirements in the fourth sentence have been met.

The Ministry may lay down more detailed provisions by means of regulations, e.g. concerning safety controls and repair of installations that are in operation, concerning qualification requirements for control personnel, and concerning the obligations of the owner of the installation, and that the provisions that apply to lifts, escalators, and moving pavements shall also fully or partially apply to other permanent lifting equipment.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 29-10. *Regulations concerning preservation of the environment***

The Ministry lays down regulations for the preservation of the environment, including biodiversity, during the positioning and design of projects.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

## **Chapter 30. Requirements for special projects**

### **Section 30-1. *Agricultural buildings***

The provisions in Section 27-1, second to fourth sentences, Section 27-2, second to fifth sentences and Section 27-4 do not apply to the erection of agricultural buildings or to the alteration and repair of existing agricultural buildings.

The Ministry may lay down regulations to the effect that also other provisions made in or pursuant to this Act shall not apply and concerning the practical applicability of these provisions.

These provisions also apply to shelters for summer dairy farming, reindeer husbandry or forestry.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 30-2. *Structures and activities that may entail hazard or particular inconvenience***

In and in connection with residential areas, the municipality may prohibit or make special requirements concerning structures or activities that may entail hazard or particular inconvenience.

This provision also applies to existing structures and activities.

The Ministry may lay down further rules by means of regulations concerning the positioning of structures and activities that may entail a hazard or particular inconvenience.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 30-3. *Signs and advertising devices***

Signs and advertising devices must not seem inherently unsightly or annoying relative to the surroundings or to traffic, or in conflict with the desired development in the municipality.

Permission for signs and advertising devices may be granted permanently, for a particular period of time or until further notice. If the permission is granted until further notice, the municipality may issue orders to remove or alter any sign and advertising device that in the opinion of the municipality contravenes the requirements in the first sentence. In all cases, the municipality may order the removal of any device that is presumed to entail a hazard.

The Ministry may in regulations lay down more detailed provisions concerning material requirements for signs and advertising devices.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 30-4. *Other permanent structures or installations. Significant encroachments on terrain, etc.***

For permanent structures or installations, substantial encroachments on the terrain and the construction of roads or parking spaces, the provisions laid down in or pursuant to this Act will apply to the extent that they are suitable, regardless of whether the project is executed on or in the land, in watercourses, or in sea areas.

The municipality may determine the height and shape of terrain. The Ministry may lay down regulations to the effect that provisions made in or pursuant to this Act's provisions regarding building matters shall not apply and concerning the practical applicability of this Section.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 30-5. *Temporary buildings, structures or installations.***

Temporary buildings, structures or installations, cf. Section 20-1, first paragraph, littera j, must not be so placed as to obstruct general passage or outdoor pursuits or in any other way cause significant inconvenience for the surroundings. Insofar as they are appropriate, provisions made in or pursuant to statute shall apply to the above-mentioned projects. The Ministry may lay down regulations for temporary buildings, structures and installations. The Ministry may also lay down regulations concerning the requirements that will apply to construction workers' huts that are meant to be erected for more than two years in direct connection with building or construction plots where work is underway.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009, amended by Act no. 48 of 25 June 2010.

### **Section 30-6. *Leisure buildings***

The Act's provisions in Section 27-1, second to fourth paragraph and Section 27-2, second to fourth paragraph only apply to leisure buildings when this has been specified in a plan. The Ministry may lay down regulations to the effect that other provisions made in or pursuant to this Act shall not apply to leisure buildings.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

## **Chapter 31. Requirements for existing structures**

### **Section 31-1. *Preservation of cultural value through work on existing structures***

Through alteration of existing structures, restoration or renovation, the municipality shall ensure that any historical, architectural or other cultural value connected to the exterior of a structure is preserved as far as possible. Section 29-2 also applies.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 31-2. *Projects in existing structures***

Projects in existing structures shall be designed and executed in accordance with provisions specified in or pursuant to statute. In structures that are, or are used, in conflict with a later adopted plan, the general renovation, addition, extension, underpinning, change of use or significant extension or change of previous operation may only be permitted when it is in accordance with the plan.

The municipality may specify as terms and conditions for permitting a project pursuant to Section 20-1 that other parts of the structure to which the project applies be put into proper condition in accordance with relevant technical requirements. This may be done when the municipality finds that the structure is in such poor condition that it would otherwise not be advisable to implement the project that has been applied for out of consideration for health, safety and the environment.

