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Draft Building Decree [Bouwbesluit] 2012

Decree of

laying down regulations for the construction, use, and demolition of structures (Building Decree 2012)

Upon the proposal of the Minister of the Interior and Kingdom Relations.....2011, No CZW....., CZW;

having regard to Articles 2, 3, 5, 6, and 120 of the Housing Act [Woningwet] and Directive No 89/106/EEC of the Council of the European Communities of 21 December 1988 on the approximation of laws, regulations, and administrative provisions of the Member States relating to construction products (OJ L 40), as amended pursuant to Directive No 93/68/EEC of the Council of 22 July 1993 (OJ L 220), Directive No 2004/54/EC of the European Parliament and the Council of 29 April 2004 on minimum safety requirements for tunnels in the Trans-European Road Network (OJ L 101/56), and Directive No 2010/31/EU of the European Parliament and the Council of 19 May 2010 on the energy performance of buildings (OJ L 153);

Having heard the opinion of the Advisory Section of the Council of State (.....);

In light of the detailed report of the Minister of the Interior and Kingdom Relations of....., No CZW....., CZW;

HEREBY DECREE AS FOLLOWS:

Chapter 1 General provisions

Subsection 1.1 General

Article 1.1 Definitions

1. For the application of the provisions enacted by or pursuant to this Decree, the following definitions shall apply:
connection distance: distance between a mains in the distribution network and the part of the structure which is nearest to such mains, measured along the shortest line along which a connection could be made without difficulties;
adjacent grounds: an unbuilt plot or publicly accessible grounds adjacent to a structure;
ADR class: classification as referred to in the European agreement concerning the international carriage of dangerous goods by road, concluded

at Geneva on 30 September 1957 (Treaties Bulletin [Tractatenblad] 1959, 171);
asbestos: asbestos as referred to in Article 1(1a), of the 2005 Asbestos Removal Decree [*Asbest-verwijderingsbesluit*];
basic network route: basic network route as referred to in the External Safety Transport Routes Decree [*Besluit transportroutes externe veiligheid*];
bed area: staying area intended to accommodate one or more beds;
operations centre: centre with facilities to detect incidents, operate installations, and communicate with tunnel users and emergency services;
bed space: staying space intended to accommodate one or more beds;
combination of loads: group of loads which can occur simultaneously;
protected route: part of an escape route located outside the fire subcompartment where the escape route begins;
protected escape route: part of an escape route located outside a fire subcompartment, which passes exclusively through a circulation area;
competent authority: competent authority as referred to in the Living Environment Law (General Provisions) Act [*Wet algemene bepalingen omgevingsrecht*];
collapse: exceeding a limit condition;
load-bearing structure: part of a structure designed to bear a load;
fire compartment: part of one or more buildings designed to contain a fire within that particular area
fire-hazardous substance: solid, liquid or gaseous substance which is flammable or oxidising or which presents a hazard in case of fire;
fire class: European fire class as referred to in NEN-EN 13501-1, Part: Classification criteria for construction products;
fire-fighting lift: lift which can be made available to the fire department for the transport of equipment and personnel through a simple operation;
outside sewer: that part of the connecting pipe between a drainage system and the public wastewater sewer or public precipitation system that is located outside a structure;
CE marking: CE marking as referred to in Article 4 of the Construction Products Directive;
daily exposure: the value of the long-term average evaluation level from 7:00 to 19:00, plus an additional allowance, if applicable, for noise with a pulse-like nature, determined in accordance with the Industrial Noise Measurement and Calculation Manual [Handleiding meten en rekenen industrielawaai];
passage: entrance, exit or passageway for persons in a structure or a part thereof;
premises: premises as defined in the Living Environment Law Decree [*Besluit omgevingsrecht*];
additionally protected escape route: part of a protected escape route located outside a fire compartment;
functional area: functional area or part thereof, where the typical activities for the relevant functional unit take place, other than the staying of persons;
functional space: space located within a functional area;
functional unit: parts of one or more structures having the same intended use and which together form a functional unit;

functional area: freely subdivisible part of a functional unit where the typical activities for that functional unit take place, consisting of one or more adjacent spaces located on the same floor, which are not separated from each other by a load-bearing or fire-resistant partition, and which are not toilet spaces, bathroom spaces, technical spaces or circulation spaces, unless such spaces are also functional spaces;
usable area: usable area as referred to in NEN 2580;
adjusted walking distance: walking distance, disregarding parts of a structure which are not part of the load-bearing structure, multiplied by 1.5 to the extent that it passes through a functional area;
high voltage: a nominal AC voltage exceeding 1 000 volts or a nominal DC voltage exceeding 1 500 volts;
installation: a non-constructional facility necessary for the operation of a structure or part thereof;
integrally accessible bathroom space: bathroom space in an accessible sector;
integrally accessible toilet space: toilet space in an accessible sector;
internal partition: structure which separates two enclosed spaces in a building that are accessible to people, including parts of that structure connected to other structures insofar as those parts affect the compliance of the partition with a regulation under or pursuant to this Decree
pitch line: notional continuous line connecting the nosings of a flight of stairs;
low voltage: a nominal AC voltage not exceeding 1 000 volts or a nominal DC voltage not exceeding 1 500 volts;
living zone: part of a staying area, disregarding the surface area located within 1 m of an external partition, within 0.2 m of an internal partition, or located higher than 1.8 m above the floor;
lift: passenger lift as referred to in the Commodities Act Decree on Lifts [*Warenwetbesluit liften*];
lift access: passageway in a lift shaft for gaining access to the lift cage;
walking distance: the distance between two points, measured along the shortest possible notional continuous line along which a person can walk maintaining a distance of at least 0.3 m from structural components, with the walking distance over a staircase coinciding with the pitch line;
sanitary appliance: device with a possibility for connection to the drainage device for household wastewater;
terrain height: height of the adjacent area, measured at the entrance to the building;
environmentally hazardous substances: hazardous substances as referred to in the Decree laying down general rules for environmental management facilities [*Besluit algemene regels voor inrichtingen milieubeheer*];
NEN: standard issued by the Dutch Normalisation Institute;
ancillary function: functional unit serving another function;
nominal power: maximum power of a boiler, determined on the basis of the gross caloric value of the fuel for which the boiler is designed;
escape door: a door exclusively intended to escape from the building;
NVN: a pre-standard issued by the Dutch Normalisation Institute;
open premises: unbuilt part of a premises;

plot: plot as indicated in the application for a building permit;
permanent fire-load density: fire-load density of the flammable materials in the parts of a structure or of an area located therein, or the parts delimiting that structure or area;
permanent fire load: product of the permanent fire-load density of an area or group of areas as determined in accordance with NEN 6090, and the net floor area of the examined part of the structure as determined in accordance with NEN 2580;
pool fire-sensitive area: area as referred to in Article 7 of the External Safety Transport Routes Decree;
RAL: colour code standardised by the RAL Deutsches Institut für Gütesicherung und Kennzeichnung;
current regulatory level: level which is the consequence of the application at any time of the relevant technical provisions applicable at such time, and which is not lower than the level of the relevant provisions for an existing structure, and not higher than the level of the relevant provisions for the proposed structure;
Construction Products Directive: Directive of the Council of the European Communities of 21 December 1988 on the approximation of laws, regulations, and administrative provisions of the Member States relating to construction products (89/106/EEC, OJ (EC) L 40), as amended pursuant to Council Directive 93/68/EEC of 22 July 1993 (OJ (EC) L 220);
smoke class: European fire class as referred to in NEN-EN 13501-1, Part: Additional classifications for smoke production;
carriageway: carriageway as referred to in Article 1 of the 1990 Traffic Rules and Traffic Signs Regulation [*Reglement verkeersregels en verkeerstekens 1990*];
open fireplace: installation location for a heater designated for open combustion of solid fuels;
fire subcompartment: part of a fire compartment intended to restrict the spread of smoke and further restrict the spread of fire;
services space: space designed for installation of the equipment needed to service a building, including at least a meter space, lift machine space, and heating space;
grounds: unbuilt land or part thereof, other than a premises, associated with a structure;
accessible sector: part of a building independently usable and accessible for persons with functional disabilities;
trans-European road network: road network as described in Annex I, chapter 2, to the Decision of the European Parliament and the Council of the European Union of 23 July 1996 on Community guidelines for the development of the trans-European transport network (1692/96/EC, OJ (EC) L 228) and illustrated with maps or described in Annex II to that decision;
stair enclosure: circulation room containing a flight of stairs;
tunnel pipe length: length of the enclosed part of a tunnel pipe; tunnel length: length of the longest road tunnel pipe;
exit of a functional unit: exit to adjacent grounds, a common circulation space, a common staying area or a space of another functional unit, where a

route ends which starts at a point in a non-common staying area and passes solely through non-common spaces of the functional unit.
external partition: structure separating an enclosed space in a building accessible to persons from the outside air, ground or water, including parts of other structures connected to that structure insofar as those parts affect the compliance of the separating structure with a regulation laid down under or pursuant to this Decree;
V: guideline issued by the Chief Committee for Standardisation;
variable fire-load density: fire-load density of a building or a space minus the permanent fire-load density of that building or space;
safety escape route: part of an additionally protected escape route which passes through a non-enclosed space and from that to a space which can be reached exclusively from non-enclosed spaces;
safety zone: area along or within a basic network route where the location-related risk exceeds or could exceed $10^{-6;}$
staying area: functional area or part thereof intended to accommodate the staying of persons;
staying space: space intended to accommodate the staying of persons located within a staying area;
permit for fire-safe use: permit for fire-safe use as referred to in Article 2.1.1.d, of the Living Environment Law (General Provisions) Act [*wet algemene bepalingen omgevingsrecht*];
building permit: permit for a building activity as referred to in Article 2.1.1.a, of the Wabo;
circulation route: route starting at a passageway of a space, passing only through floors, stairs or ramps, and ending at the passageway of another space;
circulation space: a space, other than a space in a staying area, a toilet space, a bathroom space or a services space, designed to provide access to another space;
packaging group: packaging group as referred to in the European agreement concerning the international carriage of dangerous goods by road, concluded at Geneva on 30 September 1957 (Treaties Bulletin [Tractatenblad] 1959, 171);
escape route: route starting in a space intended for persons, passing only over floors, stairs or ramps, and ending at a safe place without requiring the use of a lift;
floor or space intended for persons: floor or space whose typical use is associated with the presence of persons;
available width: available width as referred to in NEN 2580;
headroom: headroom as referred to in NEN 2580;
fire-load density: amount of heat released per unit of floor area by the combustion of all flammable materials present in a building or a space located therein;
Wabo: Living Environment Law (General Provisions) Act [*Wet algemene bepalingen omgevingsrecht*];
fire resistance: shortest time which a fire needs to spread expand from one space to another space;

road tunnel: tunnel or tunnel-shaped structure intended, whether or not exclusively, for vehicles as referred to in Article 1(1)(c), of the 1994 Road Traffic Act [*Wegenverkeerswet*];
road tunnel pipe: part of a road tunnel intended for a carriageway;
Act: Housing Act [*Woningwet*].

2. For the application of the provisions enacted by or pursuant to this Decree, the following definitions shall also apply:
assembly function: functional unit for gatherings of persons for art, culture, religion, communication, child care, the distribution of refreshments for consumption on the premises or watching sports;
structure other than a building: structure or part thereof, to the extent that it is not a building or part thereof;
detention function: functional unit for the detention of persons;
health care function: functional unit for medical examinations, nursing, care or treatment;
industrial function: functional unit for the commercial processing or storage of materials and goods, or for agricultural purposes;
office function: functional unit for office administration;
temporary accommodation function: functional unit intended to provide recreational or temporary accommodation to persons;
education function: functional unit for teaching;
other functional unit: functional unit, not listed in this paragraph, for activities where staying by persons plays a subordinate role.
sports function: functional unit for playing sports;
shop function: functional unit for trading materials, goods or services;
residential function: functional unit for residential use.

3. For the application of the provisions enacted by or pursuant to this Decree, the following definitions shall also apply:
assembly function for child care: assembly function for the commercial provision of care, education, and supervision for children who have not yet terminated their primary education, other than family day care as referred to in the Child Care and Nursery Schools Quality Requirements Act [*Wet kinderopvang en kwaliteitseisen peuterspeelzalen*];
cell: part of a detention function intended for a single person or group of persons;
light industrial function: industrial function where activities take place in which the staying of persons plays a subordinate role;
temporary accommodation building: building or part of a building containing one or more temporary accommodation spaces depending on a joint circulation route;
temporary accommodation space: part of a temporary accommodation function intended for a single person or group of persons;
other passenger transport function: other functional unit intended for the arrival or departure of vehicles for the transport of passengers by road, railway, waterway or air;
residential unit: part of a residential function for room-based renting which is intended for separate habitation;
residential function for room-based renting: non-common part of a residential function containing five or more residential units;

residential function for care: residential function where professional care is provided to residents in the context of a combination of residence and care, organised by health care providers, in a residential function intended and equipped for that purpose;
residential building: building or part having exclusively residential functions or ancillary functions thereof and containing more than one residential function depending on a common circulation route;
caravan: residential function on a plot intended for a caravan.

4. For the application of the provisions enacted by or pursuant to this Decree, the following symbols in tables shall have the meanings indicated:
   - : this paragraph does not apply;
   * : the entire Article applies;
   ≤ : all values less than or equal to the value given after the symbol;
   > : all values greater than the value given after the symbol;
   ≥ ; all values greater than or equal to the value given after the symbol;
   g.o.: usable area;
   FR: fire resistance:

Article 1.2 Number of persons

1. In any structure or part thereof, no more persons shall be present than the number of persons for which the structure or part thereof is intended in accordance with this Decree.
2. For applications for building permits, an occupation in persons per m^2 of a staying area shall be assumed, without prejudice to the first paragraph, which is not less than the occupation given in Table 1.2.

Functional use	Minimum number of persons per m^2 of a staying area
1 Residential function:	-
2 Assembly function:	
a for watching sports	0.75
b other Functional use	0.33
3 Detention function	
a for visitors	0.33
b other detention function	0.125
4 Health care function	
a with bed area	0.33
b other health care function	0.125
5 Industrial function	0.05
6 Office function	0.125
7 Temporary accommodation function	0.125
8 Educational function	0.33
9 Sports function	0.05
10 Shop function	0.05
11 Other Functional use	-
12 Structure other than a building:	-

Article 1.3 Equivalence provision

1. Any of the provisions of Chapters 2 to 7 will not need to be complied with if the structure or its use, other than by application of the relevant provision, provides at least the same level of safety, health protection, usefulness, energy efficiency, and environmental protection as envisaged with the provisions of those chapters.
2. An equivalent solution as referred to in the first paragraph shall be maintained during the use of the structure.

Article 1.4 Common and joint

1. Every structure, space, facility or part thereof as defined in or pursuant to this Decree shall be either common or non-common, unless provided otherwise.
2. Every structure, space or facility which serves more than one functional unit shall be designated as common. For the application of this Decree, such a part, space or facility shall be considered to be part of all functional units depending on it, with the exception of any ancillary functions depending on it.
3. Any part of a residential function, detention function or temporary accommodation function, or any space or facility serving such function, as defined in or pursuant to this Decree, if used by more than one residential unit, cell or temporary accommodation space within that functional unit, shall be considered to be joint.

Subsection 1.2 Application of standards and certification and inspection schemes

Article 1.5 Application of standards and certification and inspection schemes

1. Ministerial regulations may be enacted to lay down rules for the application of a standard referred to in this Decree.
2. Where a NEN-EN standard is designated by or pursuant to this Decree for which a national annex has been adopted, the reference is to the relevant NEN-EN including the annex.
3. Ministerial regulations may be enacted to lay down rules for the application of a certification or inspection scheme referred to in this Decree.

Subsection 1.3 CE markings and quality certificates

Article 1.6 Placement on the market

It shall be prohibited to place a construction product on the market for which the European Commission has published a harmonised European standard, and the period of co-existence for that standard has ended, if that product does not bear the relevant CE marking.

Article 1.7 CE markings

1. It shall be prohibited to provide a construction product, a label attached to such product, the packaging of a construction product or the accompanying commercial documents, with any marking which is similar to a CE marking as referred to in Article 4(6) of the Construction Products Directive.
2. It shall be prohibited to subject a construction product to a requirement of having a quality certificate or quality mark if the relevant criteria are already subject to a harmonised European standard published by the European Commission.
3. If a construction product must meet specific performance criteria so that the structure in which it is used fulfils a requirement imposed by or pursuant to this Decree, such requirement shall be deemed to have been fulfilled if the construction product is used in accordance with a CE marking applicable to such requirement.

Article 1.8 Application of quality certificates

If a construction product or construction process must meet specific performance criteria so that the structure in which it is used fulfils a requirement imposed by or

pursuant to this Decree, such requirement shall be deemed to have been fulfilled if the construction product or construction process is used in accordance with a quality certificate applicable to such requirement.

Article 1.9 Certification and inspection agencies for quality certificates

1. The responsible Minister shall publish the references for the technical specifications as referred to in Articles 4 and 11 of the Construction Products Directive.
2. The Minister shall designate the authorities which carry out the duties as referred to in Article 10 of the Construction Products Directive.
3. The Minister shall designate the certification and inspection agencies and testing laboratories which carry out the duties as referred to in Articles 16 and 18 of the Construction Products Directive.

Article 1.10 Implementation of the Construction Products Directive

Ministerial regulations may be enacted to lay down more detailed provisions for the implementation of the Construction Products Directive.

Article 1.11 Approval of quality certificates

1. Quality certificates as referred to in Article 1(1)(i), of the Act shall be issued based on a system of quality certificates for construction approved by the Minister.
2. Ministerial regulations may be enacted to lay down rules with respect to the provisions of the first paragraph.

Subsection 1.4 Special provisions

Article 1.12 Alteration

A complete or partial renovation, alteration or enlargement of a structure shall be subject to the provisions for a proposed structure for the application of Chapters 2 to 6, unless the relevant section provides otherwise for the given provision.

Article 1.13 Monuments

If a living environment permit for an activity as referred to in Article 2.1(1)(f) or Article 2.2(1)(b) of the Wabo has been predicated on a requirement which differs from a requirement imposed by or pursuant to this Decree with respect to a complete or partial renovation, alteration or enlargement of a structure, then the requirements of the aforementioned permit shall apply exclusively.

Article 1.14 Temporary structures

The construction of a temporary structure shall be subject to the provisions for an existing structure for the application of Chapters 2 to 6, unless the relevant section provides otherwise for the given provision.

Article 1.15 Displacement

1. An existing structure which is moved in unchanged composition shall be subject to the current regulatory level.
2. A temporarily structure shall only be subject to the first paragraph if the structure is still a temporarily structure after being moved.

Article 1.16 Duty of care

1. An installation present under the Act or a provision enacted pursuant to it, as referred to in Chapter 6 of this Decree:
   a. shall operate in accordance with the provisions applicable to such installation;
   b. shall be adequately managed, maintained, and inspected, and
   c. shall be used in such a manner that no danger to health or safety arises or persists.
2. After installation or modification of a cable, mains or other passage in or through a partition for a requirement for fire resistance or smoke penetration is in effect which pursuant to this Decree, the fire resistance or smoke penetration shall be inspected by adequate means.

Article 1.17 Availability of data and records

A structural component which is subject to a requirement pursuant to sections 2.2, 2.8 or 2.9, which it can only continue to fulfil with an additional treatment, shall have in place a valid document, accepted by the competent authority, showing that such additional treatment has been correctly applied.

Subsection 1.5 Notification of use

Article 1.18 Obligation to notify use

1. It shall be prohibited to engage in the following without a notification of use or contrary to its restrictions:
   a. commencing or continuing the use of a structure if:
      1. more than 50 persons will be present in it at the same time, or
      2. Article 1.3 has been applied with respect to a provision of Chapter 6 or 7, and
   b. commencing or continuing the use of a residential function for room-based renting.
2. The first paragraph shall not apply to commencing or continuing the use of a structure which requires a permit for fire-safe use.
3. The first paragraph, part a, under 1, shall not apply to commencing or continuing the use of:
   a. a single-family or multiple-family house;
   b. a tunnel intended, whether or not exclusively, for vehicles as referred to in Article 1(1)(c), of the 1994 Road Traffic Act [*Wegenverkeerswet*];
4. The first paragraph shall apply accordingly to a modification of a structure or its use if a notification of use previously has been submitted and the modification causes a discrepancy with respect to the details of the notification.
5. For purposes of this Article, a structure has been understood to include a part thereof which is intended to be used separately.

Article 1.19 Submission of notification of use

1. A notification of use shall be submitted to the competent authority in writing at least four weeks prior to the proposed commencement of use.
2. An electronic notification of use shall be submitted using the electronic form as made available from the national service as referred to in Article 7.6 of the Wabo on the date of submission of the notification of use. Such notification shall be

subject to Article 4.3(1) and (2) of the Living Environment Law Decree [*Besluit omgevingsrecht*].

3. A non-electronic notification of use shall be submitted using the form as referred to in Article 4.2(1) of the Living Environment Law Decree. If the notification of use is submitted simultaneously with the submission of an application for a permit under the Wabo, then the notification of use and the required accompanying information and documents shall be submitted in the same number of copies as the application for the permit and the required accompanying information and documents pursuant to Article 4.2(2) and (3) of the Living Environment Law Decree. If the notification of use is submitted separately, then it and the required accompanying information and documents shall be submitted in triplicate.
4. Together with a notification of use as referred to in Article 1.18(1)(a)(2) the notifier shall submit information and records providing sufficient justification for the equivalence, to the extent deemed necessary by the competent authority.
5. If deemed necessary by the competent authority to prove that the intended use fulfils the requirements under the Act or a provision enacted pursuant to it, the notifier shall submit together with the notification of use as referred to in Article 1.18(1)(a)(1) and 1.18(1)(b), a location map with a north arrow to a scale not smaller than 1:1 000, and for each floor a floor plan to a scale not smaller than 1:100 for buildings with a gross floor area less than 10 000 m^2, or not smaller than 1:200 for other buildings.
   The floor plan shall indicate the following:
   a. scale;
   b. for each floor:
      1°. height of the floor above the terrain height;
      2°. usable area, and
      3°. maximum number of persons;
   c. for each space:
      1°. floor area;
      2°. intended use;
      3°. for spaces for more than 25 persons, the highest occupation of that space, and
      4°. placement of inventory and furnishings as referred to in this Decree, and
   d. indicating the locations of the following, to the extent present:
      1°. fire- and/or smoke-resistant partitions;
      2°. escape routes;
      3°. direction of rotation of doors;
      4°. self-closing doors as referred to in this Decree;
      5°. fittings of doors as referred to in Article 6.25 and 7.10;
      6°. escape route signs;
      7°. emergency lighting;
      8°. orientation lighting as referred to in Article 6.5;
      9°. fire alarm centre and fire alarm panel;
      10°. fire hose reels;
      11°. mobile fire extinguishers;
      12°. dry risers;
      13°. fire entrance;

14°. key safe or key vault, and
15°. fire-fighting lift:
The signs shall be in accordance with NEN 1414 to the extent provided for by this standard.

6. In notifications of use for temporarily or seasonal use of a structure, the notifier shall indicate the period or periods for which the use is proposed during a given calendar year.
7. A notification of use may apply to several structures on the same grounds or on a set of connected grounds.

Article 1.20 Finalisation of notification of use

A receipt shall be sent or handed to the notifier by or on behalf of the competent authority, stating the date of receipt.

Article 1.21 Further conditions after notification of use

1. After a notification of a use as referred to in Article 1.18(1)(a)(1) the competent authority may impose further conditions on the use if deemed necessary to prevent, limit, and control fires, fire hazards, and fire-related accidents.
2. It shall be prohibited to act in violation of the further conditions as referred to in the first paragraph.

Article 1.22 Changes in further conditions for notification of use

1. The competent authority may change the further conditions as referred to in Article 1.21(1):
   a. if necessitated by a change in the insights or circumstances outside the structure which have been material in the assessment of the notification, and
   b. at the request of the notifier.
2. The competent authority shall not change the further conditions as referred to in Article 1.21(1) until after giving the notifier an opportunity to present his views.

Article 1.23 (deleted)

Subsection 1.6 Procedure for construction works

Article 1.24 Presence of documents

During construction, the following documents or copies thereof, as applicable, shall be present on site:

a. building permit;
b. construction safety plan as referred to in Article 8.3;
c. copy of a decision pursuant to Article 13, 13a, or 14 of the Act, or a decision to impose an order on pain of administrative coercion or an order on pain of penalty, and
d. other permits and documents with further conditions and exemptions relevant for construction.

Article 1.25 Demarcation of site boundaries

The construction of a structure for which a permit has been granted shall not commence—without prejudice to the conditions of the permit—until the following has been effected where necessary by or on behalf of the competent authority:

a. the building lines or site boundaries have been demarcated on the construction site, and
b. the street level has been demarcated.

Article 1.26 Notification of start and end of construction works

1. The competent authority shall be notified in writing of construction works for which a building permit has been granted, including excavation works, by the holder of such permit at least two working days before the actual start of such works.
2. The competent authority shall be notified in writing of the termination of construction works for which a building permit has been granted, by the holder of such permit at least on the day of termination of such works.
3. A structure for whose construction a building permit has been granted shall not be transferred for use or taken into use if the provisions of the second paragraph are not fulfilled.

Subsection 1.7 Procedure for demolition works

Article 1.28 Notification of demolition

1. A proposed demolition where, according to reasonable estimates, the quantity of demolition waste will exceed 10 m^3 or where asbestos will be removed, shall be notified in writing to the competent authority at least four weeks before the proposed start of the demolition works.
2. The first paragraph shall not apply to a proposed demolition which consists exclusively of the complete or partial removal, in the context of a commercial undertaking, of any of the following, if they contain asbestos:
   a. pressed floor slabs under heaters;
   b. glazing sealant contained in the structures of greenhouses;
   c. braking and friction materials;
   d. gaskets from combustion engines, and
   e. gaskets from process installations or heaters with a nominal power not exceeding 2 250 kW.
3. Notwithstanding the first paragraph, the notification of demolition shall be submitted at least five working days before the proposed start of the demolition works if:
   a. such demolition works are carried out on asbestos-containing parts of a building in the context of repair or changeover maintenance works, and
   b. enforcement of the period as referred to in the first paragraph would lead to unnecessary vacancy of the home or building or would severely reduce the usefulness of the home or building.
4. In a notification of demolition, the following information and documents shall be submitted to the competent authority:
   a. name and address of the owner of the structure to be demolished and, if applicable, any person authorised on other grounds for the demolition of the structure;
   b. name and address of the person who will implement the demolition works, if the implementer is not the same person as referred to under a;
   c. address, land registry number and nature of the structure or part thereof proposed to be demolished;

d. the dates, times, and a description of the manner in which the demolition works will be implemented;
e. if necessary in light of local circumstances, the demolition safety plan as referred to in Article 8.3;
f. an acoustic study report if the daily exposure caused by the demolition works and the installations and equipment used for the demolition works is likely to exceed the limits as referred to in Article 8.4, or the maximum exposure time in days is likely to exceed the corresponding limits;
g. a vibration study report if the demolition works are likely to cause a high vibration intensity,
h. a survey of the nature and quantity of waste materials expected to be produced by the demolition works, and
i. if the 2005 Asbestos Removal Decree [*Asbestverwijderingsbesluit 2005*] requires an asbestos survey report, the report as referred to in Article 1(1)(b) of that 2005 Decree, or a final assessment as referred to in Article 9(1) and (2) of that Decree.

5. Notwithstanding the fourth paragraph, the information as referred to in part b of that paragraph shall be submitted to the competent authority at least two working days before the actual start of the demolition works.
6. If asbestos is identified during demolition which is not mentioned in the asbestos survey report as referred to in the fourth paragraph, under i, the competent authority shall be informed immediately.

Article 1.29 Manner of submission of notification of demolition

1. An electronic notification of demolition shall be submitted using the electronic form as made available from the national service as referred to in Article 7.6 of the Wabo on the date of submission of the notification of demolition. Such notification shall be subject to Article 4.3(1) and (2) of the Living Environment Law Decree [*Besluit omgevingsrecht*].
2. A non-electronic notification of demolition shall be submitted using the form as referred to in Article 4.2(1) of the Living Environment Law Decree. If the notification is submitted simultaneously with the submission of an application for a permit under the Wabo, then the notification and the required accompanying information and documents shall be submitted in the same number of copies as the application for the permit and the required accompanying information and documents pursuant to Article 4.2(2) and (3) of the Living Environment Law Decree. If the notification of demolition is submitted separately, then it and the required accompanying information and documents shall be submitted in triplicate.

Article 1.30 Finalisation of notification of demolition

A receipt shall be sent or handed to the notifier by or on behalf of the competent authority, stating the date of receipt.

Article 1.31 Further conditions after notification of demolition

1. After a notification of a demolition as referred to in Article 1.28, the competent authority may impose further conditions on the demolition if deemed necessary to prevent or limit nuisance or unsafe situations during the demolition works.

2. After a notification of demolition as referred to in Article 1.28, the competent authority may also impose further conditions with respect to any of the following:
   a. separating the demolition waste on the demolition site into fractions and keeping them separate, and
   b. the manner in which the notification as referred to in Article 1.35(2) is submitted.
3. It shall be prohibited to act in violation of the further conditions as referred to in the first and second paragraphs.

Article 1.32 Changes in further conditions for notification of demolition

1. The competent authority may change the further conditions as referred to in Article 1.31(1) and (2):
   a. if necessitated by a change in the insights or circumstances outside the demolition works which have been material in the assessment of the notification of demolition, and
   b. at the request of the notifier.
2. The competent authority shall not change the further conditions as referred to in Article 1.31 until after giving the notifier an opportunity to present his views.

Article 1.33 Simultaneous submission of notification of demolition and living environment permit

1. If demolition works requiring notification of demolition as referred to in Article 1.28 are related to an activity requiring a permit under Article 2.1 or 2.2(1) of the Wabo, then the relevant notification may be submitted simultaneously with the application for such permit, without prejudice to the provisions of Article 1.28. In such case, the notification shall be submitted in the same manner as the permit application.
2. In case of application of the first paragraph, the notification of demolition shall be submitted to the same competent authority as the permit application under the Wabo.
3. If the competent authority as referred to in the second paragraph is an administrative body other than the Municipal Executive, then such administrative body shall forward the information of the notification of demolition without delay to the Municipal Executive, informing the notifier thereof.

Article 1.34 Presence of documents

During demolition, the following documents or copies thereof, as applicable, shall be present on site:

a. notification of demolition;
b. demolition safety plan as referred to in Article 8.3;
c. copy of a decision pursuant to Article 13, 13a, or 14 of the Act, or a decision to impose an order on pain of administrative coercion or an order on pain of penalty;
d. other permits and documents with further conditions and exemptions relevant for demolition, and
e. if the 2005 Asbestos Removal Decree [*Asbestverwijderingsbesluit 2005*] requires an asbestos survey report, an asbestos survey report as referred to in Article

1(1)(b) of the 2005 Asbestos Removal Decree, or a copy of the outcome of the final assessment as referred to in Article 9(1) and (2) of that Decree.

Article 1.35 Notification of start and end of demolition works

1. The competent authority shall be notified in writing of the start of demolition works as referred to in Article 1.28 by the person who will carry out such demolition works at least two working days before the actual start of the demolition works.
2. The competent authority shall be notified in writing of the termination of demolition works by the person who has carried out such demolition works, at least on the day of termination of such works.
3. Where applicable, the person who has carried out the demolition works shall submit to the competent authority a copy of the outcome of the final assessments referred to in Article 9(1) and (2) of the 2005 Asbestos Removal Decree, within two weeks after termination of the works.

Chapter 2 Technical construction requirements to ensure safety

Section 2.1 General strength of the load-bearing structure

Subsection 2.1.1 New structures

Article 2.1 Guiding article

1. A proposed structure shall be sufficiently resistant to the forces impinging upon it.
2. Where Table 2.1 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 2.1

Functional use	applicable paragraphs						
	fundamental combinations of loads	extraordinary combinations of loads		method of determination			alteration
Article	2.2	2.3		2.4			2.5
Paragraph	*	1	2	1	2	3	*
1 Residential function:	*	1	2	1	2	3	*
7 Temporary accommodation function	*	1	2	1	2	3	*
All functional uses not listed above	*	1	2	1	2	-	*

Article 2.2 Fundamental combinations of loads

A load-bearing structure shall not collapse, during the designed useful life referred to in NEN-EN 1990, under the fundamental combinations of loads as referred to in NEN-EN 1990.

Article 2.3 Extraordinary combinations of loads

1. A load-bearing structure shall not collapse, during the designed useful life referred to in NEN-EN 1990, under the extraordinary combinations of loads as referred to in NEN-EN 1990, if this leads to the collapse of another load-bearing structure not in the immediate proximity of such load-bearing structure. This is based on the extraordinary loads as referred to in NEN-EN 1991.
2. A roof or floor partition shall not collapse, during the designed useful life referred to in NEN-EN 1990, under the extraordinary combinations of loads as referred to in NEN-EN 1990. This is based on impact loads as referred to in NEN-EN 1991.

Article 2.4 Method of determination

1. The non-collapse as referred to in Articles 2.2 and 2.3 shall be determined in accordance with:

a. NEN-EN 1999 or NEN-EN 1993, if the structure is made of metal as referred to in such standards;
b. NEN-EN 1992 or NEN-EN 1996, if the structure is made of stony material as referred to in such standards;
c. NEN-EN 1994, if the structure is made of reinforced concrete as referred to in such standard;
d. NEN-EN 1995, if the structure is made of wood as referred to in such standard;
e. NEN 2608, if the structure is made of glass as referred to in such standard; or
f. NEN 6707, if the mounting structure for the roofing is made of a material as referred to in such standard.

2. In case of the use of a different material or method of determination than as given in the first paragraph, non-collapse as referred to in Articles 2.2 and 2.3 shall be determined in accordance with NEN-EN 1990.
3. For a functional unit not located in a residential building or temporary accommodation building, the determination of non-collapse as referred to in Articles 2.2 and 2.3 may take into account a stabilising device on a functional unit of the same type located on an adjacent plot.

Article 2.5 Alteration

Articles 2.2 to 2.4 shall apply accordingly to a partial renovation, alteration or enlargement of a structure, taking the level of requirements of NEN 8700 instead of the level given in those Articles.

Subsection 2.1.2 Existing structures

Article 2.6 Guiding article

1. An existing structure shall be sufficiently resistant to the forces impinging upon it during its remaining useful life.
2. Where Table 2.6 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 2.6

Functional use	applicable paragraphs		
	fundamental combinations of loads	method of determination	
Article	2.7	2.8	
Paragraph	*	1	2
1 Residential function:	*	1	2
7 Temporary accommodation function	*	1	2
All functional uses not listed above	*	1	-

Article 2.7 Fundamental combinations of loads

A load-bearing structure shall not collapse, during its remaining useful life as referred to in NEN 8700, under the fundamental combinations of loads as referred to in NEN 8700.

Article 2.8 Limit condition

1. The non-collapse as referred to in Article 2.7 shall be determined in accordance with NEN 8700.
2. For a residential function or temporary accommodation function not located in a residential building or temporary accommodation building, the determination of non-collapse as referred to in Article 2.7 may take into account a stabilising device on a functional unit of the same type located on an adjacent plot.

Section 2.2 Strength in case of fire

Subsection 2.2.1 New structures

Article 2.9 Guiding article

1. A proposed structure shall be capable, in case of fire, of being left and searched for a reasonable amount of time without danger of collapse.
2. Where Table 2.9 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 2.9

Functional use	applicable paragraphs												
	time before collapse									method of determination		alteration
Article	2.10									2.11		2.12
Paragraph	1	2	3		5	6	7	8	9	1	2	*
1 Residential function:	1	2	3	-	-	-	-	-	-	1	2	*
2 Assembly function:												
a for child care with bed area	1	-	-	-	5	6	-	-	-	1	2	*
b other assembly function	1	-	-	4	-	6	-	-	-	1	2	*
3 Detention function	1	-	-	-	5	6	-	-	-	1	2	*
4 Health care function												
a with bed area	1	-	-	-	5	6	-	-	-	1	2	*
b other health care function	1	-	-	4	-	6	-	-	-	1	2	*
5 Industrial function	1	-	-	4	-	6	-	-	-	1	2	*
6 Office function	1	-	-	4	-	6	-	-	-	1	2	*
7 Temporary accommodation function	1	-	-	-	5	6	7	-	-	1	2	*
8 Educational function	1	-	-	4	-	6	-	-	-	1	2	*
9 Sports function	1	-	-	4	-	6	-	-	-	1	2	*
10 Shop function	1	-	-	4	-	6	-	-	-	1	2	*
11 Other functional use												
a for passenger transport	1	-	-	4	-	6	-	-	-	1	2	*
b for parking motor vehicles	1	-	-	4	-	6	-	-	-	1	2	*
c other functional use not listed above	-	-	-	-	-	-	-	-	-	-	-	-
12 Structure other than a building:												
a road tunnel with a tunnel length exceeding 250 m	1	-	-	-	-	-	-	8	-	1	2	*
b structure other than a building not listed above	-	-	-	-	-	-	-	-	9	1	2	*

Article 2.10 Time before collapse

1. A floor, staircase or ramp over or under which an escape route passes, shall not collapse within 30 minutes in case of fire in the fire subcompartment in which such escape route is located.
2. A load-bearing structure shall not collapse, in case of fire in a fire compartment in which the load-bearing structure is *not* located, within the time given in Table 2.10.1 as a consequence of the collapse of a load-bearing structure within or adjacent to such fire compartment.
   If the aforementioned fire compartment is a residential function, the above does not apply to a load-bearing structure in a fire subcompartment or outdoor space adjacent to that fire compartment.

Table 2.10.1

Residential function:	Duration of fire resistance in terms of collapse in minutes
If no floor of any staying area is higher than 7 m above the terrain height	60
If any floor of any staying area is higher than 7 m, and no floor of any staying area is higher than 13 m above the terrain height	90
If any floor of any staying area is higher than 13 m above the terrain height	120

3. Notwithstanding the second paragraph, the time given in Table 2.10.1 is reduced by 30 minutes if no floor of any staying area in the functional unit is higher than 7 m above the terrain height, and the permanent fire-load density of the fire compartment as calculated in accordance with NEN 6090 does not exceed 500 MJ/m^2.
4. A load-bearing structure of a functional unit with any floor of a functional area lying more than 5 m above the terrain height or more than 5 m below the terrain height shall not collapse for at least 90 minutes in case of a fire in a fire compartment in which the load-bearing structure is not located, as a consequence of the collapse of a load-bearing structure within or adjacent to that fire compartment.
5. A load-bearing structure shall not collapse, in case of fire in a fire compartment in which the load-bearing structure is *not* located, within the time given in Table 2.10.2 as a consequence of the collapse of a load-bearing structure within or adjacent to such fire compartment.

Table 2.10.2

Functional use other than a residential function	Duration of fire resistance in terms of collapse in minutes
If no floor of any staying area is higher than 5 m above the terrain height	60
If any floor of any staying area is higher than 5 m, and no floor of any functional area is higher than 13 m above the terrain	90

height	
If any floor of any staying area is higher than 13 m above the terrain height	120

6. Notwithstanding the fourth and fifth paragraphs, the time is reduced by 30 minutes if the permanent fire-load density of the fire compartment as calculated in accordance with NEN 6090 does not exceed 500 MJ/m^2.
7. The fifth paragraph shall not apply to a temporary accommodation function not located in a temporary accommodation building, with a usable area not exceeding 100 m^2.
8. A load-bearing structure of a tunnel shall not collapse within 60 minutes, or 120 minutes if it is located under open water, in case of a fire in the tunnel.
9. A load-bearing structure shall not collapse, in case of fire in a fire compartment in which the load-bearing structure is *not* located, due to the collapse of a load-bearing structure within or adjacent to the fire compartment, within the time that is reasonably necessary to be able to leave and search the structure in case of fire, depending on the intended use and layout of the structure.

Article 2.11 Method of determination

1. The determination of the collapse of a load-bearing structure as referred to in Article 2.10 shall be based on the extraordinary combinations of loads that may occur in case of fire pursuant to NEN-EN 1990.
2. The time before collapse as referred to in Article 2.10 is determined, depending on the material of the load-bearing structure, in accordance with:
   a. NEN-EN 1992;
   b. NEN-EN 1993;
   c. NEN-EN 1994;
   d. NEN-EN 1995;
   e. NEN-EN 1996;
   f. NEN-EN 1999, or
   g. NEN 6069.

Article 2.12 Alteration

A partial renovation, alteration or enlargement of a structure shall be subject to Articles 2.10 and 2.11, applied accordingly, with the calculations based the current regulatory level of requirements instead of the level given in Article 2.10, and on the extraordinary combinations of loads that may occur in case of fire pursuant to NEN 8700, contrary to Article 2.11(1).

Subsection 2.2.2 Existing structures

Article 2.13 Guiding article

1. An existing structure shall be capable, in case of fire, of being left and searched for some amount of time without danger of collapse.
2. Where Table 2.13 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 2.13

functional use		applicable paragraphs								
		time before collapse							method of determination	
Article		1	2	3	4	5	6	7	1	2
Paragraph										
1	Residential function:	1	2	-	-	-	-	-	1	2
2	Assembly function:	1	-	3	-	-	-	-	1	2
3	Detention function	1	-	-	4	-	-	-	1	2
4	Health care function									
	a with bed area	1	-	-	4	-	-	-	1	2
	b other health care function	1	-	3	-	-	-	-	1	2
5	Industrial function	1	-	3	-	-	-	-	1	2
6	Office function	1	-	3	-	-	-	-	1	2
7	Temporary accommodation function	1	-	-	4	5	-	-	1	2
8	Educational function	1	-	3	-	-	-	-	1	2
9	Sports function	1	-	3	-	-	-	-	1	2
10	Shop function	1	-	3	-	-	-	-	1	2
11	Other functional use									
	a for passenger transport	1	-	3	-	-	-	-	1	2
	b other functional use not listed above	-	-	-	-	-	-	-	-	-
12	Structure other than a building:									
	a road tunnel with a tunnel length exceeding 250 m	1	-	-	-	-	6	-	1	2
	b structure other than a building not listed above	-	-	-	-	-	-	7	1	2

Article 2.14 Time before collapse

1. A floor, staircase or ramp over or under which an escape route passes, shall not collapse within 20 minutes in case of fire in the fire subcompartment in which such protected route is not located.
2. A load-bearing structure shall not collapse, in case of fire in a fire compartment in which the load-bearing structure is *not* located, within the time given in Table 2.14.1 as a consequence of the collapse of a load-bearing structure within or adjacent to such fire compartment. The above does not apply to a load-bearing structure in a fire subcompartment or outdoor space adjacent to that fire compartment.

Table 2.14.1

Residential function:	duration of fire resistance in terms of collapse in minutes
if any floor of any staying area is higher than 7 m but not higher than 13 m above the terrain height	30
if any floor of any staying area is higher than 13 m above the terrain height	60

3. A load-bearing structure of a functional unit with any floor of a functional area lying more than 5 m above the terrain height, shall not collapse for at least 30 minutes in case of a fire in a fire compartment in which the load-bearing structure is not located, as a consequence of the collapse of a load-bearing structure within or adjacent to that fire compartment.

4. A load-bearing structure shall not collapse, in case of fire in a fire compartment in which the load-bearing structure is *not* located, within the time given in Table 2.14.2 as a consequence of the collapse of a load-bearing structure within or adjacent to such fire compartment.

Table 2.14.2

Functional use	duration of fire resistance in terms of collapse in minutes
If any floor of any staying area is higher than 5 m but not higher than 13 m above the terrain height	30
If any floor of any staying area is higher than 13 m above the terrain height	60

5. The fourth paragraph shall not apply to a temporary accommodation function not located in a temporary accommodation building, with a usable area not exceeding 100 m^2.
6. A load-bearing structure of a tunnel shall not collapse within 30 minutes, or 60 minutes if it is located under open water, in case of a fire in the tunnel.
7. A load-bearing structure shall not collapse, in case of fire in a fire compartment in which the load-bearing structure is *not* located, due to the collapse of a load-bearing structure within or adjacent to the fire compartment, within the time that is reasonably necessary to be able to leave and search the structure in case of fire, depending on the intended use and layout of the structure.

Article 2.15 Method of determination

1. The determination of the collapse of a load-bearing structure as referred to in Article 2.14 shall be based on the extraordinary combinations of loads that may occur in case of fire pursuant to NEN 8700.
2. The time before collapse as referred to in Article 2.14 shall be determined in accordance with NEN 6069.

Section 2.3 Partition for floors, staircases, and ramps

Subsection 2.3.1 New structures

Article 2.16 Guiding article

1. A proposed structure shall contain facilities to prevent floors, staircases, and ramps from falling down wherever possible.
2. Where Table 2.16 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 2.16

functional use		applicable paragraphs															limits
		Presence					Height					Openings				climbability	alteration	Openings
	Article	2.17					2.18					2.19				2.20	2.21	2.19
	Paragraph	1	2	3	4	5	1	2	3	4	5	1	2	3	4	*	*	1 [m]
1	Residential function:	1	2	3	4	-	1	2	3	-	5	1	2	3	4	*	*	0.2
2	Assembly function:																	
	a for child care for children below 4 years	1	2	3	4	-	1	2	3	-	5	1	-	3	4	*	*	0.1
	b other child care	1	2	3	4	5	1	2	3	-	5	1	2	3	4	*	*	0.2
	c other assembly function	1	2	3	4	5	1	2	3	4	5	1	-	3	4	-	*	0.5
3	Detention function	1	2	3	4	5	1	2	3	-	5	1	-	3	4	-	*	0.3
4	Health care function	1	2	3	4	5	1	2	3	-	5	1	-	3	4	-	*	0.5
5	Industrial function	1	2	3	4	5	1	2	3	-	5	1	-	3	4	-	*	0.5
6	Office function	1	2	3	4	5	1	2	3	-	5	1	-	3	4	-	*	0.5
7	Temporary accommodation function	1	2	3	4	5	1	2	3	-	5	1	-	3	4	-	*	0.5
8	Educational function																	
a	primary education	1	2	3	4	5	1	2	3	-	5	1	2	3	4	*	*	0.2
b	other educational function	1	2	3	4	5	1	2	3	-	5	1	-	3	4	-	*	0.5
9	Sports function	1	2	3	4	5	1	2	3	4	5	1	-	3	4	-	*	0.5
10	Shop function	1	2	3	4	5	1	2	3	-	5	1	-	3	4	-	*	0.5
11	Other functional use	1	2	3	4	5	1	2	3	-	5	1	-	3	4	-	*	0.5
12	Structure other than a building:	1	2	3	4	5	1	2	3	4	5	1	-	3	4	-	*	0.5

Article 2.17 Presence

1. A floor intended for persons shall have an immobile partition at any edge which is more than 1 m above the adjacent floor, grounds or water.
2. A staircase as referred to in Article 2.27 shall have an immobile partition on any side of any step which is more than 1 m above an adjacent floor, grounds or water.
3. A ramp as referred to in Article 2.27 shall have an immobile partition on any side of the floor which is more than 1 m above an adjacent floor, grounds or water.
4. The first paragraph shall not apply at the location of the connection of the floor to:
   a. a staircase, and
   b. a ramp.
5. Without prejudice to the fourth paragraph, the first paragraph shall not apply to:
   a. an edge of a platform;
   b. an edge of a floor adjacent to a basin;
   c. an edge of a loading platform;
   d. an edge of a railway platform, and
   e. an edge of a floor deemed equivalent to an edge as referred to under a to d.

Article 2.18 Height

1. A floor partition as referred to in Article 2.17(1) shall have a height of at least 1 m as measured from the floor.
2. Notwithstanding the first paragraph, a floor which is more than 13 m above an adjacent floor, grounds or water, shall have a floor partition with a height of at least 1.2 m as measured from the floor.

3. Notwithstanding the first and second paragraphs, a partition as referred to in Article 2.17(1) shall have a height of at least 0.85 m as measured from the floor at the location of a mobile or immobile window.
4. Notwithstanding the first paragraph, a floor partition shall have a height of at least 0.7 m as measured from the floor if the sum of that height and the width of the cross-girder is at least 1.1 m.
5. A partition as referred to in Article 2.17(2) or (3) shall have a height of at least 0.85 m as measured from the front of the steps or from the floor of the ramp.

Article 2.19 Openings

1. Notwithstanding the first paragraph, a partition as referred to in Article 2.17 shall not have openings with a width exceeding 0.1 m up to a height of 0.7 m above the floor, the front of the steps or the floor of the ramp.
2. A partition as referred to in Article 2.17 shall not have openings large enough for the passage of a sphere with a cross-section larger than the diameter given in Table 2.16.
3. The horizontal distance between a floor, staircase or ramp and a partition as referred to in Article 2.17 shall not exceed 0.05 m.
4. The cross-girder of a partition as referred to in Article 2.17 shall not have interruptions exceeding 0.1 m.

Article 2.20 Climbability

In circulation spaces and outdoor spaces, a partition as referred to in Article 2.17 shall not have any stepping places between 0.2 m and 0.7 m above the floor, to prevent climbing over.

Article 2.21 Alteration

Articles 2.17 to 2.20 shall apply accordingly to a complete or partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in those Articles.

Subsection 2.3.2 Existing structures

Article 2.22 Guiding article

1. An existing structure shall contain facilities to reasonably prevent floors, staircases and ramps from falling down.
2. Where Table 2.22 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 2.22

functional use	applicable paragraphs										limits
	presence					height				openings	openings
Article	2.23					2.24				2.25	2.25
Paragraph	1	2	3	4	5	1	2	3	4	1 2	1 [m]
1 Residential function:	1	2	3	4	-	1	2	3	4	1 2	0.2
2 Assembly function:											
a for child care for children below 4 years	1	2	3	4	5	1	2	3	4	1 2	0.1
b other assembly function	1	2	3	4	5	1	2	3	4	- 2	-
All functional uses not listed above	1	2	3	4	5	1	2	3	4	- 2	-

Article 2.23 Presence

1. A floor intended for persons shall have a partition at any edge which is more than 1.5 m above the adjacent floor, grounds or water.
2. A staircase shall have an immobile partition on any side of any step which is more than 1.5 m above an adjacent floor, grounds or water.
3. A ramp shall have an immobile partition on any side of the floor which is more than 1.5 m above an adjacent floor, grounds or water.
4. The first paragraph shall not apply at the location of the connection of the floor to:
   a. a staircase, or
   b. a ramp.
5. Without prejudice to the fourth paragraph, the first paragraph shall not apply to:
   a. an edge of a platform;
   b. an edge of a floor adjacent to a basin;
   c. an edge of a loading platform;
   d. an edge of a railway platform, and
   e. an edge of a floor deemed equivalent to an edge as referred to under a to d.

Article 2.24 Height

1. A floor partition as referred to in Article 2.23(1) shall have a height of at least 0.9 m as measured from the floor.
2. Notwithstanding the first paragraph, a partition as referred to in Article 2.23(1) shall have a height of at least 0.6 m as measured from the floor at the location of a mobile or immobile window.
3. Notwithstanding the first paragraph, a floor partition shall have a height of at least 0.6 m as measured from the floor if the sum of that height and the width of the cross-girder is at least 1 m.
4. A partition as referred to in Article 2.23(2) and (3) shall have a height of at least 0.6 m as measured from the front of the steps or from the floor of the ramp.

Article 2.25 Openings

1. A partition as referred to in Article 2.23 shall not have openings large enough for the passage of a sphere with a cross-section larger than the diameter given in

Table 2.22 up to a height of 0.6 m above the floor, the front of the steps or the floor of the ramp.
2. The horizontal distance between a floor, staircase or ramp and a partition as referred to in Article 2.23 shall not exceed 0.1 m.

Section 2.4 Bridging height gaps

Subsection 2.4.1 New structures

Article 2.26 Guiding article
1. A proposed structure shall have facilities for persons to safely cross height gaps.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 2.27 Facility for height gaps
1. A height gap exceeding 0.21 m between floors over which an escape route passes and between the floors of staying areas, staying spaces, toilet spaces, bathroom spaces, or floors intended for visitors, floors of a circulation route which connects such spaces together, or between one of such floors and the adjacent grounds shall be bridged by a fixed staircase or a fixed ramp.
2. Contrary to the second paragraph, a height gap exceeding 0.3 m applies to the extent that the escape route passes through a road tunnel pipe.

Article 2.28 Alteration
Article 2.27 shall apply accordingly to a complete or partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in that Article.

Article 2.29 Temporary structures
The construction of a temporary structure shall be subject to Article 2.27.

Subsection 2.4.2 Existing structures

Article 2.30 Guiding article
1. An existing structure shall have facilities for persons to safely cross height gaps in escape routes.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provision of this section.

Article 2.31 Facility for height gaps
1. A height gap exceeding 0.22 m between floors over which an escape route passes, or between one of such floors and the adjacent grounds, shall be bridged by a fixed staircase or a fixed ramp.
2. Contrary to the second paragraph, a height gap exceeding 0.3 m applies to the extent that the escape route passes through a road tunnel pipe.

Section 2.5 Staircase

Subsection 2.5.1 New structures

Article 2.32 Guiding article

1. A proposed staircase bridging a height gap as referred to in Article 2.27 shall be capable of being used safely.
2. Where Table 2.32 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 2.32

functional use	applicable paragraphs					
Article	dimensions		landing	handrail	rain-resistant	alteration
	2.33		2.34	2.35	2.36	2.37
Paragraph	1	2	*	*	*	*
1 Residential function:	1	2	*	*	*	*
2 Assembly function:	1	2	*	*	-	*
3 Detention function	1	2	*	*	-	*
4 Health care function	1	2	*	*	-	*
5 Industrial function	1	-	*	*	-	*
6 Office function	1	2	*	*	-	*
7 Temporary accommodation function	1	2	*	*	-	*
8 Educational function	1	2	*	*	-	*
9 Sports function	1	2	*	*	-	*
10 Shop function	1	2	*	*	-	*
11 Other functional use	1	-	*	*	-	*
12 Structure other than a building:	1	-	*	*	-	*
All functional uses not listed above	1	2	*	*	-	*

Article 2.33 Dimensions of staircases

1. A staircase as referred to in Article 2.27 shall have dimensions compliant with Table 2.33.
2. A staircase shall bridge a height gap not exceeding 4 metres.

Table 2.33

Dimensions of staircases			
	normal staircase		**dedicated escape staircase**
	residential function	other functional use	all functional uses
Minimum width of the staircase	0.8m	0.8m	0.8m
Minimum headroom above the staircase	2.3 m	2.1 m	2.1 m
Minimum going at the pitch line, measured perpendicular to the front of the step	0.22 m	0.185 m	0.185 m
Maximum rise height between steps	0.188 m	0.21 m	0.21 m
Minimum width of the step surface, measured perpendicular to the front of that surface	0.05 m	0.05 m	0.05 m
Minimum width of the step surface at the pitch line, measured perpendicular to the front of that surface	0.23 m	0.23 m	0.23 m
Minimum distance from the pitch line to the sides of the staircase	0.3 m	0.3 m	0.3 m

Article 2.34 Landing

A staircase as referred to in Article 2.27 shall adjoin a floor with a surface area of at least 0.8 m x 0.8 m at the highest step, across the width of the staircase.

Article 2.35 Handrail

A staircase as referred to in Article 2.27 designated to bridge a height gap exceeding 1 m and with a slope exceeding 2:3 over the pitch line shall have a handrail on at least one side. The upper edge of the handrail shall be at a height of at least 0.8 m and at most 1 m, measured above the front of a step.

Article 2.36 Rain-resistant

A common circulation space with a staircase designated to bridge a height gap exceeding 1.5 m shall be rain-resistant as determined in accordance with NEN 2778, at the location of such staircase. This does not apply to a staircase intended exclusively to escape from the structure.

Article 2.37 Alteration

Articles 2.33 to 2.36 shall apply accordingly to a complete or partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in those Articles.

Article 2.38 (deleted)

Subsection 2.5.2 Existing structures

Article 2.39 Guiding article

1. An existing staircase in an escape route, bridging a height gap as referred to in Article 2.31, shall be capable of being used safely.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 2.40 Dimensions of staircases

A staircase as referred to in Article 2.31 shall have dimensions compliant with Table 2.40.

Table 2.40

dimensions of staircases	
Minimum width of the staircase	0.7 m
Minimum headroom above the staircase	1.9 m
Minimum going at the pitch line, measured perpendicular to the front of the step	0.13 m
Maximum rise height between steps	0.22 m
Minimum distance from the pitch line to the sides of the staircase	0.2 m

Article 2.41 Landing

A staircase as referred to in Article 2.31 shall adjoin a floor with a surface area of at least 0.7 m x 0.7 m at the highest step, across the width of the staircase.

Article 2.42 Handrail

A staircase as referred to in Article 2.31 with a slope exceeding 2:3 over the pitch line shall have a handrail on at least one side if it bridges a height gap exceeding 1.5 m. The upper edge of the handrail shall be at a height of at least 0.6 m and at most 1 m, measured above the front of a step.

Section 2.6 Ramp

Subsection 2.6.1 New structures

Article 2.43 Guiding article

1. A proposed ramp bridging a height gap as referred to in Article 2.27 shall be capable of being used safely.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 2.44 Dimensions of ramps

A ramp as referred to in Articles 2.27 and 6.59 shall have a width of at least 1.1 m, a height of at least 1 m and a slope not exceeding:

a. 1:12 if the height gap does not exceed 0.25 m;
b. 1:16 if the height gap exceeds 0.25 m but does not exceed 0.5 m; and
c. 1:20 if the height gap exceeds 0.5 m;

Article 2.45 Ramp landing
A ramp as referred to in Articles 2.27 and 6.50 shall adjoin a floor with a surface area of at least 1.4 m x 1.4 m at the upper edge, across the width of the ramp.

Article 2.46 Guide rail
A ramp as referred to in Article 2.27 shall have a contiguous guide rail along the side, with a height of at least 0.04 m as measured from the floor of the ramp.

Article 2.47 Alteration
Articles 2.44 to 2.46 shall apply accordingly to a complete or partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in those Articles.

Subsection 2.6.2 Existing structures

Article 2.49 Guiding article
1. An existing ramp in an escape route, bridging a height gap as referred to in Article 2.31, shall be capable of being used safely.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 2.50 Dimensions of ramps
A ramp as referred to in Article 2.31 shall have a width of at least 0.7 m and a slope not exceeding 1:10.

Article 2.51 Ramp landing
A ramp as referred to in Article 2.31 shall adjoin a floor with a surface area of at least 0.7 m x 0.7 m at the upper edge, across the width of the ramp.

Section 2.7 Movable structural components

Subsection 2.7.1 New structures

Article 2.52 Guiding article
1. The movable components of a proposed structure shall be such that they do not cause hindrance in case of escaping through or using an adjoining public space.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 2.53 Hindrance
1. A movable structural component which when opened can overhang a road intended for motor vehicles or a border of 0.6 m adjacent to such road, shall lie more than 4.2 m above such road or border, as measured from the bottom of the component.
2. A movable structural component which when opened can overhang a road not intended for motor vehicles, shall lie more than 2.2 m above such road, as measured from the bottom of the component. This provision shall not apply to escape doors.

3. A protected escape route over which a movable component turns to open, shall allow free passage with a width of at least 0.6 m and a height of at least 2.2 m with the component opened.
4. The first to third paragraphs shall not apply to the door of a space with a floor area less than 0.5 m^2.

Article 2.54 Alteration
Article 2.53(1) shall not apply to the complete or partial renovation, alteration or enlargement of a structure.

Article 2.55 Temporary structures
The construction of a temporary structure shall be subject to Article 2.53(2) to (4).

Subsection 2.7.2 Existing structures

Article 2.56 Guiding article
1. The movable components of an existing structure shall be such that they do not cause hindrance in case of escaping through or using an adjoining public space.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provision of this section.

Article 2.57 Hindrance
A movable structural component which when opened can overhang a road intended for motor vehicles shall lie more than 4.2 m above such road, as measured from the bottom of the component.

Section 2.8 Reducing the likelihood of fire-hazardous situations

Subsection 2.8.1 New structures

Article 2.58 Guiding article
1. A proposed structure shall be such that the likelihood of fire-hazardous situations is sufficiently reduced.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 2.59 Open fireplace
Material located at or near an open fireplace shall fulfil fire class A1 or, for upper edges of floors, staircases or ramps, fire class $A1_{fl}$, determined in either case in accordance with NEN-EN 13501-1, if the following applies:
a. a thermal radiation intensity can be emitted from the material which exceeds 2 kW/m^2 as determined in accordance with NEN 606, or
b. the material can reach a temperature exceeding 90 °C as determined in accordance with NEN 6061.