If it has been agreed to expropriate the structure, the municipality does not have to grant permission to the project. The same applies if the owner is given preliminary notice pursuant to the Expropriation Act. Otherwise, Section 28 of the Expropriation Act applies. If the expropriation has not been decided, the decision must have been made no later than twelve weeks after the application for permission has been received.

The municipality may also grant permission for change of use and necessary reconstruction and renovation of existing structures when it is not possible to adapt the structure to technical requirements without disproportionate costs if the change of use or the reconstruction is adequate and necessary in order to ensure appropriate use. The municipality may specify terms and conditions in the permission.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 31-3. *Safety and repair. Disconnection of water and sewer pipes***

The owner or the responsible party is obligated to keep structures and installations that are covered by this Act in such a condition that a hazard of damage or significant inconvenience to a person, property or the environment does not arise, and in such a way that they do not appear inherently unsightly relative to the surroundings.

If this obligation is not met, the municipality may issue an order regarding safety and repair.

In cases where water and sewer pipes are taken out of use permanently or for a longer period of time, the owner shall connect the pipe from a common pipe installation when considerations of adequate health, safety and the environment so require. The municipality may order disconnection in cases mentioned in the previous sentence.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 31-4. *Orders regarding documentation and improvement***

The Ministry may lay down regulations concerning the municipality's right to issue orders regarding documentation and improvement of existing structures and installations.

Orders may only be issued in cases where improvement will result in substantial improvement of the structure's or the installation's function, which is indicated by weighty considerations of design for universal accessibility, health, safety, environment, or conservation value. In making an assessment, importance shall be attached to the costs entailed by the order, the number of users, the hazards or inconveniences to which they are exposed and the difference between the actual condition and current requirements.

The King may lay down regulations specifying that certain types of projects or certain types of existing buildings, installations or outdoor areas may be developed in such a way that they will be universally designed. A time limit may be set for this kind of development.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 31-5. *Orders regarding and prohibition against demolition***

If a structure has reached such a state that, in the opinion of the municipality, it cannot be restored except by general renovation and new building or general renovation cannot be carried out or is not started within a reasonable period of time stipulated by the municipality, the municipality may require the structure or the remains thereof to be removed and the lot to be cleared.

The removal of structures, etc. may also be required if, in the opinion of the municipality, it has got into such a state that it entails a hazard or significant inconvenience to persons, property or the environment, or seems very unsightly, and it is not repaired within a stipulated time limit.

The municipality may also reject applications for demolition pursuant to Section 20-1, first paragraph, *litra e* until there is:

- a) permission to start the work for new projects on the lot, or
- b) a zoning plan that cannot be implemented unless the structure is demolished.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 31-6. *Change of use and demolition of dwellings***

By means of provisions in the municipal master plan, or by making use of it for such purposes, the Municipal Council may decide that special permission must be obtained from the municipality for:

- a) converting a dwelling into business premises or making use of it for such purposes, including a hotel or other type of hostel,
- b) demolishing a building containing a dwelling, except when the building
  1. has been expropriated by the public authorities, or
  2. lies within an area that is zoned for buildings and installations, cf. Section 12-

5, sub-section 1, is subject to provisions regarding renewal, cf. Section 12-7, and has been acquired by the municipality or other parties who, with the consent of the Municipal Council, shall be responsible for renewal.

- c) entails combining dwellings or dividing dwelling units into bed-sitting rooms,
- d) entails reconstruction of a dwelling other than that mentioned in litra a or c when the reconstruction entails that a dwelling unit must be vacated.

When deciding whether to grant permission pursuant to the first paragraph, litra a to d, it is necessary to take into account whether, in the opinion of the municipality, there has been proper utilization of the building complex. It may be stipulated as a condition that affected residents shall be provided with a compensatory dwelling.

If a dwelling is converted in contravention of a planning provision pursuant to the first paragraph, the municipality may order that the dwelling be restored to such a state that it can serve its original purpose.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 31-7. *Supervision of existing structures and ground***

The planning and building authorities may oversee existing ground and structures to ensure that no unlawful use or other unlawful conditions pursuant to this Act subsist, which may entail a hazard or significant inconvenience to persons, property or the environment. Oversight may, however, only be carried out when there is reason to assume the existence of such conditions as are mentioned above or measures pursuant to Sections 31-3 and 31-4 are to be considered.