Article 2.60 Shaft, riser or channel
1. Material used on the interior of a shaft, riser or channel adjacent to more than one fire compartment or fire subcompartment, with an inner cross-section exceeding 0.015 m^2 shall comply with fire class A2 as determined in accordance with

NEN-EN 13501-1 over a thickness of at least 0.01 m as measured perpendicular to the inner section.

2. The first paragraph shall not apply to:
   a. a shaft intended exclusively for one or more toilet spaces or bathroom spaces located above each other, and which does not pass through other spaces;
   b. at most 5 % of the total surface of the interior as referred to in that paragraph, and
   c. the material of a structure or installation component which is enclosed by a shaft, riser or channel as referred to in that paragraph.

Article 2.61 Flue gas drainage tube

1. A drainage device for flue gas shall be fire-safe as determined in accordance with NEN 6062.
2. The horizontal distance between the outlet of a drainage device for flue gas on an appliance running on solid fuel and a fire-hazardous roof, as referred to in NEN 6063, of another structure shall be at least 15 m.

Article 2.62 Installation location for open flue heater

An installation location for an open flue heater shall not be located in a toilet space, a bathroom space or a space for parking motor vehicles.

Article 2.63 Temporary structures

The construction of a temporary structure shall be subject to Articles 2.59 to 2.61.

Subsection 2.8.2 Existing structures

Article 2.64 Guiding article

1. An existing structure shall be such that the likelihood of fire-hazardous situations is sufficiently reduced.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 2.65 Open fireplace

1. The fire characteristics of material at or near an open fireplace shall be non-flammable as determined in accordance with NEN 6064, if any of the following applies:
   a. a thermal radiation intensity can be emitted from the material which exceeds 2 kW/m^2 as determined in accordance with NEN 606, or
   b. the material can reach a temperature exceeding 90 °C as determined in accordance with NEN 6061.
2. The application of the first paragraph may be based on fire class A1 or $A1_{fl}$ as determined in accordance with NEN-EN 13501-1, instead of non-flammable as determined in accordance with NEN 6064.

Article 2.66 Flue gas drainage tube

1. A drainage device for flue gas shall be fire-safe. Whether the drainage device is fire-safe may be determined in accordance with NEN 8062.
2. The horizontal distance between the outlet of a drainage device for flue gas on an appliance running on solid fuel and a fire-hazardous roof, as referred to in NEN 6063, of another structure shall be at least 15 m.

Article 2.67 Installation location for open flue heater

An installation location for an open flue heater shall not be located in a toilet space or bathroom space.

Section 2.9 Reducing the development of fire and smoke

Subsection 2.9.1 New structures

Article 2.68 Guiding article

1. A proposed structure shall be such that fire and smoke cannot develop quickly.
2. Where Table 2.68 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 2.68

functional use	applicable paragraphs																limits								
																	side adjacent to the						top		
																	indoor air			outdoor air					
	inner surface		outer surface					walkable surface		exempt		roof surface		structural component	alteration	temporary structure	additionally protected escape route	protected escape route	other	additionally protected escape route	protected escape route	other	additional protected circulation	protected circulation space	other
Article	2.69		2.70					2.71		2.72		2.73		2.73a	2.74	2.75	2.69			2.70			2.71		
Paragraph	1	2	1	2	3	4	5	1	2	1	2	1	2	*	*	*	1 and 2 [fire class]			1 [fire class]			1 and 2 [fire class]		
1 Residential function:																									
a in a residential building	1	-	1	2	3	4	5	1	2	1	-	1	-	*	*	*	B	B	D	C	C	D	C_{fl}	C_{fl}	D_{fl}
b for care with a UA. > 500 m²	1	-	1	2	3	4	5	1	2	1	-	1	-	*	*	*	B	B	D	C	C	D	C_{fl}	C_{fl}	D_{fl}
c other residential function	1	-	1	2	-	4	5	1	2	1	-	1	-	-	-	-	B	D	D	C	D	D	C_{fl}	D_{fl}	D_{fl}
2 Assembly function:											-														
a for child care for children below 4 years	1	-	1	2	3	4	5	1	2	1	-	1	-	*	*	*	B	B	D	C	C	D	C_{fl}	D_{fl}	D_{fl}
b other assembly function	1	-	1	2	3	4	5	1	2	1	-	1	-	*	*	*	B	D	D	C	D	D	C_{fl}	D_{fl}	D_{fl}
3 Detention function	1	-	1	2	3	4	5	1	2	1	-	1	-	*	*	*	B	B	C	B	B	D	C_{fl}	C_{fl}	C_{fl}
4 Health care function																									
a with bed area	1	-	1	2	3	4	5	1	2	1	-	1	-	*	*	*	B	B	D	C	C	D	C_{fl}	D_{fl}	D_{fl}
b other health care function	1	-	1	2	3	4	5	1	2	1	-	1	-	*	*	*	B	D	D	C	D	D	C_{fl}	D_{fl}	D_{fl}
5 Industrial function	1	-	1	2	3	4	5	1	2	1	-	1	-	*	*	*	B	D	D	C	D	D	C_{fl}	D_{fl}	D_{fl}
6 Office function	1	-	1	2	3	4	5	1	2	1	-	1	-	*	*	*	B	D	D	C	D	D	C_{fl}	D_{fl}	D_{fl}
7 Temporary accommodation function	1	-	1	2	3	4	5	1	2	1	-	1	-	*	*	*	B	B	D	C	C	D	C_{fl}	D_{fl}	D_{fl}
8 Educational function	1	-	1	2	3	4	5	1	2	1	-	1	-	*	*	*	B	D	D	C	D	D	C_{fl}	D_{fl}	D_{fl}
9 Sports function	1	-	1	2	3	4	5	1	2	1	-	1	-	*	*	*	B	D	D	C	D	D	C_{fl}	D_{fl}	D_{fl}
10 Shop function	1	-	1	2	3	4	5	1	2	1	-	1	-	*	*	*	B	D	D	C	D	D	C_{fl}	D_{fl}	D_{fl}
11 Other functional use	1	2	1	2	3	4	5	1	2	1	-	1	-	*	*	*	B	D	D	C	D	D	C_{fl}	D_{fl}	D_{fl}
12 Structure other than a building:																									
a tunnel or tunnel-shaped structure for traffic	1	-	1	2	-	4	5	1	2	-	2	1	2	*	*	*	B	B	B	C	D	D	C_{fl}	D_{fl}	D_{fl}
b structure other than a building not listed above			1	2	-	4	5	1	2	-	2	1	2	*	*	*				C	D	D	C_{fl}	D_{fl}	D_{fl}

Article 2.69 Inner surface

1. A side of a structural component which adjoins indoor air shall comply with the fire class given in Table 2.68 and smoke class s2, both determined in accordance with NEN-EN 13501-1.
2. Contrary to the first paragraph, the requirement as to the smoke class applies exclusively to protected escape routes.

Article 2.70 Outer surface

1. A side of a structural component which adjoins outdoor air shall comply with the fire class given in Table 2.68, determined in accordance with NEN-EN 135011.
2. The part of a side of a structural component which adjoins outdoor air and is located higher than 13 m shall comply with fire class B as determined in accordance with NEN-EN 13501-1.
3. A side of a structural component which adjoins outdoor air and which is part of a structure in which one of the floors intended for persons is at least 5 m above the terrain height, shall comply with fire class B as determined in accordance with NEN-EN 13501-1 from the adjacent grounds up to a height of at least 2.5 m.
4. The first to third paragraphs shall not apply to the top of a roof.
5. Notwithstanding the first to third paragraphs, a door, window, door or window frame or a structural component deemed equivalent to any of the foregoing shall comply with fire class D as determined in accordance with NEN-EN 13501-1.

Article 2.71 Walkable surface

1. Notwithstanding Article 2.69, the top of a floor intended for persons, a staircase or a ramp adjoining indoor air shall comply with smoke class $s1_{fl}$ and the fire class given in Table 2.68, both determined in accordance with NEN-EN 13501-1.
2. Notwithstanding Article 2.70, the top of a floor intended for persons, a staircase or a ramp adjoining outdoor air shall comply with the fire class given in Table 2.68, determined in accordance with NEN-EN 13501-1.

Article 2.72 Exempt

1. At most 5 % of the total surface of the structural components of every individual space subject to a requirement pursuant to Articles 2.69 to 2.71 shall be exempt from such requirement.
2. At most 5 % of the total surface of the components of structures other than buildings subject to a requirement pursuant to Articles 2.69 to 2.71 shall be exempt from such requirement.

Article 2.73 Roof surface

1. The top of a roof of a structure shall not be fire-hazardous as determined in accordance with NEN 6063. The above shall not apply if the structure does not have any floor intended for persons which is located higher than 5 m above the terrain height, and the fire-hazardous parts of the roof are at least 15 m from the plot boundary. If the plot on which the structure is located adjoins a public highway, a public body of water, a public green area or a plot not intended for buildings nor for a playground, camping ground or storage facility for fire-hazardous substances or flammable, non-environmentally hazardous substances, the aforementioned clearance shall be calculated from the centre of such road, body of water, green area or plot.
2. The fifth paragraph shall not apply to a structure with a usable area not exceeding 50 m^2.

Article 2.73a Structural component

Ministerial regulations may be enacted to lay down provisions to reduce the development of fire and smoke in a structural component.

Article 2.74 Alteration

Articles 2.69, 2.70(1), (2), (4), and (5), 2.71, and 2.73 shall apply accordingly to a complete or partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in those Articles.

Article 2.75 Temporary structures

The construction of a temporary structure shall be subject to Articles 2.70(3) and 2.73.

Subsection 2.9.2 Existing structures

Article 2.76 Guiding article

1. An existing structure shall be such that fire and smoke cannot develop quickly.
2. Where Table 2.76 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 2.76

functional use	applicable paragraphs									limits					
										side adjacent to the indoor air			side adjacent to the outdoor air		
	inner surface	outer surface	walkable surface	exempt	Use of Euro Classes	additionally protected escape	protected route	other	additionally protected escape	protected route	other
Article	2.77	2.78	2.79	2.80	2.81	2.77			2.78		
Paragraph	1 2 3 4	1 2 3	1 2	1 2	*	1 [fire class]			1 [fire class]		
1 Residential function											
a in a residential building	1 2 3 -	1 2 3	1 2	1 -	*	2	2	4	2	2	4
b other residential function	1 - 3 -	1 2 3	1 2	1 -	*	2	4	4	2	4	4
2 Assembly function	1 - 3 -	1 2 3	1 2	1 -	*	2	4	4	2	4	4
3 Detention function	1 - 3 4	1 2 3	1 2	1 -	*	1	1	4	1	1	4
4 Health care function											
a with bed area	1 2 3 -	1 2 3	1 2	1 -	*	2	2	4	2	4	4
b other health care function	1 - 3 -	1 2 3	1 2	1 -	*	2	4	4	2	4	4
5 Industrial function	1 - 3 -	1 2 3	1 2	1 -	*	2	4	4	2	4	4
6 Office function	1 - 3 -	1 2 3	1 2	1 -	*	2	4	4	2	4	4
7 Temporary accommodation function											
a in a temporary accommodation building	1 2 3 -	1 2 3	1 2	1 -	*	2	2	4	2	4	4
b other temporary accommodation function	1 - 3 -	1 2 3	1 2	1 -	*	2	4	4	2	4	4
8 Educational function	1 - 3 -	1 2 3	1 2	1 -	*	2	4	4	2	4	4
9 Sports function	1 - 3 -	1 2 3	1 2	1 -	*	2	4	4	2	4	4
10 Shop function	1 - 3 -	1 2 3	1 2	1 -	*	2	4	4	2	4	4
11 Other functional use	- - - -	- - -	- -	- -	-	-	-	-	-	-	-
12 Structure other than a building											
a tunnel or tunnel-shaped structure for traffic	- - 3 -	1 2 3	1 2	- 2	*	-	-	-	2	4	4
b structure other than a building not listed above	- - - -	1 2 3	1 2	- 2	*	2	4	4	2	4	4

Article 2.77 Inner surface

1. A side of a structural component which adjoins indoor air shall have a contribution to fire propagation as determined in accordance with NEN 6065 which complies with the fire class given in Table 2.76, and a smoke production with a smoke density, as determined in accordance with NEN 6066, which does not exceed 10 m^{-1}.
2. Contrary to the first paragraph, a side of a structural component which adjoins indoor air in an enclosed space through which a protected route passes shall have a smoke production with a smoke density, as determined in accordance with NEN 6066, which does not exceed 5.4 m^{-1}.
3. Contrary to the first paragraph, a side of a structural component which adjoins indoor air in an enclosed space through which an additionally protected route passes shall have a smoke production with a smoke density, as determined in accordance with NEN 6066, which does not exceed 5.4 m^{-1}.
4. Contrary to the first paragraph, a side of a structural component which adjoins indoor air in a cell shall have a smoke production with a smoke density, as determined in accordance with NEN 6066, which does not exceed 5.4 m^{-1}.

Article 2.78 Outer surface

1. A side of a structural component which adjoins outdoor air shall have a contribution to fire propagation, as determined in accordance with NEN 6065, which complies with the fire class given in Table 2.76.

2. Contrary to the first paragraph, a door, window, door or window frame or a structural component deemed equivalent to any of the foregoing, shall have a contribution to fire propagation, as determined in accordance with NEN 6065, which complies with class 4.
3. The first paragraph shall not apply to the top of a roof.

Article 2.79 Walkable surface

1. Notwithstanding Article 2.77, the top of a floor intended for persons, a staircase or a ramp adjoining indoor air shall have a contribution to fire propagation, as determined in accordance with NEN 1775, which complies with class T3, and a smoke production with a smoke density, as determined in accordance with NEN 6066, which does not exceed 10 m^{-1}.
2. Notwithstanding the first paragraph, the top of a floor intended for persons, a staircase or a ramp over which an additionally protected escape route passes shall have a contribution to fire propagation, determined in accordance with NEN 1775, complying with class T1.

Article 2.80 Exempt

1. At most 5 % of the total surface of the structural components of every individual space subject to a requirement pursuant to Articles 2.77 to 2.79 shall be exempt from such requirement.
2. At most 5 % of the total surface of the components of structures other than buildings subject to a requirement pursuant to Articles 2.77 to 2.79 shall be exempt from such requirement.

Article 2.81 Use of Euro Classes

For the application of Articles 2.77 to 2.79, the following substitutions may be made:

a. instead of fire class 1 determined in accordance with NEN 6065: fire class B determined in accordance with NEN-EN 13501-1;
b. instead of fire class 2 determined in accordance with NEN 6065: fire class B for enclosed spaces or fire class C for non-enclosed spaces, both determined in accordance with NEN-EN 13501-1;
c. instead of fire class 3 determined in accordance with NEN 6065: fire class C determined in accordance with NEN-EN 13501-1;
d. instead of fire class 4 determined in accordance with NEN 6065: fire class D determined in accordance with NEN-EN 13501-1;
e. instead of fire class T1 determined in accordance with NEN 1775: fire class C_{fl} determined in accordance with NEN-EN 13501-1;
f. instead of fire class T3 determined in accordance with NEN 1775: fire class D_{fl} determined in accordance with NEN-EN 13501-1; and
g. a smoke production with a smoke density not exceeding 10 m^{-1} or 5.4-^{1} determined in accordance with NEN 6066: smoke class s2 determined in accordance with NEN-EN 13501-1.

Section 2.10 Reducing the spread of fire

Subsection 2.10.1 New structures

Article 2.82 Guiding article

1. A proposed structure shall be such that the likelihood of a fire spreading fast is sufficiently reduced.
2. Where Table 2.82 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 2.82

functional use	applicable paragraphs					limits
	location	size	wbdbo	alteration	temporary structures	size
Article	2.83	2.84	2.85	2.86	2.87	2.84
Paragraph	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8	*	*	1
1 Residential Function						[m^2]
a caravan	1 - 3 4 - - - -	- 2 - - - - - - - -	1 - - - - - - 8	-	-	-
b other residential function	1 - 3 4 - - - -	1 - 3 - 5 6 7 - - -	1 2 3 - - 6 7 -	*	*	1 000
2 Assembly Function	1 - 3 4 - - - -	1 - 3 - - - 7 8 - -	1 - - 4 - 6 7 -	*	*	1 000
3 Detention Function	1 - 3 4 - - - -	1 - 3 - - - 7 - 9 -	1 - - - - - 7 -	*	*	1 000
4 Health Care Function	-					
a with bed area	1 - 3 4 - - - -	1 - 3 - - - 7 - - 10	1 7 -	*	*	1 000
b other health care function	1 - 3 4 - - - -	1 - 3 - - - 7 - - -	1 - - 4 - 6 7 -	*	*	1 000
5 Industrial Function	-					
a light industrial function	1 - 3 4 5 6 7 8	1 - 3 - - - 7 - - -	1 - - 4 5 6 7 -	*	*	2 500
b other industrial function	1 - 3 4 5 6 - -	1 - 3 - - - 7 - - -	1 - - 4 5 6 7 -	*	*	2 500
6 Office Function	1 - 3 4 - - - -	1 - 3 - - - 7 8 - -	1 - - 4 - 6 7 -	*	*	1 000
7 Temporary Accommodation Function	1 - 3 4 - - - -	1 - 3 - - - 7 - - -	1 - - 4 - 6 7 -	*	*	500
8 Educational Function	1 - 3 4 - - - -	1 - 3 - - - 7 8 - -	1 - - 4 - 6 7 -	*	*	1 000
9 Sports Function	1 - 3 4 - - - -	1 - 3 - - - 7 - - -	1 - - 4 - 6 7 -	*	*	1 000
10 Shop Function	1 - 3 4 - - - -	1 - 3 - - - 7 8 - -	1 - - 4 - 6 7 -	*	*	1 000
11 Other functional use	1 - 3 4 5 6 7 -	1 - 3 - - - 7 8 - -	1 - - 4 - 6 7 -	*	*	1 000
12 Structure other than a building						
a Road tunnel with a tunnel length exceeding 250 m	1 2 3 4 - - - -	- - - 4 - - - - - -	1 - - - - - 7 -	*	-	-
b Structure other than a building not listed above	- - - - - - - -	- - - - - - - - - -	- - - - - - - -			-

Article 2.83 Location

1. An enclosed space shall be located within a fire compartment.
2. A road tunnel pipe with a length exceeding 250 m shall be located within a fire compartment.
3. The first paragraph shall not apply to:
   a. a toilet space;
   b. a bathroom space;
   c. A lift shaft, if the structural components in the interior of the shaft comply with fire class B and smoke class s2, both determined in accordance with NEN-EN 13501-1; and
   d. a services space with a usable area not exceeding 50 m^2, not intended for one or more heating appliances with a total nominal power exceeding 130 kW.
4. Notwithstanding the first paragraph, an additionally protected escape route shall not pass through a fire compartment.
5. A non-enclosed functional area shall be located within a fire compartment.

6. The first and fifth paragraphs shall not apply to one or more functional units of the same type with a total usable area not exceeding 1 000 m^2 and a fire-load density not exceeding 500 MJ/m^2, determined in accordance with NEN 6090.
7. The first and fifth paragraphs shall not apply to one or more adjacent structures with a total usable area not exceeding 50 m^2.
8. The first and fifth paragraphs shall not apply to a light industrial function intended exclusively for the commercial cultivation or storage of crops or similar products, with a permanent fire-load density not exceeding 150 MJ/m^2, determined in accordance with NEN 6090.

Article 2.84 Size

1. A fire compartment shall have a usable area not exceeding the value given in Table 2.82.
2. A fire compartment shall contain at most four caravans and ancillary functions thereof, with a total usable area not exceeding 500 m^2.
3. A fire compartment shall not span more than one plot.
4. A fire compartment shall not span more than one road tunnel pipe.
5. A fire compartment shall contain the non-common spaces of not more than one residential function and ancillary functions thereof.
6. A common staying area shall constitute a separate fire compartment.
7. A services space with a usable area exceeding 50 m^2, or a services space where one or more heating appliances with a total nominal power exceeding 130 kW are installed, shall constitute a separate fire compartment.
8. For a fire compartment of an industrial function with a usable area exceeding 1 000 m^2, the first paragraph shall not apply to one or more ancillary functions located in that fire compartment with a total usable area not exceeding 100 m^2.
9. Notwithstanding the first paragraph, the usable area of a fire compartment with one or more cells shall not exceed 500 m^2, and shall also not exceed 77 % of the usable area of the entire building.
10. A fire compartment containing a bed area shall not exceed 77 % of the usable area of the floor where this fire compartment is located.

Article 2.85 Fire resistance

1. The fire resistance of a fire compartment with respect to spread of the fire to another fire compartment, to an enclosed space through with an additionally protected escape route passes, to a non-enclosed escape route, or to the lift shaft of a fire-fighting lift, as determined in accordance with NEN 6068, shall be at least 60 minutes.
2. Notwithstanding the first paragraph, a limit of 30 minutes is sufficient for the fire resistance between a fire compartment and an enclosed space through which an additionally protected escape route passes.
3. Notwithstanding the first paragraph, a limit of 30 minutes is sufficient if:
   a. the permanent fire-load density of the fire compartment, determined in accordance with NEN 6090, does not exceed 500 MJ/m^2, and
   b. the building does not contain a floor of a staying area located higher than 7 m above the terrain height.
4. Notwithstanding the first paragraph, a limit of 30 minutes is sufficient if:
   a. the enclosed spaces referred to in the first paragraph are located on the same plot, and

b. the building does not contain a floor of a functional area located higher than 5 m above the terrain height.

5. The fourth paragraph shall not apply to a fire compartment with a usable area exceeding 1 000 m^2.
6. The second to fourth paragraphs shall not apply to a space through which an escape route passes.
7. When calculating the fire resistance of a fire compartment with respect to a space in a building located on an adjacent plot, the building located on the other plot shall be assumed to be a building which is identical but mirrored in the plot boundary line. If the plot adjoins a public highway, a public body of water, a public green area or a plot not intended for buildings nor for a playground, camping ground or storage facility for fire-hazardous substances or flammable, non-environmentally hazardous substances, the mirror line as indicated above shall be the centre of such road, body of water, green area or plot.
8. The fire resistance of a caravan with respect to another caravan, as determined in accordance with NEN 6068, shall be at least 30 minutes. The determination of this fire resistance shall be based on an identical but mirrored caravan at a distance of 5 m.

Article 2.86 Alteration

Articles 2.83 to 2.85 shall apply accordingly to a partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements and a fire resistance of at least 30 minutes instead of the levels given in those Articles.

Article 2.87 Temporary structures

The construction of a temporary structure shall be subject to Articles 2.83 and 2.84, and Article 2.85 shall apply accordingly with a fire resistance of at least 30 minutes.

Subsection 2.10.2 Existing structures

Article 2.88 Guiding article

1. An existing structure shall be such that the likelihood of a fire spreading fast is sufficiently reduced.
2. Where Table 2.88 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 2.88

functional use	applicable paragraphs																		limits
	location								size									wbdbo	size
Article	2.89								2.90									2.91	2.90
Paragraph	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	9	10	1	2	1 [m^2]
1 Residential Function																					
a caravan	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	1	2	-
b other residential function	1	-	3	4	-	-	-	-	1	-	3	-	5	6	7	-	-	-	1	2	2 000
2 Assembly Function	1	-	3	4	-	-	-	-	1	-	3	-	-	-	7	8	-	-	1	2	2 000
3 Detention Function	1	-	3	4	-	-	-	-	1	-	3	-	-	-	7	-	9	-	1	2	2 000
4 Health Care Function																					
a with bed area	1	-	3	4	-	-	-	-	1	-	3	-	-	-	7	-	-	10	1	2	2 000
b other health care function	1	-	3	4	-	-	-	-	1	-	3	-	-	-	7	-	-	-	1	2	2 000
5 Industrial Function																					
a light industrial function	1	-	3	4	5	6	7	8	1	-	3	-	-	-	7	-	-	-	1	2	3 000
b other industrial function	1	-	3	4	5	6	-	-	1	-	3	-	-	-	7	-	-	-	1	2	3 000
6 Office Function	1	-	3	4	-	-	-	-	1	-	3	-	-	-	7	8	-	-	1	2	2 000
7 Temporary Accommodation Function	1	-	3	4	-	-	-	-	1	-	3	-	-	-	7	-	-	-	1	2	1 000
8 Educational Function	1	-	3	4	-	-	-	-	1	-	3	-	-	-	7	-	-	-	1	2	3 000
9 Sports Function	1	-	3	4	-	-	-	-	1	-	3	-	-	-	7	-	-	-	1	2	3 000
10 Shop Function	1	-	3	4	-	-	-	-	1	-	3	-	-	-	7	8	-	-	1	2	2 000
11 Other functional use	1	-	3	4	5	6	7	-	1	-	3	-	-	-	7	8	-	-	1	2	3 000
12 Structure other than a building																					
a road tunnel with a tunnel length exceeding 250 m	1	2	3	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	1	2	-
b structure other than a building not listed above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Article 2.89 Location

1. An enclosed space shall be located within a fire compartment.
2. A road tunnel pipe with a tunnel pipe length exceeding 500 m shall be located within a fire compartment.
3. The first paragraph shall not apply to:
   a. a toilet space;
   b. a bathroom space;
   c. A lift shaft, if the structural components in the interior of the shaft have a contribution to fire propagation, determined in accordance with NEN 6065, which complies with class 2, and a smoke production with a smoke density, as determined in accordance with NEN 6066, which does not exceed 5.4 m^{-1}, or fire class B and smoke class s2, both determined in accordance with NEN 13501-1, and
   d. a services space with a usable area not exceeding 100 m^2, not intended for one or more heating appliances with a total nominal power exceeding 160 kW.
4. Notwithstanding the first paragraph, an additionally protected escape route shall not pass through a fire compartment.
5. A non-enclosed functional area shall be located within a fire compartment.
6. The first and fifth paragraphs shall not apply to one or more functional units of the same type with a usable area not exceeding 2 000 m^2 and a fire-load density not exceeding 500 MJ/m^2, determined in accordance with NEN 6090.
7. The first and fifth paragraphs shall not apply to one or more functional units of the same type with a total usable area not exceeding 100 m^2.

8. The first and fifth paragraphs shall not apply to a light industrial function with a permanent fire-load density not exceeding 200 MJ/m^2, determined in accordance with NEN 6090.

Article 2.90 Size

1. A fire compartment shall have a usable area not exceeding the value given in Table 2.88.
2. A fire compartment shall contain at most four caravans and ancillary functions thereof, with a total usable area not exceeding 1 000 m^2.
3. A fire compartment shall not span more than one plot.
4. A fire compartment shall not span more than one road tunnel pipe.
5. A fire compartment shall contain the non-common spaces of not more than one residential function and ancillary functions thereof.
6. A common staying area shall constitute a separate fire compartment.
7. A services space with a usable area exceeding 100 m^2, or a services space where one or more heating appliances with a total nominal power exceeding 160 kW are installed, shall constitute a separate fire compartment.
8. For a fire compartment of an industrial function with a usable area exceeding 2 000 m^2, the first paragraph shall not apply to one or more ancillary functions located in that fire compartment.
9. Notwithstanding the first paragraph, the usable area of a fire compartment with one or more cells shall not exceed 1 000 m^2, and shall also not exceed 77 % of the usable area of the entire building.
10. A fire compartment containing a bed area shall not exceed 77 % of the usable area of the floor where this fire compartment is located.

Article 2.91 Fire resistance

1. The fire resistance of a fire compartment with respect to another fire compartment and to an enclosed space through which an additionally protected escape route passes, as determined in accordance with NEN 6068, shall be at least 20 minutes.
2. When calculating the fire resistance of a fire compartment with respect to a space in a building located on an adjacent plot, the building located on the other plot shall be assumed to be a building which is identical but mirrored in the plot boundary line. If the plot adjoins a public highway, a public body of water, a public green area or a plot not intended for buildings nor for a playground, camping ground or storage facility for fire-hazardous substances, the mirror line as indicated above shall be the centre of such road, body of water, green area or plot.

Section 2.11 Further reduction of the spread of fire and reduction of the spread of smoke

Subsection 2.11.1 New structures

Article 2.92 Guiding article

1. A proposed structure shall be such that the spread of fire is reduced to a greater degree than envisaged by section 2.10.1, and that a safe escape is possible.
2. Where Table 2.92 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 2.92

functional use	applicable paragraphs														limits
	location			size							FR and smoke penetration			alteration	temporary structures	size
Article	2.93			2.94							2.95			2.96	2.97	2.94
Paragraph	1	2	3	1	2	3	4	5	6	7	1	2	3	*	*	1
1 Residential function																
a for care with a UA > 500 m^2	1	2	3	1	2	-	-	-	-	-	-	2	3	*	*	100
b other residential function	1	2	3	1	-	-	-	-	-	-	-	2	3	*	*	500
2 Assembly function:																
a for child care with bed area	1	2	3	1	-	3	-	-	-	-	-	2	3	*	*	200
b other assembly function	1	2	3	-	-	-	-	-	-	-	1	-	3	*	*	-
3 Detention function	1	2	3	1	-	-	4	-	-	-	1	2	3	*	*	500
4 Health care function																
a with bed area	1	2	3	-	-	-	-	5	6	-	1	2	3	*	*	-
b other health care function	1	2	3	-	-	-	-	-	-	-	1	-	3	*	*	-
5 Industrial function	1	2	3	-	-	-	-	-	-	-	1	-	3	*	*	-
6 Office function	1	2	3	-	-	-	-	-	-	-	1	-	3	*	*	-
7 Temporary accommodation function	1	2	3	1	-	-	-	-	-	7	1	2	3	*	*	500
8 Educational function	1	2	3	-	-	-	-	-	-	-	1	-	3	*	*	-
9 Sports function	1	2	3	-	-	-	-	-	-	-	1	-	3	*	*	-
10 Shop function	1	2	3	-	-	-	-	-	-	-	1	-	3	*	*	-
11 Other usage function	1	2	3	-	-	-	-	-	-	-	1	-	3	*	*	-
12 Structure other than a building:																
a road tunnel with a tunnel length exceeding 250 m	1	2	3	-	-	-	-	-	-	-	1	-	3	-	-	-
b structure other than a building not listed above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Article 2.93 Location

1. A fire compartment shall be divided into one or more fire subcompartments or traffic spaces through which a protected escape route passes.
2. A protected escape route shall not be located in a fire subcompartment.
3. Notwithstanding the first paragraph, a staying area for surveillance may be located outside a fire subcompartment if:
   a. structural components in such area comply with the requirements of Article 2.69 for structural components adjoining indoor air in a space through which a protected escape route passes, and
   b. any furnishings in such area comply with the requirements of Article 7.3 for furnishings in a space through which a protected escape route passes.

Article 2.94 Size

1. A fire subcompartment shall have a usable area not exceeding the value given in Table 2.92.
2. Notwithstanding the first paragraph, a joint staying space shall constitute a separate fire subcompartment with a usable area not exceeding 500 m^2.
3. A fire subcompartment shall contain no more than one functional unit and the ancillary functions of such functional unit.
4. A cell shall constitute a separate fire subcompartment.
5. A fire subcompartment with bed area shall comprise only one or more bed areas and spaces serving such bed areas, and shall have a total usable area not exceeding 500 m^2.
6. A fire subcompartment as referred to in the fifth paragraph, intended for hospitalised patients, shall have a maximum total usable area depending on the surveillance level, ranging from 50 m^2 without surveillance to 500 m^2 for permanent surveillance.
7. A temporary accommodation space shall constitute a separate fire subcompartment.

Article 2.95 Fire and smoke resistance

1. The fire resistance of a fire subcompartment with respect to another space in the fire compartment, as determined in accordance with NEN 6068, shall be at least 20 minutes, where the calculation of the fire resistance in relation to the dividing function of a partition shall be based exclusively on the assessment criterion of flame retardancy with respect to the sealing.
2. The fire resistance of a fire subcompartment with respect to another space within a fire compartment containing a fire subcompartment as referred to in Article 2.94, as determined in accordance with NEN 6068, shall be at least 30 minutes.
3. Ministerial regulations may be enacted to lay down rules for smoke penetration from a fire subcompartment to another space.

Article 2.96 Alteration

Articles 2.93 to 2.95 shall apply accordingly to a partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in those Articles.

Article 2.97 Temporary structures

The construction of a temporary structure shall be subject to Articles 2.95(1) and (3).

Subsection 2.11.2 Existing structures

Article 2.98 Guiding article

1. An existing structure shall be such that the spread of fire is reduced to a greater degree than envisaged by section 2.10.1, and that a safe escape is possible.
2. Where Table 2.98 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 2.98

functional use	applicable paragraphs											limits
	location	size							SR and FR			size
Article	2.99	2.100							2.101			2.100
Paragraph	*	1	2	3	4	5	6	7	1	2	3	1
1 Residential function												
a for care with a UA. > 500 m^2	*	1	2	-	-	-	-	-	-	2	-	200
b other residential function	*	1	-	-	-	-	-	-	-	2	-	1 000
2 Assembly function												
a for child care with bed area	*	-	-	3	-	-	-	-	-	2	-	-
b other assembly function	*	-	-	-	-	-	-	-	1	-	-	-
3 Detention function	*	-	-	-	4	-	-	-	-	2	3	-
4 Health care function												-
a with bed area	*	-	-	-	-	5	6	-	-	2	3	-
b other health care function	*	-	-	-	-	-	-	-	1	-	-	-
5 Industrial function	*	-	-	-	-	-	-	-	1	-	-	-
6 Office function	*	-	-	-	-	-	-	-	1	-	-	-
7 Temporary accommodation function	*	1	-	-	-	-	-	7	-	2	-	1 000
8 Educational function	*	-	-	-	-	-	-	-	1	-	-	-
9 Sports function	*	-	-	-	-	-	-	-	1	-	-	-
10 Shop function	*	-	-	-	-	-	-	-	1	-	-	-
11 Other functional use	*	-	-	-	-	-	-	-	1	-	-	-
12 Structure other than a building												
a road tunnel with a tunnel length exceeding 250 m	*	-	-	-	-	-	-	-	1	-	-	-
b structure other than a building not listed above	-	-	-	-	-	-	-	-	-	-	-	-

Article 2.99 Location

A fire compartment shall be divided into one or more fire subcompartments or traffic spaces through which a protected route passes.

Article 2.100 Size

1. A fire subcompartment shall have a usable area not exceeding the value given in Table 2.98.
2. Notwithstanding the first paragraph, a fire subcompartment with only joint spaces shall have a usable area not exceeding 1 000 m^2.
3. A fire subcompartment shall contain no more than one functional unit and the ancillary functions of such functional unit.
4. A cell shall constitute a separate fire subcompartment.
5. A fire subcompartment with bed area shall comprise only one or more bed areas and spaces serving such bed areas, and shall have a total usable area not exceeding 1 000 m^2.
6. A fire subcompartment as referred to in the fifth paragraph, intended for hospitalised patients, shall have a maximum total usable area depending on the surveillance level, ranging from 100 m^2 without surveillance to 1 000 m^2 for permanent surveillance.
7. A temporary accommodation space shall constitute a separate fire subcompartment.

Article 2.101 Smoke and fire resistance

1. The resistance to smoke penetration of a fire subcompartment with respect to an enclosed space in the fire compartment, as determined in accordance with NEN 6075, shall be at least 20 minutes.
2. The fire resistance of a fire subcompartment as referred to in Article 2.100 with respect to another space within the fire compartment, as determined in accordance with NEN 6068, shall be at least 20 minutes.
3. If there is a door between a fire subcompartment and an adjacent space, the calculation of the fire resistance as referred to in the second paragraph may disregard a surface underneath such door not exceeding 0.02 m^2, up to a height not exceeding 0.05 m as measured from the floor.

Section 2.12 Escape routes

Subsection 2.12.1 New structures

Article 2.102 Guiding article

1. A proposed structure shall have escape routes such that a safe place can be reached in case of fire.
2. Where Table 2.102 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 2.102

functional use	applicable paragraphs									Limits			
	escape route	protected escape route	additionally protected escape route	safety escape route	second escape route	Layout of escape route	capacity	alteration	temporary structures	escape route	protected escape route	additionally protected escape route	Layout of escape route
Article	2.103	2.104	2.105	2.106	2.107	2.108	2.109	2.110	2.111	2.103	2.104	2.105	2.108
Paragraph	1 2 3 4 5 6 7 8 9 10 11	1 2 3	1 2 3 4 5 6 7 8	1 2	1 2 3 4 5	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3	*	*	4 and 5	3	6	8
										[m]	[m]	[m]	[m]
1 Residential function													
a caravan	1 - - 4 5 - - - - - -	- - -	- - - - - - - -	- -	- - - - -	- - - - - - - 8 - - - 12	- - -	*	*	30	-	-	2.1
b other residential function	1 - - 4 5 - - - - - -	1 - 3	1 2 3 4 - - - 8	- -	1 2 3 4 5	1 2 3 4 5 6 7 8 - 10 - 12	- - -	*	*	30	30	-	2.3
2 Assembly function													
a for child care with bed area	1 2 - 4 5 - - - 9 - -	1 - 3	1 - - - - 6 - 8	1 -	1 2 3 4 -	1 2 3 - 5 6 - 8 - - - 12	1 2 -	*	*	30	30	5	2.3
b other assembly function	1 2 - 4 5 - - - 9 10 -	- 2 3	- - - - 5 6 - 8	1 -	1 2 3 4 -	1 2 3 - 5 6 - 8 - - - 12	1 2 -	*	*	30	30	30	2.3
3 Detention function	2 - 4 5 6 9 10 -	1 - 3	1 - - - - 6 - 8	1 -	1 2 3 4 -	1 2 3 - 5 6 - 8 - - - 12	1 2 -	*	*	22.5	22.5	22.5	2.3
4 Health care function													
a with bed area	1 2 - 4 5 6 - - 9 - -	1 - 3	1 - - - - 6 - 8	1 -	1 2 3 4 -	1 2 3 - 5 6 - 8 - - 11 12	1 2 -	*	*	30	30	20	2.3
b other health care function	1 2 - 4 5 6 - - 9 10 -	- 2 3	- - - - 5 6 - 8	1 -	1 2 3 4 -	1 2 3 - 5 6 - 8 - - - 12	1 2 -	*	*	30	30	30	2.3
5 Industrial function	1 2 - 4 5 6 7 - - 10 -	- 2 3	- - - - 5 6 - 8	1 -	1 2 3 4 -	1 2 3 - 5 6 - 8 - - - 12	1 2 -	*	*	30	30	30	2.3
6 Office function	1 2 - 4 5 6 - - 9 10 -	- 2 3	- - - - 5 6 - 8	1 -	1 2 3 4 -	1 2 3 - 5 6 8 - - - 12	1 2 -	*	*	30	30	30	2.3
7 Temporary accommodation function													
a in a temporary accommodation building	1 2 - 4 5 - - - 9 10	1 - 3	1 - - - - 6 7 8	1 2	1 2 3 4 -	1 2 3 - 5 6 - 8 - - - 12	1 2 -	*	*	30	30	20	2.3
b other temporary accommodation function	1 2 - 4 5 - - - 9 10 -	1 - 3	1 - - - - 6 7 8	1 2	1 2 3 4 -	1 2 3 - 5 6 8 - - - 12	1 2 -	*	*	30	30	20	2.1
8 Educational function	1 2 - 4 5 - - - 9 10 -	- 2 3	- - - - 5 6 - 8	1 -	1 2 3 4 -	1 2 3 - 5 6 - 8 - - - 12	1 2 -	*	*	30	30	15	2.3
9 Sports function	1 2 - 4 5 6 7 - 9 10 -	- 2 3	- - - - 5 6 - 8	1 -	1 2 3 4 -	1 2 3 - 5 6 - 8 - - - 12	1 2 -	*	*	30	30	30	2.3
10 Shop function	1 2 - 4 5 6 7 - 9 10 -	- 2 3	- - - - 5 6 - 8	1 -	1 2 3 4 -	1 2 3 - 5 6 - 8 - - - 12	1 2 -	*	*	30	30	30	2.3
11 Other functional use	1 2 - 4 5 6 7 - - 10 -	- 2 3	- - - - 5 6 - 8	1 -	1 2 3 4 -	1 2 3 - 5 6 - 8 - - - 12	1 2 -	*	*	30	30	30	2.1
12 Structure other than a building													
a road tunnel with a tunnel length exceeding 250 m	1 - 3 - - - - 8 - - -	1 - 3	- - - - - - - -	- -	- - - - -	1 - 3 - - 5 - - 8 9 - - 12	- - 3	*	-	-	-	-	2.1
b structure other than a building not listed above	1 - - - - - - - - - 11	- - -		- -	- - - - -	- - - - - - - - - - - - 12	- - 3	*	-	-	-	-	-

Article 2.103 Escape route

1. Each point on a floor intended for persons is the start of an escape route which leads to the adjacent grounds and from there to the public highway.
2. Each point on a floor intended for persons of a detention function or an ancillary function thereof is the start of an escape route which leads to another fire compartment, via an outdoor space or otherwise.
3. Each point on a carriageway is the start of an escape route which leads to the adjacent grounds and from there to the public highway.
4. The adjusted walking distance between a point in a functional area and an exit of the fire subcompartment in which such functional area is located shall not exceed the value given in Table 2.102.
5. Notwithstanding the fourth paragraph, for a non-divisible functional area or a staying space, the calculation shall be based on a walking distance not exceeding the value given in Table 2.102 instead of the adjusted walking distance.
6. Notwithstanding the fourth and fifth paragraphs, in case of an occupation of the fire subcompartment of less than 1 person per 12 m^2 of usable area, a maximum value of 45 m shall apply.
7. Notwithstanding the fourth and fifth paragraphs, in case of an occupation of the fire subcompartment of less than 1 person per 30 m^2 of usable area, a maximum value of 60 m shall apply.
8. The walking distance between a point on a carriageway floor and an exit of the fire subcompartment shall be at most 150 m. The distance between two exits shall be at most 250 m, measured along the tunnel wall.
9. Each point on a floor intended for persons in a fire subcompartment is the start of at least one escape route, with a height gap not exceeding 4 m bridged over such escape route to an exit of the fire subcompartment.
10. A fire subcompartment or a space located therein, if it is intended for more than 150 persons, shall have at least two exits through which an escape route passes. The spacing between exits shall be at least 5 m.
11. A structure other than a building shall have a sufficient number of escape routes, depending on its intended use and size, laid out such that an effective and safe escape is possible in case of fire.

Article 2.104 Protected escape route

1. An escape route shall be a protected escape route from the exit of the fire subcompartment where the escape route starts, unless such exit directly adjoins the adjacent grounds.
2. An escape route on which more than 37 persons depend shall be a protected escape route from the exit of the fire subcompartment where the escape route starts, unless such exit directly adjoins the adjacent grounds.
3. An enclosed space through which a protected escape route passes shall have a walking distance from the exit of the fire subcompartment to the next exit on the escape route which does not exceed the value given in Table 2.102. The above shall not apply to the extent that the escape route passes through a stairwell or a non-enclosed space.

Article 2.105 Additionally protected escape route

1. An escape route shall be an additionally protected escape route from the exit of the fire compartment where the escape route starts, unless such exit directly adjoins the adjacent grounds.
2. The escape route referred to in the first paragraph shall not pass along a movable structural component of another residential function than the residential function in which the escape route starts. This shall not apply to the entrance of a residential function located directly opposite the entrance of the residential function in which the escape route starts.
3. The escape route referred to in the first paragraph shall not pass over a staircase.
4. The second and third paragraphs shall not apply if the route passes through a stairwell, where the exits of the residential functions depending on such route are directly adjacent to the stairwell, and such route is exclusively used by residential functions and ancillary functions thereof, and the exit of the stairwell directly adjoins the adjacent grounds, and:
   a. no more than 6 residential functions depend on such route, and none of the floors of any staying area of such residential functions is higher than 6 m above the terrain height, or
   b. the total usable area of the residential functions depending on the route does not exceed 800 m^2, none of the floors of any staying area of such residential functions is higher than 12.5 m above the terrain height, and none of such residential functions has a usable area exceeding 150 m^2.
5. An escape route on which at least 38 persons but no more than 150 persons depend shall be an additionally protected escape route from the exit of the fire subcompartment where the escape route starts, unless such exit directly adjoins the adjacent grounds.
6. An enclosed space through which an additionally protected escape route passes shall have a walking distance from the exit of the fire subcompartment in which the route starts, to the point where a second escape route or a safety escape route starts, or alternatively to the adjacent grounds, which does not exceed the value given in Table 2.102.
7. An escape route in a stairwell shall be deemed an additionally protected escape route.
8. An escape route in a stairwell where a height gap exceeding 8 m is bridged shall be an additionally protected escape route.

Article 2.106 Safety escape route

1. An escape route on which more than 150 persons are dependent shall be a safety escape route from the exit of the fire subcompartment where the escape route starts, unless such exit directly adjoins the adjacent grounds.
2. An escape route in an enclosed stairwell where a height gap exceeding 12.5 m is bridged shall be a safety escape route.

Article 2.107 Second escape route

1. If a second escape route starts on a given escape route, Articles 2.104, 2.105(1) to (7), and 2.106 shall cease to apply from the point where the two escape routes pass through different spaces.

2. The two escape routes shall not pass through the same fire compartment other than inside the fire compartment where the start of the second escape route as referred to in the first paragraph is located.
3. Notwithstanding the first and second paragraphs, the two escape routes may pass through by the same space after the exit of the fire subcompartment where the first escape route starts, if:
   a. such space adjoins the exit of the fire subcompartment;
   b. the escape routes in such space are protected escape routes, and additionally protected escape routes to the extent that they lie outside a fire compartment;
   c. the walking distance in such space, measured along both escape routes, does not exceed 30 m if the space is enclosed, and
   d. the escape routes lead in different directions.
4. Notwithstanding the first paragraph, the two escape routes may pass through the same space, to the extent that the escape route is a safety escape route.
5. The safety escape route referred to in the fourth paragraph shall pass exclusively through a stairwell.

Article 2.108 Furnishings of escape routes

1. The fire resistance between a protected or additionally protected escape route and the adjoining enclosed space in the direction of escape, as determined in accordance with NEN 6068, shall be at least 20 minutes.
2. The fire resistance between the two spaces as referred to in Article 2.107(1) as determined in accordance with NEN 6068, shall be at least 30 minutes.
3. Ministerial regulations may be enacted to lay down rules for the smoke penetration between:
   a. a protected or additionally protected escape route and the adjoining enclosed space in the direction of escape, and
   b. between two escape routes as referred to in Article 2.107(1) which pass through different spaces.
4. For each floor, the permanent fire load, as determined in accordance with NEN 6090, of a stairwell through which a protected or additionally protected escape route passes, including any enclosed spaces accessible directly from that stairwell, shall not exceed 3 500 MJ. An enclosed space shall be disregarded for the calculation of the fire load if the fire resistance between such space and the stairwell, as determined in accordance with NEN 6068, is at least 30 minutes. The calculated fire load shall be reduced by 50 % for a roof structure on the upper floor of a stairwell through which no safety escape route passes.
5. For each floor, the permanent fire load, as determined in accordance with NEN 6090, of an enclosed space through which a safety escape route passes, including any enclosed spaces accessible directly from such space, shall not exceed 3 500 MJ. An enclosed space shall be disregarded for the calculation of the fire load if the fire resistance between such space and the stairwell, as determined in accordance with NEN 6068, is at least 30 minutes.
6. An enclosed stairwell bridging a height gap exceeding 20 m shall be reached only by a separate protected escape route with a walking distance of at least 2 m in the direction of escape.
7. An exit of a residential function shall not be adjacent to a separate escape route as referred to in the sixth paragraph.

8. An escape route shall have a free passage with a width of at least 0.85 m and a height of at least the value given in Table 2.102. The above shall not apply where the escape route passes over a staircase.
9. Notwithstanding the eighth paragraph, a protected escape route shall have a free passage with a width of at least 1.2 m where it does not pass through an exit or over a staircase.
10. If a staircase is depended upon by staying areas with a total floor area exceeding 600 m^2, then the width of the staircase shall be at least 1.2 m.
11. An escape route passing from a bed area for hospitalised patients to another fire compartment as referred to in Article 2.84(10) shall have a free passage through which a block with a length of 2.3 m, a height of 1.2 m, and a width of 1.1 m can be moved horizontally. Such route shall not pass over a staircase or through a lift cage.
12. A non-enclosed space through which an escape route passes shall have such capacity for drainage of heat and smoke and input of fresh air that in case of fire, such space can be used for a sufficiently long period of time for escape, rescue, and firefighting purposes.

Article 2.109 Capacity of an escape route

1. The capacity of a part of an escape route in persons shall be at least the number of persons depending on that part. The calculation of the capacity shall be based on:
   a. 45 persons per metre of width of a staircase bridging a height gap of more than 1 metre, and 90 persons per metre of available width for a height gap not exceeding 1 metre, provided the going of the staircase is at least 0.17 m;
   b. 90 persons per metre of available width of a space;
   c. 90 persons per metre of available width of a passageway, if the passageway contains a double door or similar movable structure part with a maximum opening angle less than 135 degrees;
   d. 110 persons per metre of available width of a passageway, if the passageway contains a single door or similar movable structure part with a maximum opening angle less than 135 degrees; and
   e. 135 persons per metre of available width of any other passageway.
2. Ministerial regulations may be enacted to lay down provisions, different from those of the first paragraph, for parts of an escape route located outside the fire subcompartment in which the escape route starts.
3. The capacity of any part of an escape route shall be such that persons depending on that part can escape safely.

Article 2.110 Alteration

Articles 2.103 to 2.109 shall apply accordingly to a partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in those Articles.

Article 2.111 Temporary structures

The construction of a temporary structure shall be subject to Articles 2.103 to 2.107 and 2.109.

Subsection 2.12.2 Existing structures

Article 2.112 Guiding article

1. An existing structure shall have escape routes such that a safe place can be reached in case of fire.
2. Where Table 2.112 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 2.112

	functional use	applicable paragraphs							Limits		
		escape route	protected route	additionally protected escape route	safety escape route	second escape route	Furnishings of escape route	capacity of an escape route	escape route	width	height
	Article	2.113	2.114	2.115	2.11	2.117	2.118	2.119	2.113	2.118	
	Paragraph	1 2 3 4 5 6 7 8	1 2	1 2 3	1 2	1 2 3	1 2 3 4 5 6	1 2 3	4	4	
									[m]	[m]	[m]
1	Residential function:	1 - - 4 - - - -	1 -	1 - -	1 -	1 2 3	1 2 3 4 - 6	- - -	45	0.5	1.7
2	Assembly function:	1 2 - 4 - - 7 -	- 2	- 2 3	- 2	1 2 3	1 2 3 4 - 6	1 2 -	60	0.5	1.7
3	Detention function	- 2 - - 5 - 7 -	- 2	- 2 3	- 2	1 2 3	1 2 3 4 - 6	1 2 -	-	0.5	1.7
4	Health care function										
	a with bed area	1 2 - - 5 - 7 -	- 2	- 2 3	- 2	1 2 3	1 2 3 4 5 6	1 2 -	-	0.5	1.7
	b other health care function	1 2 - 4 - - 7 -	- 2	- 2 3	- 2	1 2 3	1 2 3 4 - 6	1 2 -	75	0.5	1.7
5	Industrial function	1 2 - 4 - - 7 -	- 2	- 2 3	- 2	1 2 3	1 2 3 4 - 6	1 2 -	75	0.5	1.7
6	Office function	1 2 - 4 - - 7 -	- 2	- 2 3	- 2	1 2 3	1 2 3 4 - 6	1 2 -	75	0.5	1.7
7	Temporary accommodation function	1 2 - 4 - - 7 -	- 2	- 2 3	- 2	1 2 3	1 2 3 4 - 6	1 2 -	75	0.5	1.7
8	Educational function	1 2 - 4 - - 7 -	- 2	- 2 3	- 2	1 2 3	1 2 3 4 - 6	1 2 -	60	0.5	1.7
9	Sports function	1 2 - 4 - - 7 -	- 2	- 2 3	- 2	1 2 3	1 2 3 4 - 6	1 2 -	75	0.5	1.7
10	Shop function	1 2 - 4 - - 7 -	- 2	- 2 3	- 2	1 2 3	1 2 3 4 - 6	1 2 -	75	0.5	1.7
11	Other functional use	1 2 - 4 - - 7 -	- 2	- 2 3	- 2	1 2 3	1 2 3 4 - 6	1 2 -	75	0.5	1.7
12	Structure other than a building:										
	a road tunnel with a tunnel length exceeding 250 m	1 - 3 - - 6 - -	1 -	- - -	- -	- - -	1 - 3 4 - 6	- - 3	-	0.7	1.9
	b structure other than a building not listed above	1 - - - - - - 8	- -	- - -	- -	- - -	- - - - - 6	- - 3	-	-	-

Article 2.113 Escape route

1. Each point on a floor intended for persons is the start of an escape route which leads to the adjacent grounds and from there to the public highway.
2. Each point on a floor intended for persons of a detention function or an ancillary function thereof is the start of an escape route which leads to another fire compartment, via an outdoor space or otherwise.
3. Each point on a carriageway is the start of an escape route which leads to the adjacent grounds and from there to the public highway.
4. The walking distance between a point in a functional area and an exit of the fire subcompartment in which such functional area is located shall not exceed the value given in Table 2.112.
5. The walking distance between a point in a functional area and the next exit after the exit of the fire subcompartment in which such functional area is located shall not exceed 75 m. The above shall not apply where the escape route passes through a non-enclosed space.
6. The walking distance between a point on a carriageway floor and an exit of the fire subcompartment shall be at most 150 m. The distance between two exits shall be at most 250 m, measured along the tunnel wall.
7. A fire subcompartment or a space located therein, if it is intended for more than 150 persons, shall have at least two exits through which an escape route passes.

8. A structure other than a building shall have a sufficient number of escape routes, depending on its intended use and size, laid out such that an effective and safe escape is possible in case of fire.

Article 2.114 Protected route

1. An escape route shall be a protected route from the exit of the fire subcompartment where the escape route starts, unless such exit immediately adjoins the adjacent grounds.
2. An escape route on which no more than 37 persons depend shall be a protected route from the exit of the fire subcompartment where the escape route starts, unless such exit immediately adjoins the adjacent grounds.

Article 2.115 Additionally protected escape route

1. An escape route passing through a common circulation space depended upon by residential functions with a total usable area exceeding 500 m^2 shall be an additionally protected escape route.
2. An escape route on which at least 37 persons but no more than 150 persons depend shall be an additionally protected escape route from the exit of the fire subcompartment where the escape route starts, unless such compartment directly adjoins the adjacent grounds.
3. An escape route passing from the exit of a fire subcompartment over a staircase and bridging a height gap exceeding 12.5 m shall be an additionally protected escape route.

Article 2.116 Safety escape route

1. An escape route passing through a common circulation space depended upon by residential functions with a total usable area exceeding 1 500 m^2 shall be a safety escape route.
2. An escape route upon which more than 150 persons depend shall be a safety escape route from the exit of the fire subcompartment where the escape route starts, unless such compartment directly adjoins the adjacent grounds.

Article 2.117 Second escape route

1. If a second escape route starts on a given escape route, Articles 2.114, 2.115(1) and (2), and 2.116 shall cease to apply from the point where the two escape routes pass through different spaces.
2. Notwithstanding the first and second paragraphs, the two escape routes may pass through by the same space after the exit of the fire subcompartment where the first escape route starts, if:
   c. such space adjoins the exit of the fire subcompartment;
   d. the escape routes in the space lead to different exits; and
   e. the space is an enclosed space and the walking distance in such space, measured along the escape route, does not exceed 30 m, or 70 m if the route is a protected route.
3. Notwithstanding the first paragraph, the two escape routes may pass through by the same space after the exit of the fire subcompartment where the first escape route starts, if the escape route is a safety escape route.

Article 2.118 Furnishings of an escape route

1. The smoke resistance between a protected route or additionally protected escape route and the adjoining enclosed space in the direction of escape, as determined in accordance with NEN 6075, shall be at least 20 minutes.
2. The fire resistance between two escape routes as referred to in Article 2.117(1), as determined in accordance with NEN 6068, shall be at least 20 minutes.
3. The product of the permanent fire load, as determined in accordance with NEN 6090, and the net floor areas of a space through which a safety escape route passes shall not exceed 7 000 MJ per floor.
4. An escape route shall have a free passage with at least the width and height given in Table 2.112.
5. An escape route passing from a bed area for hospitalised patients to another fire compartment as referred to in Article 2.90(10) shall have a free passage through which a block with a length of 2.3 m, a height of 1.2 m, and a width of 1.1 m can be moved horizontally. Such escape route shall not pass over a staircase or through a lift cage.
6. A non-enclosed space through which an escape route passes shall have such capacity for drainage of heat and smoke and input of fresh air that in case of fire, such space can be used for a sufficiently long period of time for escape, rescue, and firefighting purposes.

Article 2.119 Capacity of an escape route

1. The capacity of a part of an escape route in persons shall be at least the number of persons depending on that part. The calculation of the capacity shall be based on:
   a. 45 persons per metre of width of a staircase bridging a height gap of more than 1 m, and 90 persons per metre of available width for a height gap not exceeding 1 m, provided the going of the staircase is at least 0.16 m.
   b. 90 persons per metre of available width of a space;
   c. 90 persons per metre of available width of a passageway, if the passageway contains a double door or similar movable structure part with a maximum opening angle less than 135 degrees;
   d. 110 persons per metre of available width of a passageway, if the passageway contains a single door or similar movable structure part with a maximum opening angle less than 135 degrees; and
   e. 135 persons per metre of available width of any other passageway.
2. Ministerial regulations may be enacted to lay down provisions, different from those of the first paragraph, for parts of an escape route located outside the fire subcompartment in which the escape route starts.
3. The capacity of any part of an escape route shall be such that persons depending on that part can escape safely.

Section 2.13 Emergency services in case of fire

Subsection 2.13.1 New structures

Article 2.120 Guiding article

1. A proposed structure shall be such that emergency services can rescue persons and fight the fire within a reasonable time.

2. Where Table 2.120 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 2.120

functional use	applicable paragraphs						
	fire-fighting lift		walking distance		emergency station	alteration	temporary structure
Article	2.121		2.122		2.123	2.124	2.125
Paragraph	1	2	1	2	*	*	*
1 Residential function:	1	2	1	2	-	*	*
2 Assembly function:	1	-	1	2	-	*	*
3 Detention function	1	-	1	2	-	*	*
4 Health care function	1	-	1	2	-	*	*
5 Industrial function	1	-	1	2	-	*	*
6 Office function	1	-	1	2	-	*	*
7 Temporary accommodation function	1	-	1	2	-	*	*
8 Educational function	1	-	1	2	-	*	*
9 Sports function	1	-	1	2	-	*	*
10 Shop function	1	-	1	2	-	*	*
11 Other functional use	-	-	-	-	-	-	-
12 Structure other than a building:							
a. road tunnel with a tunnel length exceeding 250 m	-	-	-	-	*	-	-
b. structure other than a building not listed above	-	-	-	-	-	-	-

Article 2.121 Fire-fighting lift

1. From any entrance of a fire-fighting lift on a given floor, the lift entrance on the floor above it shall be accessible via an additionally protected escape route.
2. An exit of a residential function shall not be adjacent to an additionally protected escape route as referred to in the first paragraph.

Article 2.122 Walking distance

1. The walking distance between a point within a functional area and at least one entrance of a stairwell shall not exceed 75 m.
2. The walking distance between any point within a functional area and at least one entrance of a fire-fighting lift shall not exceed 120 m.

Article 2.123 Emergency station

A road tunnel pipe with a length exceeding 250 m shall have a number of emergency stations such that the walking distance between any point on the carriageway floor and at least one emergency station does not exceed 75 m. This distance shall be measured along a route passing exclusively over floors, stairs or access ramps without passing doors which need a key to be opened. The spacing between two successive emergency stations shall not exceed 100 m.

Article 2.124 Alteration

Articles 2.121 and 2.122 shall apply accordingly to a partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in those Articles.

Article 2.125 Temporary structures
The construction of a temporary structure shall be subject to Articles 2.121 and 2.122.

Subsection 2.13.2 Existing structures

Article 2.126 Guiding article
1. An existing road tunnel with a tunnel length exceeding 250 m shall be such that emergency services can rescue persons and fight the fire within a reasonable time.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provision of this section.

Article 2.127 Emergency station
A road tunnel pipe with a length exceeding 250 m shall have a number of emergency stations such that the walking distance between any point on the carriageway floor and at least one emergency station does not exceed 75 m. This distance shall be measured along a route passing exclusively over floors, stairs or access ramps without passing doors which need a key to be opened. The spacing between two successive emergency stations shall not exceed 100 m.