Anyone using a structure, ground or relevant parts of it is under obligation to provide the authorities concerned with the necessary information and access to undertake any necessary investigations.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 31-8. *Improvement programme***

For one or more properties in a built-up area, the Municipal Council may adopt a programme for improvement of buildings and associated land.

The municipality may encourage owners and residents of the affected real property, including houses on leased land, to provide the necessary information and shall give them an opportunity to participate in the preparation of the improvement programme.

The improvement programme may comprise:

- a) reconstruction, improvement or restoration,
- b) composition of dwelling units, heating, electricity supply, sanitary installations, etc.
- c) technical and fire prevention conditions
- d) laying out common areas and arranging common installations for the building and



future maintenance and operation of common areas and common installations.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

## **Part five: Rules concerning enforcement and fees**

### **Chapter 32. Monitoring of unlawful acts**

#### **Section 32-1. *Obligation to prosecute unlawful acts***

The municipality shall prosecute violations of provisions specified in or pursuant to this Act.

If the violation is relatively minor, the municipality may refrain from prosecuting unlawful acts. A decision about this is not an individual decision.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

#### **Section 32-2. *Preliminary notice***

The responsible party shall be notified before an order is issued, a coercive fine approved or a writ issued and be given an opportunity to submit comments within a time limit that shall be no shorter than three weeks. Preliminary notice shall be given in writing.

The preliminary notice shall provide information that if unlawful matters are not remedied by the time limit, the matter may be followed up with an order that it be remedied, an order to stop the project or approval of a coercive fine. The preliminary notice shall also provide information about whether any order that is not complied with by the specified time limit may also be followed up with a writ that may have the same effect as a legally enforceable judgment.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

#### **Section 32-3. *Orders regarding correction and orders to stop a project***

In the case of any matter that contravenes provisions made in or pursuant to this Act, the planning and building authorities may order the person responsible to remedy the unlawful matter, cease use and issue a prohibition against continued activity as well as shutting down the work.

When an order is issued, a time limit shall be set for compliance.

At the same time as an order is issued, a coercive fine may be set. When an order is issued, information is provided that the order may be followed up with a writ that may have the effect of a legally enforceable judgment.

A final order may be registered as a charge on the relevant property.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

#### **Section 32-4. *Orders to stop and cease a project effective immediately***

If necessary, the planning and building authorities may issue an order to the responsible party to stop the project or cease use effective immediately. This kind of order may be issued without preliminary notice. If necessary, the planning and building authorities may request assistance from the police to carry out the order to stop the project.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

#### **Section 32-5. *Coercive fine***

In the case of any matter that contravenes provisions made in or pursuant to this Act, the planning and building authorities may impose a coercive fine in order to enforce any order they have issued within a specific time limit. The coercive fine is imposed simultaneously with an order to remedy the matter and runs from the expiry of the time limit for such a remedy. In cases where a coercive fine is not set at the same time as the order is issued, a separate preliminary notice concerning the coercive fine shall be issued.

It may be specified that the coercive fine will run as long as the unlawful matter persists, as a single payment or as a combination of a running fine and a single payment. The coercive fine shall be imposed on the person who is responsible for the offence, and shall accrue to the municipality. When the unlawful matter is remedied, the municipality may reduce or waive the imposed coercive fine.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

#### **Section 32-6. *Writ concerning the obligation to comply with an order or prohibition***

The planning and building authorities may issue a writ regarding the obligation to comply with an order against any party who within a fixed time limit fails to comply with an order or prohibition issued pursuant to this Act. If more than six months have elapsed since the order or prohibition was issued, the party to whom the writ is addressed shall be given an opportunity to express an opinion before the writ is issued. The writ shall provide information concerning the provisions in the second paragraph and shall, as far as possible, be served on the party to whom it is addressed.

The party to whom the writ is addressed may institute legal proceedings against the public authorities in order to have the writ tested in court. If such proceedings have not been instituted within 30 days of service, the writ shall have the same effect as a legally enforceable judgment and may be executed pursuant to the rules for judgments. The writ cannot be appealed against.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

#### **Section 32-7. *Enforcement***

If an order in a legally enforceable judgment or in a writ that is equivalent to such a judgment is not complied with, the planning and building authorities may have the necessary work carried out at the expense of the party to whom the judgment or the writ is directed, without requiring any court order pursuant to Sections 13-7 and 13-14 of the Enforcement Act.