Section 2.14 High and underground buildings, new structures

Article 2.134 Guiding article
1. A proposed structure containing a floor of a functional area located more than 70 m above the terrain height or more than 8 m below the terrain height shall be such that the structure is fire-safe.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 2.135 Furnishings
1. A structure containing any floor of a functional area located at more than 70 m above the terrain height shall be furnished such that the structure has the same level of fire safety as envisaged by sections 2.2.1, 2.8.1, 2.9.1, 2.10.1 2.11.1, 2.12.1, and 2.13.1.
2. A structure containing any a floor of a functional area located at more than 8 m below the terrain height shall be furnished such that the structure has the same level of fire safety as envisaged by sections 2.2.1, 2.8.1, 2.9.1, 2.10.1 2.11.1, 2.12.1, and 2.13.1.

Section 2.15 Burglar-proofing, new structures

Article 2.136 Guiding article
1. A proposed residential function, other than a caravan, shall be burglar-proof.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 2.137 Scope
Doors, windows, window and door frames, and equivalent structural components in a partition of a non-common space which is susceptible to burglary in accordance with NEN 5087 shall have a level of burglar-proofing, as determined in accordance with NEN 5096, which complies with resistance class 2 as defined in such standard.

Article 2.138 Alteration
Article 2.137 shall apply accordingly to a partial renovation, alteration or enlargement of a residential function other than a caravan, taking the current regulatory level of requirements instead of the level given in that Article.

Section 2.16 Safety zone and pool fire-sensitive area, new structures

Article 2.139 Guiding article
1. A proposed structure in a safety zone or pool fire-sensitive area, or over the entire width of a basic network route if the safety zone spans only part of the width of such basic network route, shall be such that the risk to persons within the structure produced by the transport of hazardous substances remains limited.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provision of this section.

Article 2.140 Safety zone and pool fire-sensitive area
Ministerial regulations may be enacted to place requirements on structures in a safety zone or a pool fire-sensitive area, or over the entire width of a basic network route, if the safety zone spans only part of the width of such basic network route, such that persons are protected from the consequences of emergencies on roads, railways or inland waters involving hazardous substances.

Section 2.17 Additional rules for tunnel safety

Subsection 2.17.1 New structures

Article 2.141 Guiding article
1. A proposed road tunnel with a tunnel length exceeding 250 m shall be such that the safety of road traffic is ensured.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 2.142 Traffic safety
1. A bidirectional road tunnel located outside built-up areas shall have at least two road tunnel pipes.
2. A road tunnel pipe with a tunnel pipe length exceeding 250 m shall have a carriageway floor with a slope not exceeding 1:20.
3. A road tunnel pipe with a tunnel pipe length exceeding 250 m shall have a floor with a width of at least 7 m and a height of at least 4.2 m over such width, to ensure efficient passage of road vehicles.

Subsection 2.17.2 Existing structures

Article 2.143 Guiding article

1. An existing road tunnel with a tunnel length exceeding 250 m shall be such that the safety of road traffic is ensured.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provision of this section.

Article 2.144 Traffic safety

A bidirectional road tunnel located outside built-up areas with a tunnel pipe length exceeding 250 m shall have at least two road tunnel pipes.

Chapter 3 Technical construction requirements for health protection

Section 3.1 Protection from outside noise, new structures

Article 3.1 Guiding article

1. A proposed structure shall offer protection from outside noise in staying areas.
2. Where Table 3.1 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 3.1 does not mention a provision.

Table 3.1

functional use	applicable paragraphs												
	outside noise	industrial, road or railway noise				aviation noise					alteration	temporary structure	
Article	3.2	3.3				3.4					3.5	3.6	3.6
Paragraph	*	1	2	3	4	1	2	3	4	5	*	1	2
1 Residential function:													
a caravan	*	-	-	-	-	-	-	-	-	-	*	-	-
b other residential function	*	1	-	3	4	1	2	3	4	5	*	1	2
2 Assembly function:													
a for child care:	*	1	2	3	4	1	2	-	4	5	*	1	2
b other assembly function	-	-	-	-	-	-	-	-	-	-	-	-	-
3 Detention function	-	-	-	-	-	-	-	-	-	-	-	-	-
4 Health Care Function	*	1	2	3	4	1	2	3	4	5	*	1	2
5 Industrial function	-	-	-	-	-	-	-	-	-	-	-	-	-
6 Office function	-	-	-	-	-	-	-	-	-	-	-	-	-
7 Temporary accommodation function	-	-	-	-	-	-	-	-	-	-	-	-	-
8 Educational function	*	1	-	3	4	1	2	-	4	5	*	1	2
9 Sports function	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Shop function	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Other functional use	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Structure other than a building:	-	-	-	-	-	-	-	-	-	-	-	-	-

Article 3.2 Outside noise

An exterior partition of a staying area shall have a minimum characteristic noise protection of 20 dB as determined in accordance with NEN 5077.

Article 3.3 Industrial, road or railway noise

1. In a level increase decision issued under the Noise Protection Act [*Wet geluidhinder*] or the Road Planning Act [*Tracéwet*], the characteristic noise protection of an exterior partition of a staying area, as determined in accordance with NEN 5077, shall not be less than the difference between the maximum permissible noise level for industrial, road or railway noise as given in such decision on one hand, and 35 dB(A) for industrial noise or 33 dB for road or rail noise on the other hand.

2. In a level increase decision issued under the Noise Protection Act [*Wet geluidhinder*] or the Road Planning Act [*Tracéwet*], the characteristic noise protection of an exterior partition of a bed area, as determined in accordance with NEN 5077, shall not be less than the difference between the maximum permissible noise level for industrial, road or railway noise as given in such decision on one hand, and 30 dB(A) for industrial noise or 28 dB for road or rail noise on the other hand.
3. The first and second paragraphs shall apply accordingly to an interior partition of an area as referred to in the first and second paragraphs which does not partition off a staying area of an adjacent functional unit subject to the first and second paragraphs.
4. A partition of a staying space, as referred to in the first to third paragraphs, shall have a characteristic noise protection, as determined in accordance with NEN 5077, which is at most 2 dB or dB(A) lower than the characteristic noise protection, as referred to in the first to third paragraphs, of the staying area in which the staying space is located.

Article 3.4 Aviation noise

1. An exterior partition of a staying area of a functional unit in a Ke noise zone near a military airport as designated under the Aviation Act [*Wet luchtvaart*], shall have a characteristic noise protection, as determined in accordance with NEN 5077, which is not less than the value given in Table 3.4. For a noise level lying between the Ke values given in the first column, the noise protection level to be achieved shall be calculated by linear interpolation between the dB values in the second column.

Table 3.4

Noise protection for aviation noise	
Noise level in Ke	*Required characteristic noise protection in dB*
36–40	30–33
41–45	33–36
46–50	36–40
more than 50	40

2. An exterior partition of a staying area of a functional unit located in a 56 dB(A) L_{den} restriction area designated under the Aviation Act [*Wet luchtvaart*] or in a 35 Ke noise contour near a civilian airport shall have such characteristic noise protection, as determined in accordance with NEN 5077, that the characteristic noise level in the staying area does not exceed 33 dB. This shall be based on the noise level on the exterior partition as determined in accordance with the Aviation Act.
3. A bed area located in the 26 LA_{eq} noise zone dB(A) area designated under the Aviation Act for Schiphol Airport shall have such characteristic noise protection, as determined in accordance with NEN 5077, that the characteristic noise level in the staying area does not exceed 28 dB.
4. The first to third paragraphs shall apply accordingly to an interior partition of an area as referred to in the first and second paragraphs which does not partition off

a staying area of an adjacent functional unit subject to the first to third paragraphs.

5. A partition of a staying space, as referred to in the first to fourth paragraphs, shall have a characteristic noise protection, as determined in accordance with NEN 5077, which is at most 2 dB or dB(A) lower than the characteristic noise protection, as referred to in the first to fourth paragraphs, of the staying area in which the staying space is located.

Article 3.5 Alteration

Articles 3.2 to 3.4 shall apply accordingly to a partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in those Articles.

Article 3.6 Temporary structures

1. Articles 3.2 to 3.4 shall apply accordingly to the construction of a temporary structure, taking a level of requirements which is 10 dB or dB(A) below the level given in those Articles.
2. Notwithstanding the first paragraph, the application of Article 3.4(3) shall be based on a characteristic noise level in the staying area not exceeding 30 dB.

Section 3.2 Protection from noise from installations, new structures

Article 3.7 Guiding article

1. A proposed structure shall offer protection from noise from installations.
2. Where Table 3.7 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 3.7

functional use	applicable paragraphs					limits
	adjacent plot	same plot		alteration	temporary structure	same plot
Article	3.8	3.9		3.10	3.11	3.9
Paragraph	*	1	2	*	*	2 [dB]
1 Residential function:	*	1	2	*	*	30
2 Assembly function:						
a for child care:	*	1	2	*	*	35
b other assembly function	*	1	-	*	*	-
3 Detention function	*	1	-	*	*	-
4 Health care function	*	1	-	*	*	-
5 Industrial function	*	1	-	*	*	-
6 Office function	*	1	-	*	*	-
7 Temporary accommodation function	*	1	-	*	*	-
8 Educational function	*	1	2	*	*	35
9 Sports function	*	1	-	*	*	-
10 Shop function	*	1	-	*	*	-
11 Other functional use	*	1	-	*	*	-
12 Structure other than a building:	*	1	-	-	-	-

Article 3.8 Adjacent plot

A toilet with a flushing device, tap, mechanical ventilation system, water heater, water pressure booster or lift shall produce a characteristic installation-noise level, as determined in accordance with NEN 5077, in any staying area located on an adjacent plot that does not exceed 30 dB. The above shall not apply to a light industrial function or other functional unit located on an adjacent plot.

Article 3.9 Same plot

1. A toilet with a flushing device, tap, mechanical ventilation system, water heater, water pressure booster or lift shall produce a characteristic installation-noise level, as determined in accordance with NEN 5077, in any non-common staying area of an adjacent residential function located on the same plot, which does not exceed 30 dB.
2. A mechanical device for ventilation, heat generation or heat recovery shall produce a characteristic installation-noise level, as determined in accordance with NEN 5077, in any staying area of the functional unit, which does not exceed the value given in Table 3.7.

Article 3.10 Alteration

Articles 3.8 and 3.9 shall apply accordingly to a partial renovation, alteration or expansion of a structure, taking a level of requirements which is 10 dB below the level given in those Articles.

Article 3.11 Temporary structures

Articles 3.8 and 3.9 shall apply accordingly to the construction of a temporary structure, taking a level of requirements which is 10 dB below the level given in those Articles.

Section 3.3 Reverberation control, new structures

Article 3.12 Guiding article

1. A proposed residential building shall have such noise absorption in any common circulation space that any undesirable noise caused by reverberation is limited.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 3.13 Noise absorption

Any enclosed common circulation space adjacent to a non-common space of a residential function shall have a total noise absorption, as determined in accordance with NEN-EN 12354-6, with a numerical value, expressed in m^2, which is not less than 1/8 of the numerical value of the volume of such space, expressed in m^3, in each of the octave bands with centre frequencies of 250, 500, 1 000, and 2 000 Hz.

Article 3.14 Alteration

Article 3.13 shall apply accordingly to a partial renovation, alteration or enlargement of a residential building, taking the current regulatory level of requirements instead of the level given in that Article.

Section 3.4 Noise protection between spaces of various functional units, new structures

Article 3.15 Guiding article

1. A proposed structure offers protection from undesirable noise between functional units.
2. Where Table 3.15 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 3.15 does not mention a provision.

Table 3.15

functional use	applicable paragraphs													limits			
	other plot				the same plot							alteration	temporary structure	other plot		the same plot	
Article	3.16				3.17							3.18	3.19	3.16		3.17	
Paragraph	1	2	3	4	1	2	3	4	5	6	7	*	*	3	4	3	4
1 Residential function:																	
a caravan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b in a residential building	1	2	3	4	1	2	3	4	-	6	7	*	*	54	59	54	59
c other residential function	1	2	3	4	1	2	3	4	-	-	-	*	*	54	59	54	59
2 Assembly function:	1	2	3	4	1	2	3	4	-	-	-	*	*	59	64	59	64
3 Detention function	1	2	3	4	1	2	3	4	-	-	-	*	*	59	64	59	64
4 Health care function	1	2	3	4	1	2	3	4	-	-	-	*	*	59	64	59	64
5 Industrial function																	
a light industrial function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b other industrial function	1	2	3	4	1	2	3	4	-	-	-	*	*	59	64	59	64
6 Office function	1	2	3	4	1	2	3	4	5	-	-	*	*	59	64	59	64
7 Temporary accommodation function	1	2	3	4	1	2	3	4	5	-	-	*	*	59	64	59	64
8 Educational function	1	2	3	4	1	2	3	4	-	-	-	*	*	59	64	59	64
9 Sports function	1	2	3	4	1	2	3	4	5	-	-	*	*	59	64	59	64
10 Shop function	1	2	3	4	1	2	3	4	5	-	-	*	*	59	64	59	64
11 Other functional use	1	2	3	4	1	2	3	4	5	-	-	*	*	59	64	59	64
12 Structure other than a building:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Article 3.16 Other plot

1. The characteristic airborne noise level difference for noise transfer from an enclosed space to a staying area in an adjacent functional unit located on another plot, as determined in accordance with NEN 5077, shall not be less than 52 dB.
2. The characteristic airborne noise level difference for noise transfer from an enclosed space to an enclosed space—not located within a staying area—of an adjacent residential function on another plot, as determined in accordance with NEN 5077, shall not be less than 47 dB.

3. The weighted contact noise level for noise transfer from an enclosed space to a staying area in an adjacent functional unit located on another plot, as determined in accordance with NEN 5077, shall not exceed the value given in Table 3.15.
4. The weighted contact noise level for noise transfer from an enclosed space to an enclosed space—not located within a staying area—of an adjacent residential function on another plot, as determined in accordance with NEN 5077, shall not exceed the value given in Table 3.15.

Article 3.17 The same plot

1. The characteristic airborne noise level difference for noise transfer from an enclosed space to a staying area in an adjacent residential function located on the same plot, as determined in accordance with NEN 5077, shall not be less than 52 dB.
2. The characteristic airborne noise level difference for noise transfer from an enclosed space to an enclosed space—not located within a staying area—of an adjacent residential function on the same plot, as determined in accordance with NEN 5077, shall not be less than 47 dB.
3. The weighted contact noise level for noise transfer from an enclosed space to a staying area in an adjacent residential function located on the same plot, as determined in accordance with NEN 5077, shall not exceed the value given in Table 3.15.
4. The weighted contact noise level for noise transfer from an enclosed space to an enclosed space—not located within a staying area—of an adjacent residential function on the same plot, as determined in accordance with NEN 5077, shall not exceed the value given in Table 3.15.
5. The first to fourth paragraphs shall not apply to noise transfer from an ancillary function of a residential function to such residential function.
6. The first to fourth paragraphs shall not apply to noise transfer from a common space to an adjacent common space.
7. The second and fourth paragraphs shall not apply to noise transfer from an enclosed space to a common circulation space, or to noise transfer from a common circulation space to an enclosed space not located in a staying area.

Article 3.18 Alteration

Articles 3.16 and 3.17 shall apply accordingly to a partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in those Articles.

Article 3.19 Temporary structures

Articles 3.16 and 3.17 shall apply accordingly to the construction of a temporary structure, taking a level of requirements which is 10 dB below the level given in those Articles.

Section 3.5 Moisture reduction

Subsection 3.5.1 New structures

Article 3.20 Guiding article

1. A proposed structure shall have such partitions that the formation of allergens due to moisture in staying areas, toilet spaces, and bathroom spaces is adequately reduced.
2. Where Table 3.20 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 3.20 does not mention a provision.

Table 3.20

functional use		applicable paragraphs									limits
		outside moisture reduction				temperature factor		water absorption		alteration	temperature factor
	Article	3.21				3.22		3.23		3.24	3.22
	Paragraph	1	2	3	4	1	2	1	2	*	1
1	Residential function:	1	2	3	4	1	2	1	2	*	0.65
2	Assembly function:	1	2	3	4	1	2	1	2	*	0.5
3	Detention function	1	2	3	4	1	2	1	2	*	0.5
4	Health care function	1	2	3	4	1	2	1	2	*	0.5
5	Industrial function	-	-	-	-	1	2	1	2	*	0.5
6	Office function	1	2	3	4	1	2	1	2	*	0.5
7	Temporary accommodation function	1	2	3	4	1	2	1	2	*	0.5
8	Educational function	1	2	3	4	1	2	1	2	*	0.5
9	Sports function	1	2	3	4	1	2	1	2	*	0.5
10	Shop function	1	2	3	4	1	2	1	2	*	0.5
11	Other functional use	-	-	-	-	-	-	-	-	-	-
12	Structure other than a building:	-	-	-	-	-	-	-	-	-	-

Article 3.21 Outside moisture reduction

1. An exterior partition of a staying area, toilet space or bathroom space shall be watertight as determined in accordance with NEN 2778.
2. A structure which separates a staying area, toilet space or bathroom space from a crawl space, including any parts of other structures adjacent to such structure, to the extent that those parts affect the possibility of penetration of moisture into the staying area, toilet space or bathroom space, shall be watertight as determined in accordance with NEN 2778.
3. An interior partition of a staying area, toilet space or bathroom space, to the extent that such partition is not adjacent to another staying area, toilet space or bathroom space, shall be watertight as determined in accordance with NEN 2778.
4. A structure which separates a staying area, toilet space or bathroom space from a crawl space, including any parts of other structures adjacent to such structure, to the extent that those parts affect the specific air volume flow rate into the staying

area, toilet space or bathroom space, shall have a specific air volume flow rate, as determined in accordance with NEN 2690, which does not exceed 20.10^{-6} $m^3/(m^2.s)$.

Article 3.22 Temperature factor

1. A partition which is subject to a heat resistance as referred to in Article 5.3 shall have, at any side adjacent to a staying area, a temperature factor for the interior surface, as determined in accordance with NEN 2778, which is not less than the value given in Table 3.20.
2. The first paragraph shall not apply to windows, doors, window and door frames, and equivalent structural components.

Article 3.23 Water absorption

1. A partition of a toilet space or bathroom space shall have, at any side adjacent to such space, a water absorption rate, as determined in accordance with NEN 2778, up to a height of 1.2 m above the floor of such space, which does not exceed 0.01 $kg/(m^2.s^{1/2)}$ on average and which does not exceed 0.2 $kg/(m^2.s^{1/2)}$ anywhere.
2. For bathroom spaces, the requirement of the first paragraph shall apply over a length of at least 3 m up to a height of 2.1 m above the floor of such space where the partition is adjacent to a bath or shower.

Article 3.24 Alteration

Articles 3.21 and 3.23 shall apply accordingly to a partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in those Articles.

Subsection 3.5.2 Existing structures

Article 3.25 Guiding article

1. An existing structure shall have such partitions that the formation of allergens due to moisture in staying spaces, toilet spaces, and bathroom spaces is adequately reduced.
2. Where Table 3.25 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 3.25 does not mention a provision.

Table 3.25

	functional use	applicable paragraphs			
		outside moisture			water absorption
	Article	3.26			3.27
	Paragraph	1	2	3	*
1	Residential function:	1	2	3	*
2	Assembly function:	1	2	3	*
3	Detention function	1	2	3	*
4	Health care function	1	2	3	*
5	Industrial function	-	-	-	*
6	Office function	1	2	3	*
7	Temporary accommodation function	1	2	3	*
8	Educational function	1	2	3	*
9	Sports function	1	2	3	*
10	Shop function	1	2	3	*
11	Other functional use	-	-	-	-
12	Structure other than a building:	-	-	-	-

Article 3.26 Outside moisture

1. An exterior partition of a staying space, toilet space or bathroom space shall be watertight as determined in accordance with NEN 2778.
2. A structure which separates a staying space, toilet space or bathroom space from a crawl space, including any parts of other structures adjacent to such structure, to the extent that those parts affect the possibility of penetration of moisture into the staying space, toilet space or bathroom space, shall be watertight as determined in accordance with NEN 2778.
3. An interior partition of a staying space, toilet space or bathroom space, to the extent that such partition is not adjacent to another staying space, toilet space or bathroom space, shall be watertight as determined in accordance with NEN 2778.

Article 3.27 Water absorption

A partition of a bathroom space shall have, at any side adjacent to such space, a water absorption rate, as determined in accordance with NEN 2778, up to a height of 1 m above the floor of such space, which does not exceed 0.01 kg/(m^2.$s^{1/2}$) on average and which does not exceed 0.2 kg/(m^2.$s^{1/2}$) anywhere.

Section 3.6 Ventilation

Subsection 3.6.1 New structures

Article 3.28 Guiding article

1. A proposed structure shall have a facility for ventilation such that the occurrence of unhealthy quality of indoor air is prevented.
2. Where Table 3.28 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 3.28

Functional use	applicable paragraphs								limit
	ventilation in staying area, staying space, toilet space, and bathroom space	thermal comfort	adjustability	ventilation other spaces	location of the opening	air quality	alteration	temporary structure	capacity per person
Article	3.29	3.30	3.31	3.32	3.33	3.34	3.35	3.36	3.29
Paragraph	1 2 3 4 5 6	*	*	1 2 3 4 5 6 7	1 2	1 2 3 4 5 6 7 8 9	*	*	3 [dm^3/s per person]
1 Residential function	1 2 - 4 5 6	*	*	1 2 3 4 - - -	1 2	1 2 3 4 5 - 7 8 -	*	*	-
2 Assembly function:									
a for child care:	- - 3 4 - 6	*	*	- 2 3 4 - - -	1 2	1 - - 4 5 - 7 8 -	*	*	6.5
b other assembly function	- - 3 4 - 6	*	*	- 2 3 4 - - -	1 2	1 - - 4 5 - 7 8 -	*	-	4
3 Detention function	- - 3 4 - 6	*	*	- 2 3 4 - - -	1 2	1 - - 4 5 - 7 8 -	*	-	
1 cell									12
2 other staying area									6.5
4 Health care function	- - 3 4 - 6	*	*	- 2 3 4 - - -	1 2	1 - - 4 5 - 7 8 -	*	-	
1 bed area									12
2 other staying area									6.5
5 Industrial function	- - 3 4 - 6	-	-	- 2 3 4 - - -	1 2	1 - - 4 5 - 7 8 -	*	-	6.5
6 Office function	- - 3 4 - 6	*	*	- 2 3 4 - - -	1 2	1 - - 4 5 - 7 8 -	*	-	6.5
7 Temporary accommodation function									
a. in a temporary accommodation building	- - 3 4 - 6	*	*	- 2 3 4 - - -	1 2	1 2 - 4 5 - 7 8 -	*	-	12
b. other temporary accommodation function	- - 3 4 5 6	*	*	- 2 3 4 - - -	1 2	1 2 - 4 5 - 7 8 -	*	-	12
8 Educational function	- - 3 4 - 6	*	*	- 2 3 4 - - -	1 2	1 - - 4 5 - 7 8 -	*	*	8.5
9 Sports function	- - 3 4 - 6	*	*	- 2 3 4 - - -	1 2	1 - - 4 5 - 7 8 -	*	-	6.5
10 Shop function	- - 3 4 - 6	*	*	- 2 3 4 - - -	1 2	1 - - 4 5 - 7 8 -	*	-	4
11 Other functional use									
a. for parking motor vehicles	- - - - - 6	-	*	- 2 3 4 5 - -		- - - 4 5 - 7 8 9	*	-	-
b. other functional use not listed above	- - - - - 6	-	*	- 2 3 4 - - -		- - - 4 5 - 7 8 -	*	-	-
12 Structure other than a building:									
a road tunnel with a tunnel length exceeding 250 m	- - - - - -	-	-	- 2 - 4 - 6 7	- -	- - - 4 - 6 - - -	*	-	-
b other tunnel or tunnel-shaped structure	- - - - - -	-	-	- 2 - 4 - 6 -	- -	- - - 4 - - - - -	*	-	-
c. structure other than a building not listed above	- - - - - -	-	-	- 2 - 4 - - -	- -	- - - 4 5 - - - -	*	-	-

Article 3.29 Ventilation in staying area, staying space, toilet space, and bathroom space

1. A staying area shall have a facility for ventilation with a capacity, as determined in accordance with NEN 1087, of at least 0.9 dm^3/s per m^2 of floor area, with a minimum of 7 dm^3/s.
2. A staying space shall have a facility for ventilation with a capacity, as determined in accordance with NEN 1087, of at least 0.7 dm^3/s per m^2 of floor area, with a minimum of 7 dm^3/s.
3. A staying area or staying space shall have a facility for ventilation with a capacity per person, as determined in accordance with NEN 1087, at least equal to the value given in Table 3.28.
4. Without prejudice to the first to third paragraphs, a staying area or staying space with an installation location for a cooking appliance as referred to in Article 4.38

shall have a facility for ventilation with a capacity, as determined in accordance with NEN 1087, of at least 21 dm^3/s.

5. A ventilation facility for more than one staying area shall have a capacity not less than the highest value applicable to each individual staying area pursuant to the first and third paragraphs. Additionally, the capacity shall not be less than 70 % of the total of the values applicable pursuant to the first, third, and fourth paragraphs to the staying areas depending on such facility.
6. A ventilation facility of a toilet or bathroom space shall have a capacity of at least 7 dm^3/s for a toilet space, or 14 dm^3/s for a bathroom space, determined in accordance with NEN 1087.

Article 3.30 Thermal comfort

Fresh air shall be fed into the living zone of a staying area at an air speed, determined in accordance with NEN 1087, which does not exceed 0.2 m/s.

Article 3.31 Adjustability

The capacity of a ventilation facility for a staying area or staying space shall be adjustable. The facility shall have, in addition to a minimum mode not exceeding 10 % of its maximum capacity and a mode at 100 % capacity, at least two additional modes in the range between the minimum mode and 30 % capacity, as determined in accordance with NEN 1087. This two modes shall differ at least 10 % in capacity both between them and with respect to the zero position.

Article 3.32 Ventilation in other spaces

1. A common circulation space shall have a non-lockable ventilation facility with a capacity, in accordance with NEN 1087, of at least 0.5 dm^3/s per m^2 of the floor area of such space.
2. A space with an installation location for a gas meter shall have a non-lockable ventilation facility with a capacity, determined in accordance with NEN 1087, of at least 1 dm^3/s per m^2 of floor area of such space, with a minimum of 2 dm^3/s.
3. A lift shaft shall have a non-lockable ventilation facility with a capacity, in accordance with NEN 1087, of at least 3.2 dm^3/s per m^2 of the floor area of such lift shaft.
4. A storage space for household waste with a floor area exceeding 1.5 m^2 shall have a non-lockable ventilation facility with a capacity, determined in accordance with NEN 1087, of at least 10 dm^3/s per m^2 of floor area of such space.
5. A parking space for a motor vehicle with a functional area not exceeding 50 m^2 shall have a non-lockable ventilation facility with a capacity, determined in accordance with NEN 1087, of at least 3 dm^3/s per m^2 of the floor area of such space.
6. A tunnel shall have a ventilation facility of sufficient capacity, depending on its intended use and tunnel length.
7. In a road tunnel pipe with a tunnel pipe length exceeding 500 m, the ventilation facility as referred to in the sixth paragraph shall be mechanical.

Article 3.33 Location of the opening

1. The dilution factor, determined in accordance with NEN 1087, of the drainage from an air or smoke drainage device, shall not exceed the value given in Table 3.33 at the location of a fresh air inlet for a ventilation facility as referred to in Article 3.29. Drainage devices and obstacles located on another plot shall not be taken into account when determining the dilution factor.

Table 3.33 Dilution factors for different types of drainages.

Type of drainage	**dilution factor**
Ventilation	0.01
Drainage device for flue gas for gas-fuelled equipment	0.01
Drainage device for flue gas for equipment using other fuels	0.0015

2. An inlet and outlet of a ventilation facility shall be located at a distance of at least 2 m from the plot boundary as measured perpendicular to the exterior partition of the functional unit. The above shall not apply to an inlet or outlet located in a roof. If the plot on which the functional unit is located is adjacent to a public highway, public water or public green area, the aforementioned distance shall be observed with respect to the centre of such road, water or green area.

Article 3.34 Air quality

1. The volume of fresh air as referred to in Article 3.29, shall be fed into the staying area directly from outdoors.
2. Notwithstanding the first paragraph, where fresh air is fed into a non-common staying area, at most 50 % of the volume as referred to in Article 3.29 shall be fed via a non-common staying area or non-common circulation space within the same functional unit.
3. Fresh air shall be fed into a common circulation space directly from outdoors. Drainage of indoor air from such a space shall take place directly outdoors.
4. Fresh air shall be fed into a lift shaft directly from outdoors or from outside via the lift machine space. Drainage of indoor air from such a space to the ambient air shall be either direct or via the lift machine space.
5. Fresh air shall be fed into a storage space for household waste directly from outdoors, and the drainage of indoor air directly outdoors.
6. In road tunnel pipes with a tunnel pipe length exceeding 250 m, the fresh air shall be fed directly from outdoors, and the indoor air shall be drained directly outdoors.
7. At least 21 dm^3/s of the capacity of the indoor air drainage from a staying area or staying space with an installation location for a cooking appliance as referred to in Article 3.29(4) shall be directly outdoors.
8. Drainage of indoor air from a toilet space or bathroom space shall take place directly outdoors.
9. Drainage of indoor air from a parking space for motor vehicles shall take place directly outdoors.

Article 3.35 Alteration

Articles 3.29 to 3.34 shall apply accordingly to a partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in those Articles.

Article 3.36 Temporary structures

The construction of a temporary structure shall be subject to Articles 3.29 to 3.34.

Subsection 3.6.2 Existing structures

Article 3.37 Guiding article

1. An existing structure shall have a facility for ventilation such that the occurrence of unhealthy quality of indoor air is prevented.
2. Where Table 3.37 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 3.37

functional use	applicable paragraphs																limit
	ventilation in staying space, toilet space, and bathroom space						ventilation other spaces						air quality					capacity per person
Article	3.38						3.39						3.40					3.38
Paragraph	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	2 [dm^3/s per person]
1 Residential function:	1	-	3	4	5	6	1	2	3	-	-	-	1	2	-	4	5	-
2 Assembly function:																		
a for child care:	-	2	3	-	-	6	1	2	3	-	-	-	1	2	-	4	5	3.44
b other assembly function	-	2	3	-	-	6	1	2	3	-	-	-	1	2	-	4	5	2.12
3 Detention function	-	2	3	-	-	6	1	2	3	-	-	-	1	2	-	4	5	
1 cell																		6.40
2 other staying area																		3.44
4 Health care function	-	2	3	-	-	6	1	2	3	-	-	-	1	2	-	4	5	3.44
5 Industrial function	-	2	3	-	-	6	1	2	3	-	-	-	1	2	-	4	5	3.44
6 Office function	-	2	3	-	-	6	1	2	3	-	-	-	1	2	-	4	5	3.44
7 Temporary accommodation function	-	2	3	4	-	6	1	2	3	-	-	-	1	2	-	4	5	6.40
8 Educational function	-	2	3	-	-	6	1	2	3	-	-	-	1	2	-	4	5	3.44
9 Sports function	-	2	3	-	-	6	1	2	3	-	-	-	1	2	-	4	5	3.44
10 Shop function	-	2	3	-	-	6	1	2	3	-	-	-	1	2	-	4	5	2.12
11 Other functional use																		
a for parking motor vehicles	-	-	-	-	-	6	1	2	-	4	-	-	1	2	-	4	5	-
b. other functional use not listed above	-	-	-	-	-	6	1	2	3	-	-	-	1	2	-	4	5	-
12 Structure other than a building:																		
a. road tunnel with a tunnel length exceeding 250 m	-	-	-	-	-	-	1	2	3	-	-	6	1	-	3	-	-	-
b. other tunnel or tunnel-shaped structure for traffic	-	-	-	-	-	-	1	2	-	-	5	-	1	-	-	-	-	-
c. structure other than a building not listed above	-	-	-	-	-	-	1	2	3	-	-	-	1	-	-	-	-	-

Article 3.38 Ventilation in staying space, toilet space and bathroom space

1. A staying space shall have a facility for ventilation with a capacity, as determined in accordance with NEN 8087, of at least 0.7 dm^3/s per m^2 of floor area, with a minimum of 7 dm^3/s.
2. A staying space shall have a facility for ventilation with a capacity per person, as determined in accordance with NEN 8087, at least equal to the value given in Table 3.37. This shall be based on the number of persons for which the staying space has been designed.
3. Without prejudice to the first and second paragraphs, a staying space with an installation location for a cooking appliance as referred to in Article 4.42, or with an installation location for an open flue heater for warm water, shall have a facility for ventilation with a capacity, as determined in accordance with NEN

8087, of at least 21 dm^3/s. An installation location for a cooking appliance or water heater with a nominal power exceeding 15 kW, or for a water heater which is not an open flue heater, shall not be taken into account.
4. A ventilation facility for more than one staying space shall have a capacity at least equal to the highest value applicable to any individual staying area depending on such facility pursuant to the first to third paragraphs.
5. Contrary to the fourth paragraph, a ventilation facility for a staying area consisting of more than one common staying space shall have a capacity at least equal to the sum of the values applicable to the staying areas depending on such facility pursuant to the first to third paragraphs.
6. A ventilation facility of a toilet or bathroom space shall have a capacity of at least 7 dm^3/s for a toilet space, or 14 dm^3/s for a bathroom space, determined in accordance with NEN 8087.

Article 3.39 Ventilation in other spaces

1. A space with an installation location for a gas meter shall have a ventilation facility with a capacity, determined in accordance with NEN 8087, of at least 1 dm^3/s per m^2 of floor area of such space, with a minimum of 2 dm^3/s.
2. A lift shaft shall have a ventilation facility with a capacity, in accordance with NEN 8087, of at least 3.2 dm^3/s per m^2 of the floor area of such lift shaft.
3. A storage space for household waste with a floor area exceeding 1.5 m^2 shall have a non-lockable ventilation facility with a capacity, determined in accordance with NEN 8087, of at least 10 dm^3/s per m^2 of floor area of such space, with a maximum of 10 dm^3/s.
4. A parking space for motor vehicles shall have a ventilation facility with a capacity, in accordance with NEN 8087, of at least 3 dm^3/s per m^2 of the floor area of such space.
5. A tunnel shall have a ventilation facility of sufficient capacity, depending on its intended use and tunnel length.
6. In a road tunnel pipe with a tunnel pipe length exceeding 500 m, the ventilation facility as referred to in the fifth paragraph shall be mechanical.

Article 3.40 Air quality

1. Fresh air shall be fed into a shaft for a fire-fighting lift directly from outdoors or from the outside via the lift machine space. Drainage of indoor air from such a space to the ambient air shall be either direct or via the lift machine space.
2. Fresh air shall be fed into a storage space for household waste directly from outdoors. Drainage of indoor air from such a space shall take place directly outdoors.
3. In road tunnel pipes with a tunnel pipe length exceeding 250 m, the fresh air shall be fed directly from outdoors, and the indoor air shall be discharged directly outdoors.
4. At least 21 dm^3/s of the capacity of the indoor air drainage from a staying space with an installation location for a cooking appliance as referred to in Article 3.38(3) shall be directly outdoors.
5. Drainage of indoor air from a toilet space or bathroom space shall take place directly outdoors.

Section 3.7 Air drainage facility

Article 3.41 Guiding article

1. A proposed structure shall have a facility for rapid drainage of highly contaminated indoor air when necessary.
2. Where Table 3.41 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 3.14 does not mention a provision.

Table 3.41

functional use	applicable paragraphs					
	capacity			location of the opening	alteration	temporary structure
Article	3.42			3.43	3.44	3.45
Paragraph	1	2	3	*	*	*
1 Residential function:	1	2	-	*	*	*
2 Assembly function:						
a for child care:	1	2	3	*	*	*
b other assembly function	-	-	-	-	-	-
3 Detention function	-	-	-	-	-	-
4 Health care function	-	-	-	-		-
5 Industrial function	-	-	-	-	-	-
6 Office function	-	-	-	-	-	-
7 Temporary accommodation function	-	-	-	-	-	-
8 Educational function						
a for primary education	1	2	-	*	*	*
b other educational function	-	-	-	-	-	-
9 Sports function	-	-	-	-	-	-
10 Shop function	-	-	-	-	-	-
11 Other functional use	-	-	-	-	-	-
12 Structure other than a building:	-	-	-	-	-	-

Article 3.42 Capacity

1. A staying area shall have an air drainage facility with a capacity, as determined in accordance with NEN 1087, of at least 6 dm^3/s per m^2 of floor area. An exterior partition of such area shall have movable structural components which are designed for such capacity.
2. A staying space shall have an air drainage facility with a capacity, as determined in accordance with NEN 1087, of at least 3 dm^3/s per m^2 of the floor area of such space. An exterior partition of such space shall have movable structural components which are designed for such capacity. At least one of those movable structural components shall be a movable window.
3. Notwithstanding the first and second paragraphs, the aforementioned capacity may be achieved using a ventilation facility as referred to in Article 3.32.

Article 3.43 Location of the opening

An opening of an air drainage facility as referred to in Article 3.42(1) shall be located at a distance of at least 2 m from the plot boundary as measured perpendicular to the exterior partition of the functional unit. If the plot on which the functional unit is located is adjacent to a public highway, public water or public green area, the aforementioned distance shall be observed with respect to the centre of such road, water or green area.

Article 3.44 Alteration

Articles 3.42 and 3.43 shall apply accordingly to a partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in those Articles.

Article 3.45 Temporary structures

The construction of a temporary structure shall be subject to Articles 3.42 and 3.43.

Subsection 3.7.2 Existing structures

Article 3.46 Guiding article

1. An existing structure shall have a facility for rapid drainage of highly contaminated indoor air when necessary.
2. Where Table 3.46 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 3.46 does not mention a provision.

Table 3.46

functional use	applicable paragraphs		
	capacity		
Article	3.47		
Paragraph	1	2	3
1 Residential function:	1	2	3
2 Assembly function:			
a for child care:	1	-	3
b other assembly function	-	-	-
All functional uses not listed above	-	-	-

Article 3.47 Capacity

1. A staying space shall have an air drainage facility with a capacity, as determined in accordance with NEN 8087, of at least 3 dm^3/s per m^2 of the floor area of such space.
2. The first paragraph shall not apply to a common staying space.
3. The capacity referred to in the first paragraph may be achieved using a ventilation facility as referred to in Article 3.38.

Section 3.8 Supply of combustion air and drainage of flue gas

Subsection 3.8.1 New structures

Article 3.48 Guiding article

1. A proposed structure with an installation location for a heater shall have facilities for supply of combustion air and drainage of flue gas such that the occurrence of an unhealthy quality of indoor air is prevented.

2. Where Table 3.48 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 3.48 does not mention a provision.

Table 3.48

functional use	applicable paragraphs															
	presence	capacity						location of the opening			thermal comfort	smoke permeability	direction of flow		alteration	temporary structure
Article	3.49	3.49a						3.50			3.51	3.52	3.53		3.54	3.55
Paragraph	*	1	2	3	4	5	6	1	2	3	*	*	1	2	*	*
1 Residential function:	*	1	2	3	4	5	6	1	2	3	*	*	1	2	*	*
2 Assembly function:	*	1	2	3	4	5	6	1	2	3	*	*	1	2	*	*
3 Detention function	*	1	2	3	4	5	6	1	2	3	*	*	1	2	*	*
4 Health care function	*	1	2	3	4	5	6	1	2	3	*	*	1	2	*	*
5 Industrial function	*	1	2	3	4	5	6	1	2	3	-	*	1	2	*	*
6 Office function	*	1	2	3	4	5	6	1	2	3	*	*	1	2	*	*
7 Temporary accommodation function	*	1	2	3	4	5	6	1	2	3	*	*	1	2	*	*
8 Educational function	*	1	2	3	4	5	6	1	2	3	*	*	1	2	*	*
9 Sports function	*	1	2	3	4	5	6	1	2	3	*	*	1	2	*	*
10 Shop function	*	1	2	3	4	5	6	1	2	3	*	*	1	2	*	*
11 Other functional use	*	-	2	3	4	5	6	-	2	3	-	*	1	2	*	*
12 Structure other than a building:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Article 3.49 Presence

A space with an installation location for a heater shall have facilities for supply of combustion air and drainage of flue gas. An installation location for a cooking appliance with a nominal power not exceeding 15 kW, located in a staying space, shall not be taken into account.

Article 3.49a Capacity

1. A facility for supply of combustion air or a facility for drainage of flue gas for an installation location for a heater with a nominal power exceeding 130 kW shall have sufficient capacity to ensure effective combustion.
2. A facility for supply of combustion air to a heater with a nominal power not exceeding 130 kW shall have at least the required capacity given in Table 3.49.1, determined in accordance with NEN 1087.

Table 3.49.1

heater		required capacity of the supply of combustion air per kW of nominal power
	fuel	[m^3/s]
closed fire with draught limiter	natural gas/butane/propane	$0.78.\ 10^{-3}$
open fire (block fire device, type II)	natural gas	$3.35.\ 10^{-3}$
closed fire, with fan, without draught limiter	natural gas/butane/propane	$0.38.\ 10^{-3}$
closed fire	oil	$0.32.\ 10^{-3}$
closed fire	coal	$0.52.\ 10^{-3}$
open fire, solid fuel (fireplace).	solid fuel	$2.8.\ 10^{-3}$

3. A facility for drainage of flue gas from an installation location for a heater with a nominal power not exceeding 130 kW shall have a capacity, determined in accordance with NEN 2757, which is not less than the normal volume flow rate of the flue gas as determined using formula 3.49a.

Formula 3.49a

$qvn = B \times 0.27 \times 10^{-3} \times n'$

where:

q_{vn} = the normal volume flow rate in m^3/s;
B = the nominal power of the device, in kW;
n' is the "estimated dilution factor of flue gas" as given in Table 3.49.2

Table 3.49.2

heater		**estimated dilution factor of flue gas (n')**	
		drainage without fan	drainage with fan
	fuel	[-]	[-]
closed fire, without fan, with draught limiter	natural gas/butane/propane	3.0	5.0
open fire, without fan (block fire device type II)	natural gas	12.5	12.5
closed fire, without fan	oil (HBO I)	1.3	2.6
closed fire, without fan	coal, wood	2.0	4.0
open fire, without fan	solid fuel	10.0	10.0

4. Notwithstanding the third paragraph, a facility for drainage of flue gas from an installation location for an open flue heater with a fan and a nominal power not exceeding 130 kW shall have a capacity, determined in accordance with NEN 2757, which is not less than the volume flow rate produced by the fan of the device.
5. A combined air supply and exhaust gas drainage system shall have a positive differential pressure between the drainage channel for flue gas and the supply channel for combustion air, determined in accordance with NEN 2757.
6. A combined facility for drainage of flue gas and indoor air shall have a capacity, determined in accordance with NEN 2757, which is equal to the highest value applicable to any individual facility.

Article 3.50 Location of the opening

1. In case of supply of combustion air via a staying area, the dilution factor of the emission of a drainage device for ventilation or a drainage device for flue gas at the location of an inlet for combustion air located in the exterior partition, as determined in accordance with NEN 1087, shall not exceed the value given in Table 3.33. Drainage devices and obstacles located on another plot shall not be taken into account when determining the dilution factor.
2. An inlet of a supply facility for combustion air and an outlet of a drainage device for flue gas shall be located at a distance of at least 2 m from the plot boundary as measured perpendicular to the exterior partition of the functional unit. The above shall not apply to an inlet or outlet located in a roof. If the plot on which the functional unit is located is adjacent to a public highway, public water or public green area, the aforementioned distance shall be observed with respect to the centre of such road, water or green area.
3. An inlet of a supply facility for combustion air, and an outlet of a drainage device for flue gas, which is located above a structural component or the adjacent grounds, shall be at a height of at least 0.3 m above the upper edge of such

structural component or above ground level to prevent whole or partial blockage of the opening through accumulated dirt or snow.

Article 3.51 Thermal comfort

The air movement caused by the supply of combustion air in the living zone of a staying area shall have an air speed, determined in accordance with NEN 1087, which does not exceed 0.2 m/s.

Article 3.52 Smoke permeability

To prevent the spread of unhealthy components of the smoke, the interior surface of a drainage device for flue gas shall have a permeability, determined in accordance with NEN 2757, which does not exceed the value given in Table 3.52.

Table 3.52

drainage device for smoke	permitted permeability
A pressure relief facility as referred to in NEN 2757	0.006×10^{-3} m^3/s per m^2 of interior surface, measured at a differential pressure of 200 Pa
A underpressure relief facility as referred to in NEN 2757	3×10^{-3} m^3/s per m^2 of interior surface, measured at a differential pressure of 40 Pa

Article 3.53 Direction of flow

1. The direction of air flow for the supply of combustion air, as determined in accordance with NEN 1087, shall move from the facility for supply of combustion air to an installation location of a heater. Structures and equivalent obstacles located on another plot shall not be taken into account when determining the direction of flow.
2. Flue gas shall flow from the installation location of a heater to the outlet of the facility for smoke drainage, as determined in accordance with NEN 2757. Structures and equivalent obstacles located on another plot shall not be taken into account when determining the direction of flow.

Article 3.54 Alteration

Articles 3.50 to 3.52 shall apply accordingly to a partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in those Articles.

Article 3.55 Temporary structures

The construction of a temporary structure shall be subject to Articles 3.49 to 3.53.

Subsection 3.8.2. Existing structures

Article 3.56 Guiding article

1. An existing structure with an installation location for a heater shall have facilities for supply of combustion air and drainage of flue gas such that the occurrence of an unhealthy quality of indoor air is prevented.
2. Where Table 3.56 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 3.56 does not mention a provision.

Table 3.56

functional use	applicable paragraphs										
	presence	capacity						smoke permeability	direction of flow	
Article	3.57	3.57a						3.58	3.59	
Paragraph	*	1	2	3	4	5	6	*	1	2
12 Structure other than a building:	-	-	-	-	-	-	-	-	-	-
All functional uses not listed above	*	1	2	3	4	5	6	*	1	2

Article 3.57 Presence

A space with an installation location for a heater shall have facilities for supply of combustion air and drainage of flue gas. An installation location for a cooking appliance with a nominal power not exceeding 15 kW, located in a staying space, shall not be taken into account.

Article 3.57a Capacity

1. A facility for supply of combustion air or a facility for drainage of flue gas for an installation location for a heater with a nominal power exceeding 130 kW shall have sufficient capacity to ensure effective combustion.
2. A facility for supply of combustion air to a heater with a nominal power not exceeding 130 kW shall have at least the required capacity given in Table 3.49.1, determined in accordance with NEN 1087.
3. A facility for drainage of flue gas from an installation location for a heater with a nominal power not exceeding 130 kW shall have a capacity, determined in accordance with NEN 2757, which is not less than the normal volume flow rate of the flue gas as determined using Formula 3.49a.
4. Notwithstanding the third paragraph, a facility for drainage of flue gas from an installation location for an open flue heater with a fan and a nominal power not exceeding 130 kW shall have a capacity, determined in accordance with NEN 2757, which is not less than the volume flow rate produced by the fan of the device.
5. A combined air supply and exhaust gas drainage system shall have a positive differential pressure between the drainage channel for flue gas and the supply channel for combustion air, determined in accordance with NEN 2757.
6. A combined facility for drainage of flue gas and indoor air shall have a capacity, determined in accordance with NEN 2757, which is equal to the highest value applicable to any individual facility.

Article 3.58 Smoke permeability

To prevent the spread of noxious components of the smoke, the interior surface of a pressure relief facility for drainage of flue gas shall have a permeability, determined in accordance with NEN 8757, which does not exceed 0.006×10^{-3} m^3/s per m^2 at a differential pressure of 200 Pa.

Article 3.59 Direction of flow of flue gas

1. The direction of air flow for the supply of combustion air shall move from the facility for supply of combustion air to an installation location of a heater.

Structures and equivalent obstacles located on another plot shall not be taken into account when determining the direction of flow.

2. Flue gas shall flow from the installation location of a heater to the outlet of the facility for smoke drainage, as determined in accordance with NEN 8757. Structures and equivalent obstacles located on another plot shall not be taken into account when determining the direction of flow.

Section 3.9 Limiting the occurrence of noxious substances and ionising radiation

Subsection 3.9.1 New structures

Article 3.60 Guiding article

1. A proposed structure shall be such that the occurrence of unhealthy indoor air quality due to the presence of noxious substances and ionising radiation is limited.
2. Where Table 3.60 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 3.60

functional use	paragraphs of			
	ministerial regulation		alteration	temporary structure
Article	3.61		3.62	3.63
Paragraph	1	2	*	*
11 Other functional use	1	-	*	*
12 Structure other than a building:	1	-	*	*
All functional uses not listed above	1	2	*	*

Article 3.61 Ministerial regulation

1. Ministerial regulations may be enacted to lay down rules for the use in a structure of materials which could emit toxic or noxious substances or ionising radiation.
2. Ministerial regulations may be enacted to lay down rules for exterior partitions forming the boundary with the ground or crawl space, if such partition could affect the occurrence of unhealthy indoor air quality due to the presence of noxious substances and ionising radiation.

Article 3.62 Alteration

Article 3.61 shall apply accordingly to a partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in that Article.

Article 3.63 Temporary structures

The construction of a temporary structure shall be subject to Article 3.61.

Subsection 3.9.2 Existing structures

Article 3.64 Guiding article

1. An existing structure shall be such that the occurrence of unhealthy indoor air quality due to the presence of noxious substances is limited.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provision of this section.

Article 3.65 Ministerial regulation

Ministerial regulations may be enacted to lay down rules for the presence in a structure of materials which could emit toxic or noxious substances.

Section 3.10 Protection from rats and mice

Subsection 3.10.1 New structures

Article 3.66 Guiding article

1. A proposed structure shall be such that penetration by rats and mice is counteracted.
2. Where Table 3.66 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 3.66 does not mention a provision.

Table 3.66

functional use		applicable paragraphs						
		openings			screen			alteration
	Article	3.67			3.68			3.69
	Paragraph	1	2	3	1	2	3	*
1	Residential function:							
	a caravan	1	2	3	-	-	-	-
	b other residential function	1	2	3	1	2	3	*
2	Assembly function:	1	2	3	1	2	3	*
3	Detention function	1	2	3	1	2	3	*
4	Health care function	1	2	3	1	2	3	*
5	Industrial function	-	-	-	-	-	-	-
6	Office function	1	2	3	1	2	3	*
7	Temporary accommodation function							
	a in a temporary accommodation building	1	2	3	1	2	3	*
	b other temporary accommodation function	1	2	3	-	-	-	-
8	Educational function	1	2	3	1	2	3	*
9	Sports function	1	2	3	1	2	3	*
10	Shop function	1	2	3	1	2	3	*
11	Other functional use	-	-	-	-	-	-	-
12	Structure other than a building:	-	-	-	-	-	-	-

Article 3.67 Openings

1. An exterior partition shall not have openings wider than 0.01 m. The above shall not apply to a lockable opening or outlet of:
   a. a drainage device for ventilation;
   b. a drainage device for smoke, and
   c. a ventilation device in a drainage device for household waste.
2. Notwithstanding the first paragraph, a larger opening shall be permitted for nests or permanent resting or dwelling place for protected animal species under the Wildlife Protection Act [*Flora- en faunawet*].
3. The first paragraph shall apply accordingly to an interior partition which forms the boundary with a functional unit to which the first paragraph does not apply.

Article 3.68 Screen

1. A functional unit shall have a screen at the location of an exterior partition, reaching a depth of at least 0.6 m as measured from the adjacent grounds. Such screen shall not have openings wider than 0.01 m.
2. The first paragraph shall apply accordingly to an interior partition which forms the boundary with a functional unit to which the first paragraph does not apply.
3. The first and second paragraphs shall not apply to a partition of a services space, there is a screen as referred to in the first paragraph at the location of the internal partitions separating such space from other spaces of the functional unit.

Article 3.69 Alteration

Article 3.68 shall apply accordingly to a partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in that Article.

Subsection 3.10.2 Existing structures

Article 3.70 Guiding article

1. An existing structure shall be such that penetration by rats and mice is counteracted.
2. Where Table 3.70 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 3.70 does not mention a provision.

Table 3.70

functional use		applicable paragraphs	
		openings	
	Article	3.71	
	Paragraph	1	2
1	Residential function:	1	2
2	Assembly function:	1	2
3	Detention function	1	2
4	Health care function	1	2
5	Industrial function	-	-
6	Office function	1	2
7	Temporary accommodation function	1	2
8	Educational function	1	2
9	Sports function	1	2
10	Shop function	1	2
11	Other functional use	-	-
12	Structure other than a building:	-	-

Article 3.71 Openings

1. An exterior partition shall not have openings wider than 0.01 m. The above shall not apply to a lockable opening or outlet of:
   a. a drainage device for ventilation;
   b. a drainage device for smoke, and
   c. a ventilation device in a drainage device for wastewater and faecal matter.
2. Notwithstanding the first paragraph, a larger opening shall be permitted for nests or permanent resting or dwelling place for protected animal species under the Wildlife Protection Act [*Flora- en faunawet*].

Section 3.11 Daylight

Subsection 3.11.1 New structures

Article 3.72 Guiding article

1. A proposed structure shall be such that it is reached by sufficient amounts of daylight.
2. Where Table 3.72 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 3.72 does not mention a provision.

Table 3.72

functional use	applicable paragraphs									limits	
	daylight area								alteration	daylight area	
Article	3.73								3.74	3.73	
Paragraph	1	2	3	4	5	6	7	8	*	1	2
										[%]	[m^2]
1 Residential function:	1	2	3	-	-	-	-	-	*	10	0.5
2 Assembly function:											
a for child care:	1	2	3	4	5	-	-	-	*	5	0.5
b other assembly function	-	-	-	-	-	-	-	-	-	-	-
3 Detention function	1	2	3	4	-	6	-	-	*	3	0.15
4 Health care function	1	2	3	4	-	-	7	-	*	5	0.5
5 Industrial function	-	-	-	-	-	-	-	-	-	-	-
6 Office function	1	2	3	4	-	-	-	-	*	2.5	0.5
7 Temporary accommodation function	-	-	-	-	-	-	-	-	-	-	-
8 Educational function	1	2	3	4	-	-	-	8	*	5	0.5
9 Sports function	-	-	-	-	-	-	-	-	-	-	-
10 Shop function	-	-	-	-	-	-	-	-	-	-	-
11 Other functional use	-	-	-	-	-	-	-	-	-	-	-
12 Structure other than a building:	-	-	-	-	-	-	-	-	-	-	-

Article 3.73 Daylight area

1. A staying area shall have an equivalent daylight area in m^2, determined in accordance with NEN 2057, whose numerical value is not less than the numerical value of the proportion of the floor area of that staying area in m^2 as given in Table 3.72.
2. A staying space shall have an equivalent daylight area, determined in accordance with NEN 2057, which is not less than the area given in Table 3.72.
3. When determining the equivalent daylight area as referred to in the first and second paragraphs:
   a. structures and equivalent obstacles located on another plot shall not be taken into account;
   b. daylight openings in an exterior partition located at a distance of less than 2 m from the plot boundary, as measured perpendicular to the projection surface of such openings, shall not be taken into account; moreover, if the plot on which the functional unit is located is adjacent to a public highway,

public water or public green area, then the aforementioned distance shall be observed with respect to the centre of such road, water or green area, and

c. the assumed obstruction angle a, as referred to in NEN 2057, for each individual segment shall not be less than 25°.

4. The first and second paragraphs shall not apply to structures or parts thereof intended for national defence or civil protection.
5. The first and second paragraphs shall not apply to a bed area not also intended for playing activities.
6. Notwithstanding the first and second paragraphs, in a cell or other space as referred to in the Police Cell Complex Regulation, observability of the day and night cycle shall be considered sufficient.
7. The first and second paragraphs shall apply exclusively to a bed area.
8. When determining the floor area of a staying area as referred to in the first paragraph, any staying space with a floor area exceeding 150 m^2 shall not be taken into account. Such a staying space shall not be subject to the second paragraph.

Article 3.74 Alteration

Article 3.73 shall apply accordingly to a partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in that Article.

Subsection 3.11.2 Existing structures

Article 3.75 Guiding article

1. An existing structure shall be such that it is reached by sufficient amounts of daylight.
2. Where Table 3.75 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 3.75 does not mention a provision.

Table 3.75

functional use	applicable paragraphs							limits
	daylight area							daylight area
Article	3.76							3.76
Paragraph	1	2	3	4	5	6	7	1 [m^2]
1 Residential function:	1	2	-	-	-	-	-	0.5
2 Assembly function:								
a child care	1	2	3	4	-	-	-	0.5
b other assembly function	-	-	-	-	-	-	-	-
3 Detention function	1	2	3	-	5	-	-	0.15
4 Health care function	1	2	3	-	-	6	-	0.5
5 Industrial function	-	-	-	-	-	-	-	-
6 Office function	1	2	3	-	-	-	-	0.5
7 Temporary accommodation function	-	-	-	-	-	-	-	-
8 Educational function	1	2	3	-	-	-	7	0.5
9 Sports function	-	-	-	-	-	-	-	-
10 Shop function	-	-	-	-	-	-	-	-
11 Other functional use	-	-	-	-	-	-	-	-
12 Structure other than a building:	-	-	-	-	-	-	-	-

Article 3.76 Daylight area

1. A staying space shall have an equivalent daylight area, determined in accordance with NEN 2057, which is not less than the area given in Table 3.75.
2. When determining the equivalent daylight area as referred to in the first paragraph:
   a. structures and equivalent obstacles located on another plot shall not be taken into account;
   b. daylight openings in an exterior partition located at a distance of less than 2 m from the plot boundary, as measured perpendicular to the projection surface of such openings, shall not be taken into account; moreover, if the plot on which the functional unit is located is adjacent to a public highway, public water or public green area, then the aforementioned distance shall be observed with respect to the centre of such road, water or green area, and
   c. the assumed obstruction angle α, as referred to in NEN 2057, for each individual segment shall not be less than 25°.
3. The first second paragraph shall not apply to structures or parts thereof intended for national defence or civil protection.
4. The first paragraph shall not apply to a bed area.
5. Notwithstanding the first and second paragraphs, in a cell or other space as referred to in the Police Cell Complex Regulation, observability of the day and night cycle shall be considered sufficient.
6. The first paragraph shall apply exclusively to a bed area.
7. The first paragraph shall not apply to a staying space with a floor area exceeding 150 m^2.

Chapter 4 Technical construction requirements to ensure usability

Section 4.1 Staying area and staying space

Subsection 4.1.1 New structures

Article 4.1 Guiding article

1. A proposed structure shall have a staying area, where the typical activities for the functional unit can take place in one or more staying spaces.
2. Where Table 4.1 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 4.1 does not mention a provision.

Table 4.1

functional use	applicable paragraphs									limits		
	presence		dimensions of staying area and staying space						alteration	dimensions of staying area and staying space		
Article	4.2		4.3						4.4	4.3		
Paragraph	1	2	1	2	3	4	5	6	*	1	2	6
										[m^2]	[m]	[m]
1 Residential function:												
a caravan	1	2	1	2	3	4	-	6	*	5	1.8	2.2
b other residential function	1	2	1	2	3	4	-	6	*	5	1.8	2.6
2 Assembly function:	-	2	1	2	-	-	-	6	*	5	1.8	2.6
3 Detention function	-	2	1	2	-	-	-	6	*	4	1.8	2.5
4 Health care function	-	2	1	2	-	-	-	6	*	5	1.8	2.6
5 Industrial function	-	-	-	-	-	-	-	-	-	-	-	-
6 Office function	-	2	1	2	-	-	-	6	*	5	1.8	2.6
7 Temporary accommodation function												
a in a temporary accommodation building	-	2	1	2	-	-	5	6	*	4	1.5	2.6
b other temporary accommodation function	-	2	1	2	-	-	5	6	*	4	1.5	2.1
8 Educational function	-	2	1	2	-	-	-	6	*	5	1.8	2.6
9 Sports function	-	2	1	2	-	-	-	6	*	5	1.8	2.6
10 Shop function	-	2	1	2	-	-	-	6	*	5	1.8	2.6
11 Other functional use	-	-	-	-	-	-	-	-	-	-	-	-
12 Structure other than a building:	-	-	-	-	-	-	-	-	-	-	-	-

Article 4.2 Presence

1. A residential function shall have non-common staying areas with a floor area of at least 18 m^2.
2. At least 55 % of the usable area of a functional unit shall consist of staying areas.

Article 4.3 Dimensions of staying area and staying space

1. A staying area shall have at least the floor area given in Table 4.1.
2. A staying area shall have at least the width given in Table 4.1.
3. A staying space shall have a width of at least 1.8 m.