An order issued by the planning and building authorities pursuant to this Act is special grounds for enforcement if the order concerns matters entailing a hazard for those frequenting the building or others, and the order is not complied with within a fixed time limit and may be enforced pursuant to the provisions of Section 13-14 of the Enforcement Act without requiring a judgment or writ. The same applies when a temporary dispensation pursuant to section 19-3 is withdrawn, or when the work required to be carried out as a condition for provisional permission for use pursuant to section 21-10, third paragraph has not been done, or an order to remove or alter signs, etc. pursuant to Section 30-3 has not been complied with within a fixed time limit.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 32-8. *Violation fines***

Violation fines may be imposed on anyone who wilfully or negligently:

- a) designs or carries out a project in contravention of provisions made in or pursuant to this Act that may lead to or has led to injury to persons, significant material damage or damage to the environment.
- b) carries out, has carried out, uses or allows use of a project without obtaining the necessary permission pursuant to this Act, or in contravention of the terms and conditions of such permission
- c) does not carry out control of a project in accordance with provisions specified for this purpose in or pursuant to this Act and granted permissions
- d) uses or allows the use of structures or parts of structures or spaces without obtaining the necessary permission pursuant to this Act, or the use is in contravention of provisions specified in or pursuant to this Act, decisions or plans
- e) designs, carries out or has carried out or checks a project pursuant to Section 20-1 unless the work is supervised by a responsible party who is approved pursuant to Section 22-1 and is delegated the right to accept responsibility pursuant to Section 21-4, third paragraph.
- f) gives incorrect or misleading information to the planning and building authorities
- g) despite a written order fails to comply with the conditions for temporary dispensation pursuant to section 19-3,
- h) despite a written order fails to fulfil the obligation pursuant to section 31-3, first paragraph, first sentence, to maintain structures and installations in a proper state,
- i) fails to comply with a written order issued pursuant to section 31-5 concerning removal of a building or remains of a building or installation, or concerning clearing the lot,
- j) despite a written order fails to meet the obligation pursuant to section 28-2 to take

safety measures,

- k) fails to comply with a written order issued pursuant to section 29-6, third paragraph concerning taking measures to remedy inconveniences caused by technical installations.
- l) does not comply with a special order or prohibition issued pursuant to the Planning and Building Act, if the municipality has first notified him in writing that he may become liable to a violation fine if the matter is not remedied within a specified time limit, and this time limit is exceeded.

Violation fines may also be imposed in the event of contravention of regulatory provisions specified pursuant to this Act, when it is specified in the regulations that violation of the relevant provision may result in a violation fine.

The responsible party shall be specially notified before a violation fine is approved and be given an opportunity to submit comments within a time limit that shall be no shorter than three weeks. Preliminary notice shall be given in writing.

Violation fines are imposed on the responsible party by the planning and building authorities. The violation fine shall accrue to the municipality. The time limit for compliance is four weeks after the decision was made unless otherwise specified in the decision.

When a violation that may result in a violation fine is committed by someone who has acted on behalf of an enterprise, the violation fine may be imposed on the enterprise. This will apply even if a violation fine cannot be employed against an individual person.

The Ministry lays down regulations with further rules concerning the implementation of this provision, including the determination and registration of imposed violation fines and the interest rates that will be charged. A maximum limit for the violation fine shall be specified.

The final decision concerning a violation fine is enforceable by execution.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 32-9. *Punishment***

Violations of Section 32-8, first paragraph that are serious and wilful or criminally negligent are punished with fines or up to one year of imprisonment. The same applies to a violation of provisions specified pursuant to this Act, when it is specified in the regulations that violation of the relevant provision is illegal. In the assessment of whether a violation is serious, importance shall be attached to the extent and effects of the violation and the degree of demonstrated culpability. If the person or the enterprise has previously had a sanction imposed on him/her for violation of this Act or regulations specified pursuant to this Act, punishment may be meted out even if the violation is not serious.

With fines or imprisonment of up to 1 year, punishment will also be meted out to anyone who wilfully or negligently:

- a) gives incorrect or misleading information to the central approval body or

b) puts a CE-marking on a product without the conditions for doing so being met, or sells such a product, or who otherwise does not provide information or fails to allow the supervisory authority access to any product, premises, land or other area, which is deemed necessary in order to carry out the oversight, cf. Section 29-7. Any person who aids or abets the sale of such a product shall be sanctioned in the same way.

For serious violations, imprisonment of up to two years may be meted out. In the assessment of whether the violation is serious, importance shall be attached to the extent and effects of the violation and the degree of demonstrated culpability.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 32-10. *Coordination of sanctions***

Any sanctions imposed shall be in reasonable proportion to the offence. If several different kinds of sanctions are imposed for the same offence, these must be co-ordinated so that the offender is not penalized in an unreasonable manner.

The planning and building authorities may not impose a violation fine on the responsible party if the responsible party has previously been acquitted through a legally enforceable judgment or final decision or been subject to a penal sanction or loss of civil liberties for the same offence.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

## **Chapter 33. Fees and investigations on real property**

### **Section 33-1. *Fees***

The Municipal Council itself may lay down regulations concerning fees to the municipality for the processing of applications for permission, the issuing of maps and certificates and for other work that it is incumbent upon the municipality to carry out pursuant to this Act or regulations, including the consideration of private planning proposals. The fee shall not exceed the municipality's necessary expenditures in the sector. The necessary use of expert assistance during inspections may be included in the fee. The percentage of the fee that is collected for inspections shall be specified in the scale of fees. The developer himself may arrange for the necessary surveys.

The owner shall pay a fee to the appropriate authority to cover the cost of processing applications for permission to operate and for operational control. A fee for operational control may be covered partly or wholly by the annual fee.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Section 33-2. *Survey of real property***

The planning and building authorities or others with the consent of the municipality may undertake the measurement, staking out and other surveys of real

property, with the aim of implementing the Act or provisions pursuant to statute. The municipality may grant other consent in order to undertake these surveys at such time as is determined by the consent.

The owner or user must be notified before a survey takes place and in such cases may request confirmation from the municipality that it has given its consent to the survey. With regard to the implementation of the survey, Section 15 of the Public Administration Act applies. If an owner or holder of rights suffers a loss through the survey, Section 15 of the Expropriation Act applies to compensation.

An owner shall call attention to unlawful matters that are detected by inspections. The planning and building authorities may give the owner a written order to remedy the matter within a specified time limit, and may in special cases wholly or partly prohibit use of structures or ground until the unlawful conditions are remedied.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

## **Part six: Final provisions**

### **Chapter 34. Commencement and transitional provisions**

#### **Section 34-1. *Commencement – the planning part***

This Act comes into force starting on the date<sup>1</sup> determined by the King.

Starting on the same date, Chapters I to VII-a of the Planning and Building Act no. 77 of 14 June 1985 will be rescinded.<sup>2</sup>

<sup>1</sup> Pursuant to Royal Decree no. 638 of 12 June 2009, the planning part, with the exception of Chapter 15, entered into force on 1 July 2009. Starting on the same date, the amendments in Chapters 1 and 19 and the title of the Act specified in Act no. 27 of 8 May 2009 came into force. Pursuant to Royal Decree no. 896 of 18 June 2010, Chapter 15 and the building matter part entered into force on 1 July 2010 with the exception of Section 23-7, first paragraph, second sentence, Section 24-1, first paragraph, second sentence, litra a and Section 24-2, which will enter into force on 1 July 2011.

<sup>2</sup> Pursuant to Royal Decree no. 638 of 12 June 2009, Chapters I to VII, with the exception of Section 6, Section 21 and Section 32 were rescinded starting on 1 July 2009. Pursuant to Royal Decree no. 859 of 26 June 2009, Chapter VIIa was rescinded starting 1 July 2009. Pursuant to Royal Decree no. 896 of 18 June 2010, Section 6, Section 21 and Section 32 were rescinded starting 1 July 2010.

#### **Section 34-2. *Transitional provisions to the planning part***

As soon as possible and within two years after the Act's commencement, the King shall present a document with national expectations for regional and municipal planning, cf. Section 6-1.

By the end of the first year after the election of a new municipal council and county council, the municipality shall draft and approve a municipal planning strategy pursuant to Section 10-1 and the county authorities and/or regional planning authority shall draft and approve a regional planning strategy pursuant to Section 7-1.

Current national policy guidelines and provisions pursuant to Section 17-1 of the Planning and Building Act of 1985 will continue to apply. Amendments to these guidelines and provisions shall be made pursuant to the rules in Chapter 6 of this Act.

The current county master plan, municipal master plan, including the area part of the municipal master plan, zoning plan and building development plan will apply until

they are amended, rescinded, replaced or overturned by a new plan pursuant to this Act.

Limitations on the right to appeal in Section 1-9, second paragraph, first sentence, and on the right to submit an objection pursuant to Section 5-5, last paragraph, will only apply with regard to planning decisions made pursuant to this Act.