4. At least one staying area shall contain a staying space with a floor area of at least 11 m^2 and a width of at least 3 m.
5. Contrary to the first and second paragraphs, a staying area in an accessible sector shall have a staying space with a floor area of at least 14 m^2 and a width of at least 3.2 m.
6. A staying area or staying space have at least the height above the floor as given in Table 4.1.

Article 4.4 Alteration

Articles 4.2 and 4.3 shall apply accordingly to a full or partial renovation, alteration or enlargement of a structure, assuming—for width and floor area—not the requirement level given in those Articles but the current regulatory level of requirements, and—for height—a value of 2.1 m.

Subsection 4.1.2 Existing structures

Article 4.5 Guiding article

1. An existing structure shall have a staying area, where the typical activities for the functional unit can take place in one or more staying spaces.
2. Where Table 4.5 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 4.5 does not mention a provision.

Table 4.5

	functional use	applicable paragraphs		
		presence	dimensions of staying area and staying space	
	Article	4.6	4.7	
	Paragraph	*	1	2
1	Residential function:	*	1	2
2	Assembly function:	-	1	-
3	Detention function	-	1	-
4	Health care function	-	1	-
5	Industrial function	-	1	-
6	Office function	-	1	-
7	Temporary accommodation function	-	1	-
8	Educational function	-	1	-
9	Sports function	-	1	-
10	Shop function	-	1	-
11	Other functional use	-	-	-
12	Structure other than a building:	-	-	-

Article 4.6 Presence

A residential function shall have non-common staying areas with a floor area of at least 10 m^2.

Article 4.7 Dimensions of staying area and staying space

1. A staying area or staying space have at least the height of at least 2.1 m above the floor.
2. At least one staying area shall contain a staying space with a floor area of at least 7.5 m^2 and a width of at least 2.4 m.

Section 4.2 Toilet space

Subsection 4.2.1 New structures

Article 4.8 Guiding article

1. A proposed structure shall have a sufficient number of toilet spaces.
2. Where Table 4.8 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 4.8 does not mention a provision.

Table 4.8

	functional use	applicable paragraphs										limit	
		presence					accessibility	dimensions				presence	dimensions
	Article	4.9					4.10	4.11				4.9	4.11
	Paragraph	1	2	3	4	5	*	1	2	3	4	*	1	3
1	Residential function:												[m]	[m]
	a for care with a UA > 500 m^2	1	2	-	-	-	-	1	2	3	-	*	1	2.3
	b caravan	1	2	-	-	-	-	1	-	3	-	*	1	2.1
	c other residential function	1	2	-	-	-	-	1	-	3	-	*	1	2.3
2	Assembly function:													
	a for child care:	1	-	3	4	-	-	1	-	3	-	*	2	2.3
	b other assembly function	1	-	-	4	-	*	1	2	3	-	*	2	2.3
3	Detention function	1	-	3	4	-	-	1	2	3	4	*	2	2.3
4	Health care function	1	-	3	4	-	-	1	2	3	-	*	2	2.3
5	Industrial function													
	a light industrial function	-	-	-	-	-	-	-	-	-	-	-	-	-
	b other industrial function	1			4		-	1	2	3	-	*	2	2.3
6	Office function	1		3	4		-	1	2	3	-	*	2	2.3
7	Temporary accommodation function													
	a in a temporary accommodation building	1	-	-	-	5	-	1	2	3	-	*	1	2.3
	b other temporary accommodation function	1	-	-	-	5	-	1	2	3	-	*	1	2.1
8	Educational function	1	-	3	4	-	-	1	2	3	-	*	2	2.3
9	Sports function	1	-	-	4	-	-	1	2	3	-	*	2	2.3
10	Shop function	1	-	-	-	-	-	1	2	3	-	*	1	2.3
11	Other functional use	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Structure other than a building:	-	-	-	-	-	-	-	-	-	-	-	-	-

Article 4.9 Presence

1. A functional unit shall have at least the number of toilet spaces given in Table 4.8.
2. No more than five residential functions shall depend on a single toilet space. Only residential functions or ancillary functions thereof shall depend on such toilet space.
3. No more than 30 persons depend on a single toilet space.
4. Notwithstanding the first paragraph, one toilet space shall be deemed sufficient if no more than 15 persons depend on such toilet space.
5. No more than six temporary accommodation spaces shall depend on a single toilet space.

Article 4.10 Accessibility

A toilet space shall be not directly accessible from a staying space of an assembly function for alcohol use.

Article 4.11 Dimensions

1. A toilet space as referred to in Article 4.8 shall have a floor area of at least 0.9 m x 1.2 m.
2. Notwithstanding the first paragraph, an integrally accessible toilet space shall have a floor area of at least 1.65 m x 2.2 m.
3. A floor area as referred to in the first and second paragraphs shall have at least the height given in Table 4.8 above such floor.

4. The first paragraph shall not apply to a toilet space in a cell.

Article 4.12 Alteration

Articles 4.9 and 4.11 shall apply accordingly to a full or partial renovation, alteration or enlargement of a structure, assuming—for width and floor area—not the requirement level given in those Articles but the current regulatory level of requirements, and—for height—a value of 2 m.

Subsection 4.2.2 Existing structures

Article 4.13 Guiding article

1. An existing structure shall have a sufficient number of toilet spaces.
2. Where Table 4.13 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 4.13 does not mention a provision.

Table 4.13

functional use	applicable paragraphs							limit
	presence				accessibility	dimensions		presence
Article	4.14				4.15	4.16		4.14
Paragraph	1	2	3	4	*	1	2	1
								[m]
1 Residential function:	1	-	-	-	-	1	-	1
2 Assembly function:								
a for child care:	1	-	3	4	-	1	-	2
b for alcohol use	1	-	-	4	*	1	-	2
c other assembly function	1	-	-	4	-	1	-	2
3 Detention function	1	-	3	4	-	1	2	2
4 Health care function	1	-	3	4	-	1	-	2
5 Industrial function								
a light industrial function	-	-	-	-	-	-	-	-
b other industrial function	1	-	3	4	-	1	-	2
6 Office function	1	-	3	4	-	1	-	2
7 Temporary accommodation function	1	2	-	-	-	1	-	1
8 Educational function	1	-	3	4	-	1	-	2
9 Sports function	1	-	3	4	-	1	-	2
10 Shop function	1	-	-	-	-	1	-	1
11 Other functional use	-	-	-	-	-	-	-	-
12 Structure other than a building:	-	-	-	-	-	-	-	-

Article 4.14 Presence

1. A functional unit shall have at least the number of toilet spaces given in Table 4.13.
2. No more than 9 temporary accommodation spaces shall depend on a single toilet space.
3. No more than 45 persons shall depend on a single toilet space.
4. Notwithstanding the first paragraph, one toilet space shall be deemed sufficient if no more than 25 persons depend on such toilet space.

Article 4.15 Accessibility

A toilet space shall be not directly accessible from a staying space of an assembly function for alcohol use.

Article 4.16 Dimensions

1. A toilet space as referred to in Article 4.14 shall have a floor area of at least 0.64 m^2, with a width of at least 0.6 m and a height of at least 2 m above the floor.
2. The first paragraph shall not apply to a toilet space in a cell.

Section 4.3 Bathroom space, new structures

Article 4.17 Guiding article

1. A proposed structure shall have a sufficient number of bathroom spaces.
2. Where Table 4.17 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 4.17 does not mention a provision.

Table 4.17

functional use		applicable paragraphs							limits
		presence	dimensions					alteration	dimensions
	Article	4.18	4.19					4.20	4.19
	Paragraph	*	1	2	3	4	5	6	*	5
1	Residential function:									[m]
	a caravan	*	1	2	-	-	5	-	*	2.1
	b for care with a UA > 500 m^2	*	1	2	3	4	5	-	*	2.3
	c other residential function	*	1	2	-	-	5	-	*	2.3
2	Assembly function:	-	-	-	-	-	-	-	-	-
3	Detention function	*	1	2	3	4	5	6	*	2.3
4	Health care function									
	a with bed area	*	-	-	3	4	5	-	*	2.3
	b other health care function	-	-	-	-	-	-	-	-	-
5	Industrial function	-	-	-	-	-	-	-	-	-
6	Office function	-	-	-	-	-	-	-	-	-
7	Temporary accommodation function									
	a in a temporary accommodation building	*	-	-	3	4	5	-	*	2.3
	b other temporary accommodation function	*	-	-	3	4	5	-	*	2.1
8	Educational function	-	-	-	-	-	-	-	-	-
9	Sports function	-	-	-	-	-	-	-	-	-
10	Shop function	-	-	-	-	-	-	-	-	-
11	Other functional use	-	-	-	-	-	-	-	-	-
12	Structure other than a building:	-	-	-	-	-	-	-	-	-

Article 4.18 Presence

A functional unit shall have at least one bathroom space.

Article 4.19 Dimensions

1. A bathroom space as referred to in Article 4.18 shall have a floor area of at least 1.6 m^2 and a width of at least 0.8 m.
2. A bathroom space as referred to in Article 4.18 which has been combined with a toilet space as referred to in Article 4.9 shall have a floor area of at least 2.2 m^2 and a width of at least 0.9 m.
3. An integrally accessible bathroom space shall have a floor area of at least 1.6 m x 1.8 m.
4. An integrally accessible bathroom space which has been combined with a toilet space shall have a floor area of at least 2.2 m x 2.2 m.
5. A floor area as referred to in the first to fourth paragraphs shall have at least the height given in Table 4.17 above such floor.
6. The first and second paragraphs shall not apply to a bathroom space in a cell.

Article 4.20 Alteration

Articles 4.18 and 4.19 shall apply accordingly to a partial renovation, alteration or enlargement of a structure, assuming—for width and floor area—not the requirement level given in those Articles but the current regulatory level of requirements, and—for height—a value of 2 m.

Section 4.4 Reachability and accessibility, new structures

Article 4.21 Guiding article

1. A proposed structure shall have sufficiently reachable and accessible spaces.
2. Where Table 4.21 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 4.21 does not mention a provision.

Table 4.21

functional use	applicable paragraphs																								limits		
	free passage	free passage							presence of accessible sector				integrally accessible toilet and bathroom space					reachability of accessible sector			height gaps					dimensions of lift cage			alteration	free passage	accessible sector	integrally accessible toilet and bathroom
Article	4.22	4.23							4.24				4.25					4.26			4.27					4.28			4.29	4.22 and 4.23	4.24	4.25
Paragraph	1	2	1	2	3	4	5	6	1	2	3	4	1	2	3	4	5	1	2	3	1	2	3	4	5	1	2	3	*	1	3	2
1 Residential function:																														[m]	[%]	[m]
a caravan	1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1	-	-
b for care with a UA > 500 m^2	1	2	1	2	3	4	5	6	1	2	-	-	-	2	-	4	5	1	2	3	1	2	3	4	5	1	2	3	*	2.3	-	-
c other residential function	1	2	1	2	3	4	5	6	1	-	-	-	-	-	-	-	-	1	2	3	1	2	3	4	5	1	2	3	*	2.3	-	-
2 Assembly function:																																
a for alcohol use	1	2	1	-	-	-	-	6	-	-	3	4	1	-	-	-	-	1	-	-	1	-	-	-	-	1	-	-	*	2.3	40	-
b other assembly function	1	2	1	-	-	-	-	6	-	-	3	-	1	-	-	-	-	1	-	-	1	-	-	-	-	1	-	-	*	2.3	40	-
3 Detention function	1	2	1	2	-	-	-	6	-	-	3	-	1	2	-	4	5	1	-	-	1	-	-	-	-	1	-	-	*	2.3	40	10
4 Health care function	1	2	1	-	-	-	-	6	-	-	3	-	1	2	3		5	1	-	-	1	-	-	-	-	1	-	-	*	2.3	40	10
5 Industrial function																																
a light industrial function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b other industrial function	1	2	1	-	-	-	-	6	-	-	3	-	1	-	-	-	-	1	-	-	1	-	-	-	-	1	-	-	*	2.3	40	-
6 Office function	1	2	1	-	-	-	-	6	-	-	3	-	1	2	-	-	-	1	-	-	1	-	-	-	-	1	-	-	*	2.3	40	10
7 Temporary accommodation function																																
a in a temporary accommodation building	1	2	1	-	-	-	-	6	-	-	3	-	1	-	-	4	5	1	-	-	1	-	-	-	-	1	-	-	*	2.3	40	-
b other temporary accommodation	1	2	1	-	-	-	-	6	-	-	3	-	1	-	-	4	5	1	-	-	1	-	-	-	-	1	-	-	*	2.1	40	-

	function																																
8	Educational function	1	2	1	-	-	-	-	6	-	-	3	-	1	2	-	-	-	1	-	-	1	-	-	-	-	1	-	-	*	2.3	100	35
9	Sports function	1	2	1	-	-	-	-	6	-	-	3	-	1	-	-	-	-	1	-	-	1	-	-	-	-	1	-	-	*	2.3	40	-
10	Shop function	1	2	1	-	-	-	-	6	-	-	3	-	1	-	-	-	-	1	-	-	1	-	-	-	-	1	-	-	*	2.3	40	-
11	Other functional use	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Structure other than a building:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Article 4.22 Free passage

1. A passageway shall have an available width of at least 0.85 m and a headroom of at least the value given in Table 4.21. This applies to a passageway to:
   a. a staying area;
   b. a staying space;
   c. a toilet space as referred to in Articles 4.9 and 4.25;
   d. a bathroom space as referred to in Articles 4.18 and 4.25;
   e. a storage space as referred to in Article 4.31;
   f. an outdoor space as referred to in Article 4.35, and
   g. a space intended to reach a lift.

   The same applies to a passageway on a route from the adjacent grounds to a space as referred to in this paragraph.
2. A lift entrance shall have an available width of at least 0.85 m and a height of 2.3 m as measured between the parts of the load-bearing structure.

Article 4.23 Free passage in circulation route

1. A circulation route which starts at a passageway as referred to in Article 4.22 shall pass through a space with an available width of at least 0.85 m and at a headroom of at least the value given in Table 4.21. The above shall not apply where the circulation route passes over a staircase.
2. If the space referred to in the first paragraph is a common circulation space, the available width shall be at least 1.2 m. The above shall not apply where the circulation route passes over a staircase.
3. An entrance of a residential building as referred to in Article 4.27 shall give access to a common circulation space which has a free passage with an available width of at least 1.5 m over a length of at least 1.5 m from such entrance.
4. A passageway of a lift shaft shall be adjacent to a space with a floor area of at least 1.5 m x 1.5 m.
5. In addition to the second paragraph, a common circulation space shall have a free passage with a width of at least 1.5 m, over a length of 1.5 m. The above shall not apply if a wheelchair user can reach the adjacent grounds from such circulation space without turning.
6. If the space referred to in the first paragraph is located within an accessible sector, the available width shall be at least 1.2 m.

Article 4.24 Presence of accessible sector

1. A residential building shall have a common accessible sector if:
   a. any floor of any staying area within the residential building is higher than 12.5 m above the terrain height; or
   b. the residential building has usable areas of more than 3 500 m^2 located at more than 1.5 m above the terrain height.
2. A care-related residential function shall contain at least one staying area in an accessible sector.
3. If the usable area of a functional unit, added to the total usable area of other functional units, located in the same building, which are governed by the present

provision, is more than 400 m^2, then the proportion of staying areas of the functional unit located within an accessible sector shall constitute at least the proportion of total floor area as given in Table 4.21.
4. An assembly function for alcohol use with a usable area exceeding 150 m^2 shall have an accessible sector.

Article 4.25 Integrally accessible toilet and bathroom space

1. A functional unit with an accessible sector as referred to in Article 4.24 shall have at least one integrally accessible toilet space.
2. A functional unit with an accessible sector as referred to in Article 4.24 shall have a number of integrally accessible toilet spaces equal to at least the number of toilet spaces as referred to in Article 4.9 divided by the value given in Table 4.21 and then rounded to the nearest higher integer number.
3. A health care function with a bed area shall have at least one integrally accessible bathroom space per 500 m^2 of bed area in terms of floor area, rounded to the nearest higher integer number.
4. A functional unit with an accessible sector as referred to in Article 4.24 shall have a number of integrally accessible bathroom spaces equal to at least the numerical value of the number of bathroom spaces present, divided by 20 and rounded to the nearest higher integer number.
5. An integrally accessible bathroom space may be combined with an integrally accessible toilet space.

Article 4.26 Reachability of accessible sector

1. Any space located within an accessible sector shall be directly accessible from the adjacent grounds or via a circulation route passing exclusively through an accessible sector.
2. A circulation route as referred to in the first paragraph shall not pass through a non-common space of another functional unit.
3. The entrance of a residential function located within a residential building with a common accessible sector as referred to in Article 4.24(1) shall be adjacent to a common accessible sector.

Article 4.27 Height gaps

1. Height gaps of more than 0.02 m, as measured from the finished floor, shall be bridged by a lift or ramp in at least one route between points in an accessible sector and the adjacent grounds. The height gap between the entrance of the accessible sector located on such route and the adjacent grounds shall not exceed 1 m.
2. In residential buildings without an accessible sector, height gaps of more than 0.02 m, as measured from the finished floor, shall be bridged by a ramp in at least one route between the floor at the entrance and the adjacent grounds. The height gap between such entrance and the adjacent grounds shall not exceed 1 m.
3. For at least one entrance of a residential function, any height gap of more than 0.02 m, as measured from the finished floor, on the route between a non-common floor and the adjacent floor of a common circulation space or the adjacent grounds, shall be bridged by a ramp. The height gap between such entrance and the adjacent grounds or the common circulation space shall not exceed 1 m.

4. A height gap of more than 0.02 m, as measured from the finished floor, shall be bridged by a lift or ramp on at least one route between at least one exit of a residential function and a common outdoor space as referred to in Article 4.35(2).
5. A residential building where the floor at the entrance to a residential function is higher than 3 m above the terrain height shall have an installation location for a lift on every floor, with a lift cage of at least 1.5 m x 2.05 m.

Article 4.28 Dimensions of lift cage

1. The cage of a lift as referred to in Article 4.27(1) shall have a floor area of at least 1.05 m x 1.35 m.
2. Notwithstanding the first paragraph, the cage of a lift in a residential building with more than 6 residential functions shall have a floor area of at least 1.05 m x 2.05 m.
3. The walking distance between the entrance of any residential function and the entrance of at least one lift, as referred to in the first paragraph, shall be at most 90 m. If the second paragraph applies, the walking distance shall be determined as between the entrance to the residential function and the entrance to at least one lift as referred to in the second paragraph.

Article 4.29 Alteration

Articles 4.22 to 4.28 shall apply accordingly to a partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in those Articles.

Section 4.5 Outdoor storage, new structures

Article 4.30 Guiding article

1. A proposed residential function shall have a storage space to store bicycles protected from weather conditions.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 4.31 Presence, reachability, and dimensions

1. A residential function shall have, as an ancillary function, a non-common lockable storage space with a floor area of at least 5 m^2 and a width of at least 1.8 m and a height of at least 2.3 m above it.
2. Notwithstanding the first paragraph, the storage space may be common if the floor area of the staying areas of the residential function does not exceed 40 m^2 and the floor area of the storage space is at least 1.5 m^2 per residential function depending on such storage space.
3. A storage space as referred to in this Article shall be directly reachable from the public highway via the adjacent grounds or a common circulation space.

Article 4.32 Rain-resistant

The exterior partition of a storage space as referred to in Article 4.31 shall be rain-resistant as determined in accordance with NEN 2778.

Article 4.33 Alteration

Articles 4.31 and 4.32 shall apply accordingly to a full or partial renovation, alteration or enlargement of a residential function, taking the current regulatory level of requirements instead of the level given in those Articles.

Section 4.6 Outdoor space, new structures

Article 4.34 Guiding article

1. A proposed residential function shall have a directly reachable outdoor space.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 4.35 Presence, dimensions, and reachability

1. A residential function shall have a non-common outdoor space with a floor area of at least 4 m^2 and a width of at least 1.5 m, which is directly reachable from a non-common staying area of such residential function.
2. Notwithstanding the first paragraph, the outdoor space may be common if the floor area of the staying areas of the residential function does not exceed 40 m^2 and the floor area of the outdoor space is at least 1 m^2 per residential function depending on such outdoor space, with a minimum of 4 m^2, and a width of at least 1.3 m. The outdoor space shall be reachable directly from the home or through common spaces.

Article 4.36 Alteration

Article 4.35 shall apply accordingly to a partial renovation, alteration or enlargement of a residential function, taking the current regulatory level of requirements instead of the level given in that Article.

Section 4.7 Installation locations

Subsection 4.7.1 New structures

Article 4.37 Guiding article

1. A proposed structure shall have installation locations for a kitchen sink unit, a cooking appliance, a heater, and a water heater.
2. Where Table 4.37 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 4.37 does not mention a provision.

Table 4.37

functional use	applicable paragraphs						
	presence				dimensions		alteration
Article	4.38				4.39		4.40
Paragraph	1	2	3	4	1	2	*
1 Residential function:	1	2	3	-	1	2	*
2 Assembly function:							
a for alcohol use	-	2	-	4	-	-	*
b other assembly function	-	2	-	-	-	-	*
3 Detention function	-	2	-	-	-	-	*
4 Health care function	-	2	3	-	-	-	*
5 Industrial function	-	-	-	-	-	-	-
6 Office function	-	2	-	-	-	-	*
7 Temporary accommodation function							
a in a temporary accommodation building	-	2	-	-	-	-	*
b other temporary accommodation function	-	-	-	-	-	-	-
8 Educational function	-	2	-	-	-	-	*
9 Sports function	-	2	-	-	-	-	*
10 Shop function	-	2	-	-	-	-	*
11 Other functional use	-	-	-	-	-	-	-
12 Structure other than a building:	-	-	-	-	-	-	-

Article 4.38 Presence

1. A residential function shall have an installation location for a kitchen sink unit and an installation location for a cooking appliance in at least one staying area.
2. A functional unit shall have an installation location for a heater, whose dimensions are adapted to the device installed. The above shall not apply if the functional unit is connected to a public heating supply.
3. A functional unit shall have an installation location for a water heater, whose dimensions are adapted to the installed device. The above shall not apply if the functional unit is connected to a public hot-water supply.
4. An assembly function for alcohol use shall have an installation location for a kitchen sink unit in at least one staying area.

Article 4.39 Dimensions

1. An installation location for a kitchen sink unit as referred to in Article 4.38(1) shall have a floor area of at least 1.5 m x 0.6 m.
2. An installation location for a cooking appliance as referred to in Article 4.38(1) shall have a floor area of at least 0.6 m x 0.6 m.

Article 4.40 Alteration

Articles 4.38 and 4.39 shall apply accordingly to a partial renovation, alteration or enlargement of a structure, taking the current regulatory level of requirements instead of the level given in those Articles.

Subsection 4.7.2 Existing structures

Article 4.41 Guiding article

1. An existing structure shall have installation locations for a kitchen sink unit and a cooking appliance.

2. Where Table 4.41 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 4.41 does not mention a provision.

Table 4.41

functional use	applicable paragraphs			
	presence		dimensions	
Article	4.42		4.43	
Paragraph	1	2	1	2
1 Residential function:	1	-	1	2
2 Assembly function:				
a for alcohol use	-	2	-	-
b other assembly function	-	-	-	-
All functional uses not listed above	-	-	-	-

Article 4.42 Presence

1. A residential function shall have an installation location for a kitchen sink unit and an installation location for a cooking appliance located in an enclosed space.
2. An assembly function for alcohol use shall have an installation location for a kitchen sink unit in at least one staying area.

Article 4.43 Dimensions

1. An installation location for a kitchen sink unit as referred to in Article 4.42(1) shall have a floor area of at least 0.7 m x 0.4 m.
2. An installation location for a cooking appliance as referred to in Article 4.42(1) shall have a floor area of at least 0.4 m x 0.4 m.

Chapter 5 Technical construction requirements to ensure energy efficiency and environmental protection, new structures

Section 5.1 Energy efficiency, new structures

Article 5.1 Guiding article

1. A proposed structure shall be energy-efficient.
2. Where Table 5.1 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 5.1 does not mention a provision.

Table 5.1

functional use	applicable paragraphs													limit	
	energy performance coefficient			thermal insulation					air volume flow rate		unheated functional unit	alteration	temporary structure	energy performance coefficient	thermal insulation
Article	5.2			5.3					5.4		5.5	5.6	5.7	5.2	53
Paragraph	1	2	3	1	2	3	4	5	1	2	*	*	*	1, 2 and 3 [-]	1, 2 and 3 [m^2.K/W]
1 Residential function:															
a caravan	1	-	3	1	2	3	4	5	1	2	-	*	*	1.3	2.5
b other residential function	1	2	3	1	2	3	4	5	1	2	-	*	*	0.6	3.5
2 Assembly function:	1	2	3	1	2	3	4	5	1	2	*	*	*	2	3.5
3 Detention function															
a in a detention building	1	2	3	1	2	3	4	5		2		*	*	1.8	3.5
b other detention function	1	2	3	1	2	3	4	5	1	2	-	*	*	1.8	3.5
4 Health care function															
a with bed area	1	2	3	1	2	3	4	5	1	2	-	*	*	2.6	3.5
b other health care function	1	2	3	1	2	3	4	5	1	2	-	*	*	1	3.5
5 Industrial function	-	-	-	1	2	3	4	5	1	2	*	*	*	-	3.5
6 Office function	1	2	3	1	2	3	4	5	1	2	-	*	*	1.1	3.5
7 Temporary accommodation function															
a in a temporary accommodation building	1	2	3	1	2	3	4	5	1	2	-	*	*	1.8	3.5
b other temporary accommodation function	1	2	3	1	2	3	4	5	1	2	*	*	*	1.4	3.5
8 Educational function	1	2	3	1	2	3	4	5	1	2	-	*	*	1.3	3.5
9 Sports function	1	2	3	1	2	3	4	5	1	2	*	*	*	1.8	3.5
10 Shop function	1	2	3	1	2	3	4	5	1	2	*	*	*	2.6	3.5
11 Other functional use	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Structure other than a building:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Article 5.2 Energy performance coefficient

1. A functional unit shall have an energy performance coefficient, determined in accordance with NEN 7120, which does not exceed the value given in Table 5.1.

2. Notwithstanding the first paragraph, a building or a part thereof which is located on no more than one plot, with several functional units subject to an energy performance coefficient in accordance with the first paragraph, shall have a total characteristic energy consumption as determined in accordance with NEN 7120 which does not exceed the total permissible energy consumption as determined in accordance with NEN 7120. The calculation of the permissible energy consumption shall be based on the value given in Table 5.1 for each functional unit.
3. If the calculation in accordance with NEN 7120 uses NVN 7125, then the value of the energy performance coefficient calculated *without* NVN 7125 shall be at most 1.33 times the value given in Table 5.1.

Article 5.3 Thermal insulation

1. An exterior partition of a staying area, toilet space or bathroom space shall have a heat resistance as determined in accordance with NEN 1068 at least equal to the value given in Table 5.1.
2. A structure which separates a staying area, toilet space or bathroom space from a crawl space, including any parts of other structures adjacent to such structure, to the extent that those parts affect the heat resistance, shall have a heat resistance as determined in accordance with NEN 1068 equal to at least the value given in Table 5.1.
3. An interior partition separating a staying area, toilet space or bathroom space from a functional space shall have a heat resistance as determined in accordance with NEN 1068 at least equal to the value given in Table 5.1.
4. Windows, doors, window and door frames, and equivalent structural components in a partition as referred to in the first to third paragraphs shall have a heat transmission coefficient, determined in accordance with NEN 1068, which does not exceed 2.2 $W/m^2.K$.
5. The first to fourth paragraphs shall not apply to a part of the partitions with an area whose numerical value does not exceed 2 % of the usable area of the functional unit.

Article 5.4 Air volume flow rate

1. The air volume flow rate, as determined in accordance with NEN 2686, of the total of the staying areas, toilet spaces, and bathroom spaces of a functional unit shall not exceed 0.2 m^3/s.
2. Notwithstanding the first paragraph, a building or a part thereof which is located on no more than one plot, with several functional units subject to an air volume flow rate requirement under the first paragraph, shall have an air volume flow rate, determined in accordance with NEN 2686, for the total of the staying areas, toilet spaces, and bathroom spaces of all its functional units, which does not exceed 0.2 m^3/s.

Article 5.5 Unheated functional unit

Articles 5.2 to 5.4 shall not apply to a functional unit which is not intended to be heated or where the heating is intended exclusively for another purpose than the staying of persons.

Article 5.6 Alteration

For a partial renovation, alteration or enlargement of a structure, the provisions of Article 5.2 shall not apply, and the provisions of Article 5.3(1) to (3) and 5.4, shall apply accordingly, assuming the current regulatory level unless that level is lower than 1.3 m^2·K/W with respect to heat resistance.

Article 5.7 Temporary structures

Article 5.3 shall apply accordingly to the construction of a temporary structure intended to be heated, where the heat resistance shall be at least 1.3 m^2·K/W and the heat transmission coefficient shall be at most 4.2 W/m^2·K.

Section 5.2 Environment, new structures

Article 5.8 Guiding article

1. A proposed structure shall be such that any environmental burden caused by the materials to be used in the structure is reduced.
2. Where Table 5.8 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.
3. The first paragraph shall not apply to functional units for which Table 5.8 does not mention a provision.

Table 5.8

functional use	paragraphs applicable	
	sustainable construction	
Article	5.9	
Paragraph	1	2
1 Residential function:		
a caravan	-	-
b other residential function	1	-
6 Office function	-	2
All functional uses not listed above	-	-

Article 5.9 Sustainable construction

1. The total of the structural components of a residential function shall have an emission of greenhouse gases and the resource depletion quantified in accordance with the Environmental Performance Calculation Method for Buildings and Civil Works [*Bepalingsmethode Milieuprestatie Gebouwen en GWW-werken*], 31 March 2010.
2. The total of the structural components of a residential function consisting exclusively of office functions and ancillary functions thereof, with a total usable area exceeding 100 m^2, shall have an emission of greenhouse gases and the resource depletion quantified in accordance with the Environmental Performance Calculation Method for Buildings and Civil Works, 31 March 2010.