Provisions in and pursuant to Chapters VIII to XXI of the Planning and Building Act no. 77 of 14 June 1985 will continue to apply for expropriation, development, refunds, processing of applications, sanctions, etc. for plans prepared before the commencement of this Act.

Older zoning plans and building development plans are still the basis for expropriation within the ten-year time limit for expropriation.

The exception in Section 17-2, third paragraph, sub-section 1 of the Planning and Building Act of 1985 for buildings, structures, installations or fencing that are necessary in agriculture will continue to apply until provisions have been approved pursuant to Section 11-11, sub-section 4, but will lapse regardless four years after the commencement of the Act.

Municipal regulations and by-laws will apply until they are replaced by new planning provisions, regulations, or by-laws. Municipal by-laws issued pursuant to the Planning and Building Act's Section 3, Section 67, sub-section 3, Section 69, sub-section 4, Section 78, third paragraph, Section 85, third paragraph and Section 91a, first paragraph will lapse no later than eight years after the commencement of this Act. The municipality may grant dispensation from by-laws pursuant to the rules in Chapter 19.

Proposals for the area part of municipal master plans, zoning plans and building development plans that were made available for public scrutiny at the commencement of the Act may be finally processed pursuant to the rules that were in force when they were made available. For other plans, the rules in this Act apply.

For projects that require an environmental impact assessment pursuant to the rules in Chapter VII-a in the current Act and where the planning programme is approved, the environmental impact assessment may be completed pursuant to these rules.

The Ministry may lay down further provisions by means of regulations concerning the ways in which the rules in the Planning and Building Act no. 77 of 14 June 1985 shall work together with provisions in this Act.

Effective 1 July 2009, cf. Section 34-1.

Amended by Act no. 27 of 8 May 2009, (entered into force on 1 July 2009 pursuant to Royal Decree no. 859 of 26 June 2009).

### **Section 34-3. Commencement – the building matter part**

The Act enters into force starting on the date determined by the King.<sup>1</sup> Starting on the same date, the Planning and Building Act no. 77 of 14 June 1985, Chapters VIII to XXI will be repealed.

The King may bring the individual provisions into force at different times. A special implementation of the rules about approval may be stipulated, including requirements for compulsory approval of responsible controllers.

Added by Act no. 27 of 8 May 2009.

1 Pursuant to Royal Decree no. 896 of 18 June 2010, Chapter 15 and the building matter part entered into force on 1 July 2010 with the exception of Section 23-7, first paragraph, second sentence, Section 24-1, first paragraph, second sentence, *litra a* and Section 24-2, which will enter into force on 1 July 2011.

#### **Section 34-4. *Transitional provisions to the building matter part***

Special courts of assessment approved pursuant to Section 60 of the Planning and Building Act of 14 June 1985 may consider judicial assessment that has been requested by a time limit specified by the Ministry, but no later than 1 January 2013. For appointment of the president and members of the court of assessment, the rules in Section 60 of the Planning and Building Act no. 77 of 14 June 1985, apply. A scale may also be used to establish fees for transcripts and certificates from the special courts of assessment.

Decisions pursuant to Section 86b of the Planning and Building Act no. 77 of 14 June 1985 relating to construction work within a company's area are valid. This kind of construction work must not be carried out before notification concerning the work is sent to the municipality. If the work is not initiated or is cancelled, Section 21-9, first to third paragraphs will apply equivalently.

Requirements concerning registration of postponed duty to develop (??) pursuant to Section 18-1, third paragraph only apply to decisions concerning postponement granted after the commencement of the Act.

Notification pursuant to Sections 81 or 86a sent to the municipality before the Act has entered into force shall be considered in accordance with the previous rules for consideration of this kind of notification. The same applies for those who have requested consent, etc. pursuant to Sections 85, 91a and 107. Matters concerning permission pursuant to Sections 93 or 106a that are sent to the municipality before the Act has entered into force shall be considered for the whole project pursuant to the former rules for consideration of such matters. The King may set transition periods.

Claims for a refund that fall due before commencement are processed in accordance with the rules that applied when the claim arose.

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.

### **Chapter 35. Amendments in other legislation**

#### **Section 35-1. *Amendments in other legislation – part I***

— — —

Effective 1 July 2009, cf. Section 34-1.

#### **Section 35-2. *Amendments in other legislation – part II***



From the time when the Act enters into force, the following Acts will be amended:

— — —

Effective 1 July 2010, cf. Section 34-3.

Added by Act no. 27 of 8 May 2009.