Chapter 6 Provisions for installations

Section 6.1 Lighting, new structures, and existing structures

Article 6.1 Guiding article

1. A structure shall have a lighting installation such that the structure can be used and exited safely.
2. Where Table 6.1 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 6.1

functional use	applicable paragraphs																
	lighting intensity						emergency lighting							power supply	blacked-out spaces	temporary structure
Article	6.2						6.3							6.4	6.5	6.6
Paragraph	1	2	3	4	5	6	1	2	3	4	5	6	7	*		*
1 Residential function:	-	-	-	4	-	-	-	-	-	4	-	-	7	*	-	*
2 Assembly function:	1	-	-	4	-	-	1	-	3	4	-	-	7	*	*	*
3 Detention function	1	-	-	4	-	-	1	-	3	-	5	-	7	*	*	*
4 Health care function	1	-	-	4	-	-	1	-	3	4	-	-	7	*	*	*
5 Industrial function																
a light industrial function	-	-	-	-	-	-	-	-	-	4	-	-	7	-	-	*
b other industrial function	1	-	-	4	-	-	1	-	3	4	-	-	7	*	*	*
6 Office function	1	-	-	4	-	-	1	-	3	4	-	-	7	*	*	*
7 Temporary accommodation function																
a in a temporary accommodation building	1	-	-	4	-	-	1	-	3	4	-	-	7	*	*	*
b other temporary accommodation function	1	-	-	4	-	-	1	-	3	4	-	-	7	*	-	*
8 Educational function	1	-	-	4	-	-	1	-	3	4	-	-	7	*	*	*
9 Sports function	1	-	-	4	-	-	1	-	3	4	-	-	7	*	*	*
10 Shop function	1	-	-	4	-	-	1	-	3	4	-	-	7	*	*	*
11 Other functional use																
a for passenger transport	-	2	3	4	-	-	-	2	3	4	-	-	7	*	*	*
b for parking motor vehicles	-	2	-	4	-	-	-	2	3	4	-	-	7	*	*	*
c other functional use not listed above	-	-	-	4	-	-	-	-	-	4	-	-	7	*	*	*
12 Structure other than a building:																
a road tunnel with a tunnel length exceeding 250 m	-	-	-	4	5	6	-	-	3	4	-	6	7	*	-	*
b structure other than a building not listed above	-	-	-	4	-	-	-	-	3	4	-	-	7	*	*	*

Article 6.2 Lighting

1. A staying space shall have a lighting installation which can produce a lighting intensity of at least 2 lux, measured on the floor.
2. A functional area located below the terrain height shall have a lighting installation which can produce a lighting intensity of at least 2 lux as measured on the floor.
3. An “other passenger transport function” with a usable area exceeding 50 m^2 shall have, in any functional area located above the terrain height, a lighting installation which can produce a lighting intensity of at least 2 lux as measured on the floor.
4. An enclosed space through which a protected escape route passes shall have a lighting installation which can produce a lighting intensity of at least 2 lux as measured on the floor and the step surface.

5. A road tunnel pipe shall have a lighting installation which can produce a lighting intensity of at least 2 lux as measured on the floor and the step surface.
6. A proposed road tunnel pipe shall have a facility which ensures a sufficiently gradual transition from daylight to artificial lighting from a traffic safety perspective.

Article 6.3 Emergency lighting

1. A staying space for more than 75 persons and an enclosed space through which an escape route from such staying space passes shall have emergency lighting.
2. A functional area located below the terrain height, as referred to in Article 6.2(2), shall have emergency lighting.
3. An enclosed space as referred to in Article 6.2(4) shall have emergency lighting.
4. A lift cage of a proposed structure shall have emergency lighting.
5. A lift cage shall have emergency lighting.
6. A road tunnel pipe shall have emergency lighting.
7. Emergency lighting as referred to in the first to sixth paragraph shall produce, within 15 seconds from a failure of the power supply, a lighting intensity of at least 2 lux as measured on the floor and the step surface, for a duration of at least 60 minutes.

Article 6.4 Connection to power supply

A lighting installation as referred to in Articles 6.2 and 6.3 shall be connected to a power supply as referred to in Article 6.8.

Article 6.5 Blacked-out spaces

A space intended to be blacked-out during use by more than 50 persons shall have facilities such that orientation remains reasonably possible during black-outs.

Article 6.6 Temporary structures

The construction of a temporary structure shall be subject to Article 6.3(4).

Section 6.2 Facility for receiving and using energy, new structures, and existing structures

Article 6.7 Guiding article

1. A structure with a facility for receiving and using energy shall have a safe facility for receiving and using energy.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 6.8 Power supply

1. A power supply shall comply with:
   a. NEN 1010 for low voltage, and
   b. NEN 1041 for high voltage.
2. Notwithstanding the paragraph 1b, the power supply of an existing structure shall comply with V 1041.

Article 6.9 Gas supply

1. A proposed gas supply shall comply with:

a. NEN 1078 for a nominal operational pressure not exceeding 0.5 bar, and
b. NEN-EN 15001-1 for a nominal operational pressure exceeding 0.5 bar but less than 40 bar.

2. An existing gas supply shall comply with:
a. NEN 8078 for a nominal operational pressure not exceeding 0.5 bar, and
b. NEN 2078 for a nominal operational pressure exceeding 0.5 bar but less than 40 bar.

3. A proposed structure with a connection to the distribution network for gas, as referred to in Article 6.10, shall have, for such connection, pipe passages and a casing pipe compliant with NEN 2768.

Article 6.10 Connection to the distribution network for electricity, gas, and heat

1. A power supply as referred to in Article 6.8(1) and (2) shall be connected to the distribution network for electricity if:
a. the connection distance does not exceed 100 m, or
b. the connection distance exceeds 100 m but the connection cost does not exceed that for a connection distance of 100 m.

2. A gas supply as referred to in Article 6.9(1) and (2) shall be connected to the distribution network for gas if:
a. the connection distance does not exceed 40 m, or
b. the connection distance exceeds 40 m but the connection cost does not exceed that for a connection distance of 40 m.

3. A proposed structure with one or more staying areas shall be connected to the distribution network for heat if:
a. the connection distance does not exceed 40 m, or
b. the connection distance exceeds 40 m but the connection cost does not exceed that for a connection distance of 40 m.

Section 6.3 Water supply, new structures, and existing structures

Article 6.11 Guiding article

1. A structure with a drinking water or hot water supply shall have a drinking water or hot water supply which is not noxious to health.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 6.12 Drinking water supply

A drinking water supply shall comply with NEN 1006.

Article 6.13 Hot water supply

A hot water supply shall comply with NEN 1006.

Article 6.14 Connection to the distribution network for drinking water

A water supply as referred to in Article 6.12 shall be connected to the public distribution network for drinking water if:

a. the connection distance does not exceed 40 m, or
b. the connection distance exceeds 40 m but the connection cost does not exceed that for a connection distance of 40 m.

Section 6.4 Drainage of household wastewater and precipitation, new structures and existing structures

Article 6.15 Guiding article

1. A structure shall have a facility for the drainage of household wastewater or precipitation such that the water can be disposed of without harmful health effects.
2. Where Table 6.15 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 6.15

functional use	applicable paragraphs								
	drainage of household wastewater		drainage of precipitation		connection pipe and outside sewer				
Article	6.16		6.17		6.18				
Paragraph	1	2	1	2	1	2	3	4	5
1 Residential function:	1	2	1	2	1	2	3	4	5
2 Assembly function:	1	2	1	2	1	2	3	4	5
3 Detention function	1	2	1	2	1	2	3	4	5
4 Health care function	1	2	1	2	1	2	3	4	5
5 Industrial function	1	2	-	-	1	2	3	4	5
6 Office function	1	2	1	2	1	2	3	4	5
7 Temporary accommodation function									
a. in a temporary accommodation building	1	2	1	2	1	2	3	4	5
b. other temporary accommodation function	1	2	-	-	1	2	3	4	5
8 Educational function	1	2	1	2	1	2	3	4	5
9 Sports function	1	2	1	2	1	2	3	4	5
10 Shop function	1	2	1	2	1	2	3	4	5
11 Other functional use	1	2	-	-	1	2	3	4	5
12 Structure other than a building:	1	2	-	-	1	2	3	4	5

Article 6.16 Drainage of household wastewater

1. A functional unit with a toilet or bathroom space or another installation location for a sanitary appliance shall have a drainage device for household wastewater with respect to such installation location.
2. A drainage device for household wastewater as referred to in the first paragraph shall have:
   a. in a proposed structure: a capacity, air- and water-tightness, and a relief vent outlet size and capacity compliant with NEN 3215;
   b. in an existing structure: a capacity such that any sanitary appliance connected to it can be emptied within 5 minutes, and an air- and water-tightness compliant with NEN 3215.

Article 6.17 Drainage of precipitation

1. A roof of a proposed structure shall have a facility for the collection and drainage of precipitation with a capacity, as determined in accordance with NEN 3215, equal to at least the load on that facility as determined pursuant to that standard.

2. A facility for the collection and drainage of precipitation located within a structure shall be air- and water-tight as determined in accordance with NEN 3215.

Article 6.18 Building connection and outside sewer

1. An underground passage of a drainage device, as referred to in Articles 6.16 and 6.17, through an external partition shall be placed perpendicular to the partition as far as possible.
2. The building connection of a drainage device as referred to in Articles 6.16 and 6.17 to an outside sewer or other facility for drainage of wastewater located on the same premises or grounds shall be such that the tightness of the connection and the drainage is not affected by setting.
3. An outside sewer through which household wastewater is passed:
   a. shall not have a narrowing in the direction of flow;
   b. shall have a smooth gradient;
   c. shall be water-tight;
   d. shall have a sufficient internal diameter, and
   e. shall not contain a cesspool or cesspit.
4. The material, strength, and shape of pipes and accessories of an outside sewer shall comply with:
   a. NEN 7002;
   b. NEN 7003;
   c. NEN 7013;
   d. NEN-EN 1401-1;
   e. NEN-EN 295-1;
   f. NEN-EN 295-2, and
   g. NEN-EN 295-3.
5. The competent authority may issue an instruction determining the following:
   a. if, for the drainage of household wastewater, there is a public wastewater sewer or system as referred to in Article 10.33(2) of the Environmental Management Act present, to which a connection can be made: the location, height, and internal diameter used to construct the necessary building-connection pipe, at the façade of the structure or the boundary of the premises or grounds, for the connection of the drainage device as referred to in Article 6.16 to such sewer or system;
   b. if, for the drainage of precipitation, there is a public precipitation system or public wastewater sewer, to which a connection can be made, and into which the precipitation may be fed: the location, height, and internal diameter used to construct the necessary building-connection pipe, at the façade of the structure or the boundary of the premises or grounds, for the connection of the drainage device as referred to in Article 6.17 to such system or sewer; and
   c. whether any additional facilities need to be installed in the drainage device or the outside sewer located on the premises or grounds to ensure the operation of the drainage devices, neighbouring connections, and public facilities for the collection and transport of wastewater, and if so, which facilities.

Section 6.5 Timely detection of fire, new structures, and existing structures

Article 6.19 Guiding article

1. A structure shall have facilities such that cases of fire can be detected in time to enable a safe escape.
2. Where Table 6.19 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 6.19

Functional use		Applicable paragraphs														
		Fire alarm system										smoke alarms				
	Article	6.20										6.21				
	Paragraph	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5
1	Residential function:															
	a for care	1	2	3	4	-	6	7	8	9	-	1	-	-	-	-
	b for room-based renting	-	-	-	-	-	-	-	-	-	-	-	2	3	-	-
	c other residential function	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
2	Assembly function:															
	a for watching sports	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-
	b for child care for children below 4 years	1	2	3	-	5	6	7	8	9	10	-	-	-	4	-
	c other assembly function	1	2	-	-	5	6	7	8	9	-	-	-	-	-	-
3	Detention function	1	2	3	-	5	6	7	8	9	-	-	-	-	-	-
4	Health care function	1	2	3	-	5	6	7	8	9	-	-	-	-	-	-
5	Industrial function															
	a light industrial function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	b other industrial function	1	2	-	-	5	6	7	8	9	-	-	-	-	-	-
6	Office function	1	2	3	-	5	6	7	8	9	-	-	-	-	-	-
7	Temporary accommodation function															
	a in a temporary accommodation building	1	2	3	-	5	6	7	8	9	-	-	-	-	4	-
	b other temporary accommodation function	1	2	3	-	-	6	7	8	9	-	-	-	-	4	5
8	Educational function	1	2	3	-	5	6	7	8	9	-	-	-	-	-	-
9	Sports function	1	2	3	-	5	6	7	8	9	-	-	-	-	-	-
10	Shop function	1	2	3	-	5	6	7	8	9	-	-	-	-	-	-
11	Other functional use															
	a for parking motor vehicles	1	2	-	-	5	6	7	8	9	-	-	-	-	-	-
	b for passenger transport	1	2	-	-	5	6	7	8	9	-	-	-	-	-	-
	c other functional use not listed above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Structure other than a building:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Article 6.20 Fire alarm system

1. A functional unit shall have a fire alarm system as referred to in NEN 2535, with a surveillance scope and alert mechanism as described in Annex I to this Decree, if:
   a. the usable area of the functional unit or the total usable area of all functional units of the same type in the building, to the extent that such functional units depend on the same escape route, exceeds the limit given in the aforementioned Annex;
   b. the highest floor of any staying space within the functional unit, as measured above the terrain height, is higher than the limit given in the aforementioned Annex; or
   c. the aforementioned Annex designates it as such without imposing a specific limit as referred to above.
2. A fire compartment which contains a functional unit with a fire alarm system as referred to in the first paragraph shall have a fire alarm system with the same surveillance scope and alert mechanism as such functional unit.

3. An alert mechanism as referred to in the first paragraph shall directly alert the regional emergency centre of the fire department.
4. In a care-related residential function with stand-by care as part of a residential building or a communal care home, a direct alert to an emergency care centre shall take place. In case of 24-hour care in a residential building or communal care home, the aforementioned alert shall be directed to a nurse's office.
5. Where escape is possible only in a single direction from the exit of a given staying space, any spaces located outside such staying space, through which that single escape route passes, as well as any staying spaces or spaces with an increased fire risk that are adjacent to such spaces, shall be fitted with a fire alarm system with spatial surveillance as referred to in NEN 2535, if:
   a. the walking distance between the exit of a staying space and the nearest point from which escape is possible in more than one direction is more than 10 m;
   b. the total floor area of the spaces through which that single escape route passes, plus that of the staying spaces depending on it, is more than 200 m^2; or
   c. the number of staying spaces located adjacent to the single escape route is more than two.
6. A proposed fire alarm system that is obligatory under the Act or a provision enacted pursuant to it shall have a valid certificate issued in accordance with the CCV Fire alarm systems Certification Scheme [*CCV-certificatieschema Brandmeldinstallatie*].
7. In the cases designated in Annex I to this Decree, an existing fire alarm system that is obligatory under the Act or a provision enacted pursuant to it shall have a valid inspection certificate issued in accordance with the CCV Fire alarm systems Inspection Scheme [*CCV-inspectieschema Brandmeldinstallatie*].
8. The maintenance of an existing fire alarm system that is obligatory under the Act or a provision enacted pursuant to it, for which a certificate as referred to in the seventh paragraph is not required, shall comply with NEN 2654-1.
9. The management and inspection of a fire alarm system obligatory under the Act or a provision enacted pursuant to it shall comply with NEN 2654-1.
10. Paragraph 1b shall not apply if there are no more than 6 installation locations for children's beds above the highest floor as referred to in Annex I.

Article 6.21 Smoke alarms

1. In a proposed residential function, any enclosed space through which an escape route passes between the exit of a staying space and the exit of the residential function shall have one or more smoke alarms compliant with and installed in accordance with the primary installation requirements of NEN 2555. The above shall not apply to residential functions with a fire alarm system as referred to in Article 6.20.
2. In a residential function for room-based renting, any enclosed space through which an escape route passes between the exit of a staying space and the exit of the residential function shall have one or more smoke alarms compliant with and installed in accordance with the primary installation requirements of NEN 2555. The above shall not apply to residential functions with a fire alarm system as referred to in Article 6.20.

3. A staying space shall have one or more smoke alarms compliant with and installed in accordance with the primary installation requirements as referred to in NEN 2555. The above shall not apply to a staying space in a residential unit if every residential unit in the residential function is located in a distinct fire subcompartment, with a fire resistance of at least 30 minutes from such fire subcompartment to any other space within the fire compartment, as determined in accordance with NEN 6068.
4. Any staying space or enclosed space through which an escape route passes between the exit of a staying space and the exit of the building, shall have one or more smoke alarms compliant with the primary installation requirements of NEN 2555. The above shall not apply to functional units with a fire alarm system as referred to in Article 6.20.
5. The fourth paragraph shall not apply to an existing temporary accommodation function.

Section 6.6 Escape in case of fire, new structures, and existing structures

Article 6.22 Guiding article

1. A structure shall have facilities to enable a timely start of the escape.
2. Where Table 6.22 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 6.22

Functional use	Applicable paragraphs			
	evacuation installation	escape route signs	doors in escape routes	self-closing structural components
Article	6.23	6.24	6.25	6.26
Paragraph	1 2 3 4 5	1 2 3 4 5 6 7	1 2 3 4 5 6 7 8 9 10	1 2 3
1 Residential function:				
a for care with a UA > 500 m^2	1 2 3 4 5	- - - - - - -	1 - - - - - 7 8 9 10	1 2 -
b other care-related residential function	1 2 3 4 5	- - - - - - -	1 - - - - - 7 8 9 -	1 2 -
c for room-based renting	- - - - -	- - - - - - -	1 2 - - - - - 8 9 -	1 2 -
d other residential function	- - - - -	- - - - - - -	1 - - - - - - 8 9 -	1 2 -
2 Assembly function:				
a for watching sports	- - - - -	1 - 3 4 5 - -	- - 3 4 - 6 7 8 9	1 - -
b for child care for children below 4 years	1 2 3 4 5	1 - 3 4 5 - -	- - 3 4 - 6 7 8 9 10	1 - -
c other assembly function	1 2 3 4 5	1 - 3 4 5 - -	- - 3 4 - 6 7 8 9 10	1 - -
3 Detention function	1 2 3 4 5	1 - 3 4 5 - -	- - 3 4 - 6 7 8 9 10	1 - 3
4 Health care function	1 2 3 4 5	1 - 3 4 5 - -	- - 3 4 - 6 7 8 9 10	1 - -
5 Industrial function				
a light industrial function	- - - - -	- - - - - - -	- - 3 4 - 6 7 8 9 10	1 - -
b other industrial function	1 2 3 4 5	1 - 3 4 5 - -	- - 3 4 - 6 7 8 9 10	1 - -
6 Office function	1 2 3 4 5	1 - 3 4 5 - -	- - 3 4 - 6 7 8 9 10	1 - -
7 Temporary accommodation function				
a in a temporary accommodation building	1 2 3 4 5	1 - 3 4 5 - -	- - 3 4 - 6 7 8 9 10	1 - -
b other temporary accommodation function	1 2 3 4 5	- - - - - - -	- - 3 4 - 6 7 8 9 10	1 - -
8 Educational function	1 2 3 4 5	1 - 3 4 5 - -	- - 3 4 - 6 7 8 9 10	1 - -
9 Sports function	1 2 3 4 5	1 - 3 4 5 - -	- - 3 4 - 6 7 8 9 10	1 - -
10 Shop function	1 2 3 4 5	1 - 3 4 5 - -	- - 3 4 - 6 7 8 9 10	1 - -
11 Other functional use				
a for parking motor vehicles	1 2 3 4 5	1 - 3 4 5 - -	- - 3 4 - 6 7 8 9 10	1 - -

b	for passenger transport	1 2 3 4 5	1 - 3 4 5 - -	- - 3 4 - 6 7 8 9 10	1 - -
c	other functional use not listed above	- - - - -	- - - - - - -	- - 3 4 - 6 7 8 9 10	1 - -
12	Structure other than a building:				
a	road tunnel with a tunnel length exceeding 250 m	- - - - -	- 2 3 4 6 7	- - - - 5 - - 8 9 10	1 - -
b	structure other than a building not listed above	- - - - -	- - - - - - -	- - 3 4 - 6 - 8 9 10	1 - -

Article 6.23 Evacuation alarm system

1. A functional unit with a fire alarm system as referred to in Article 6.20(1), (2), and (5) shall have an evacuation alarm system as referred to in NEN 2575 compliant with the requirements specification given in such standard and approved by the competent authority.
2. Ministerial regulations may be enacted to lay down rules for the evacuation signal given by the evacuation alarm system referred to in the first paragraph.
3. The management and inspection of an evacuation alarm system as referred to in the first paragraph shall comply with NEN 2654-1.
4. An evacuation alarm system as referred to in the first paragraph, which is part of a fire alarm system subject to Article 6.20(7) shall have a valid inspection certificate issued under the CCV Evacuation Alarm Systems Inspection Scheme [*CCV-inspectieschema Ontruimingsalarminstallatie*].
5. The maintenance of an evacuation alarm system as referred to in the first paragraph, which is part of a fire alarm system subject to Article 6.20(8) shall comply with NEN 2654-2.

Article 6.24 Escape route signs

1. A space through which a circulation route passes and any space intended for more than 50 persons shall have an escape route sign which shall comply with NEN 6088 and the visibility requirements of Articles 5.2 to 5.6 of NEN-EN 1838.
2. A road tunnel shall have an escape route sign which shall comply with NEN 6088 and the visibility requirements of Articles 5.2 to 5.6 of NEN-EN 1838. The escape route sign shall be place no more than 1.5 m above the floor, and the spacing between two escape route signs shall not exceed 25 metres, measured along the tunnel wall.
3. An escape route sign as referred to in the first or second paragraph shall be mounted in a clearly visible location.
4. An escape route sign as referred to in the first or second paragraph shall fulfil the visibility requirements as referred to in Articles 5.2 to 5.6 of NEN-EN 1838 within 15 seconds from a failure of the power supply, for a duration of at least 60 minutes.
5. An escape route sign as referred to in the first paragraph which is located on an escape route from a space with a lighting system other than an emergency lighting system as referred to in Article 6.3, shall not be subject to the visibility requirements referred to in the first paragraph in case of a failure of the power supply.
6. A door in a tunnel, giving access to a protected route as referred to in section 2.12, shall have the colour green, RAL 6024.
7. Near an escape route sign as referred to in the second paragraph there shall be a clearly visible indication of either the walking distance in two directions to either end of the tunnel pipe, or the walking distance to the nearest entrance as referred to in the sixth paragraph, if the latter is nearer.

Article 6.25 Doors in escape routes

1. A door located in a common escape route which gives access to a stairwell shall not turn against the direction of escape when opening.
2. A door in an escape route from the exit of a residential unit to the exit of the residential function for room-based renting shall be capable of being opened in the direction of escape:
   a. by a slight pushing against the door, or
   b. by means of an opening mechanism compliant with NEN-EN 179 or NEN-EN 1125.
3. A door located in an escape route shall not turn not against the direction of escape when opening if more than 37 persons depend on the relevant exit.
4. An escape door shall not be a sliding door.
5. A door located in an escape route shall not turn not against the direction of escape when opening.
6. A door on which more than 100 persons depend for their escape shall be capable of being opened by:
   a. a slight pushing against the door, or
   b. a slight pushing against a panic bar mounted about 1 m above the floor across the entire width of the door, which shall comply with NEN-EN 1125.
7. A door located in an escape route starting in a space for locking persons in shall be capable of being opened with a key during escape.
8. An automatic door or access or exit control facility located in an escape route shall not obstruct the escape.
9. A door which gives access to a pressurised stairwell as referred to in NEN 6092 shall be fitted with a sign indicating that forceful pushing may be necessary.
10. On the side of an escape door or emergency exit adjacent to the outdoor air, a sign shall be installed with the text “escape door, keep clear” or “emergency exit”. This text shall comply with the requirements for additional signs in NEN 3011.

Article 6.26 Self-closing doors

1. A movable structural component in an interior partition of a fire compartment or fire subcompartment which is subject to a requirement of fire resistance or smoke resistance shall be self-closing.
2. The first paragraph shall not apply to a door in a non-common passageway.
3. The first paragraph shall not apply to a door of a cell.

Section 6.7 Fire-fighting, new structures, and existing structures

Article 6.27 Guiding article

1. A structure shall have facilities for fire-fighting such that fires can be counteracted within a reasonable time.
2. Where Table 6.27 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 6.27

functional use		applicable paragraphs							limits
		fire hose reels	dry risers	extinguishing water supply	fire extinguishers	automatic fire extinguishing system and smoke control system	designation of fire extinguishing agents	temporary structure	fire hose reels
	Article	6.28	6.29	6.30	6.31	6.32	6.33	6.34	6.28
	Paragraph	1 2 3 4	1 2 3 4 5 6 7	1 2 3 4	1 2 3 4	1 2 3	*	*	2 [m^2]
1	Residential function:								
	a for care with a UA > 500 m^2	1 - 3 4	1 2 - 4 5 6 7	1 - 3 4	1 - - 4	1 2 3	*	*	-
	b room-based renting	- - - -	1 2 - 4 5 6 7	1 - 3 4	1 2 4	1 2 3	*	*	-
	c other residential function	- - - -	1 2 - 4 5 6 7	1 - 3 4	- - - -	1 2 3	-	*	-
2	Assembly function:								
	a for child care:	1 - 3 4	1 2 - 4 5 6 7	1 - 3 4	1 - - 4	1 2 3	*	*	-
	b other assembly function	- 2 3 4	1 2 - 4 5 6 7	1 - 3 4	1 - - 4	1 2 3	*	*	500
3	Detention function	1 - 3 4	1 2 - 4 5 6 7	1 - 3 4	1 - - 4	1 2 3	*	*	-
4	Health care function								
	a with bed area	1 - 3 4	1 2 - 4 5 6 7	1 - 3 4	1 - - 4	1 2 3	*	*	-
	b other health care function	- 2 3 4	1 2 - 4 5 6 7	1 - 3 4	1 - - 4	1 2 3	*	*	500
5	Industrial function								
	a light industrial function	- - - -	1 2 - 4 5 6 7	1 - 3 4	1 - - 4	1 2 3	*	*	-
	b other industrial function	- 2 3 4	1 2 - 4 5 6 7	1 - 3 4	1 - - 4	1 2 3	*	*	1000
6	Office function	- 2 3 4	1 2 - 4 5 6 7	1 - 3 4	1 - - 4	1 2 3	*	*	500
7	Temporary accommodation function								
	a in a temporary accommodation building	1 - 3 4	1 2 - 4 5 6 7	1 - 3 4	1 - - 4	1 2 3	*	*	-
	b other temporary accommodation function	- 2 3 4	1 2 - 4 5 6 7	1 - 3 4	- - - 4	1 2 3		*	500
8	Educational function	1 - 3 4	1 2 - 4 5 6 7	1 - 3 4	1 - - 4	1 2 3	*	*	-
9	Sports function	- 2 3 4	1 2 - 4 5 6 7	1 - 3 4	1 - - 4	1 2 3	*	*	500
10	Shop function	- 2 3 4	1 2 - 4 5 6 7	1 - 3 4	1 - - 4	1 2 3	*	*	500
11	Other functional use	- - - -	1 2 - 4 5 6 7	1 - 3 4	1 - - 4	1 2 3	*	*	-
12	Structure other than a building:								
	a road tunnel with a tunnel length exceeding 250 m	- - - -	- - 3 - 5 6 7	- 2 3 4	- - 3 4	1 2 3	*	*	-
	b structure other than a building not listed above	- - - -	- - - - - - -	1 - 3 4	- - - -	1 2 3	*	*	-

Article 6.28 Fire hose reels

1. A proposed functional unit shall have at least one fire hose reel.
2. A proposed functional unit shall have at least one fire hose reel if the usable area of the functional unit, or the total usable area of all functional units of the same type within the building, exceeds the limit as referred to in Table 6.27.
3. The adjusted walking distance between a fire hose reel as referred to in the first and second paragraphs, and any point on the floor of a functional unit, shall not exceed the length of the fire hose plus 5 m. The above shall not apply to a floor not located in a functional area which can be reached only through non-enclosed spaces.
4. A fire hose reel:
   a. shall have a hose with a length not exceeding 30 m;
   b. shall be connected to a drinking water supply as referred to in Article 6.12, which provides a static pressure at the nozzle not less than 100 kPa and has a capacity of 1.3 m^3/h in case of simultaneous use of two fire hose reels, and
   c. shall not be located in a space with a staircase over which a protected escape route passes.

Article 6.29 Dry riser

1. A functional unit with any floor of a staying area located more than 20 m above the terrain height shall have a dry riser.

2. Ministerial regulations may be enacted to lay down rules for dry risers supplementing those of the first paragraph.
3. A road tunnel pipe shall have a dry riser, connected to an extinguishing water supply as referred to in Article 6.30, with a fire extinguishing hose connection in every emergency station as referred to in section 2.13, which can deliver a capacity of at least 120 m^3/h in case of fire.
4. The walking distance between a fire extinguishing hose connection of a dry riser as referred to in the first paragraph and any point in a functional area depending on such connection shall not exceed 60 m for new structures or 110 m for existing structures.
5. A dry riser in a proposed structure shall comply with NEN 1594.
6. The furnishings of a dry riser in an existing structure shall comply with NEN 1594 as to:
   a. pressure resistance;
   b. the fire-proofing of the hose material;
   c. the types of adapters for the connection of fire hoses;
   d. the signs indicating the fire hose connections, and
   e. the signs indicating the supply connections.
7. Without prejudice to the provisions of Article 1.16(1), a dry riser and pump system that is obligatory under the Act or a provision enacted pursuant to it shall be tested in accordance with NEN 1594, once upon completion and then once every five years.

Article 6.30 Extinguishing water supply

1. A structure shall have an adequate extinguishing water supply.
2. A road tunnel shall have an extinguishing water supply able to deliver a capacity of at least 120 m^3/h for at least 60 minutes in case of fire.
3. The distance between an extinguishing water supply as referred to in the first paragraph and a fire entrance as referred to in Article 6.37(1) shall be at most 40 m.
4. An extinguishing water supply as referred to in the first and second paragraphs shall be accessible without obstruction for extinguishing.

Article 6.31 Fire extinguishers

1. Unless a building already has a sufficient number of fire hose reels to serve the same purpose, it shall have a sufficient number of portable or mobile fire extinguishers to enable persons present in the building to fight an incipient fire at the earliest possible stage.
2. For a residential function for room-based renting, the requirement of the first paragraph shall be deemed to be fulfilled by a device in a joint kitchen and at least one on each floor in a space through which a joint escape route passes.
3. Every emergency station as referred to in Article 2.123 shall have a portable fire extinguisher.
4. Without prejudice to the provisions of Article 1.16(1) a portable or mobile extinguisher that is obligatory under the Act or a provision enacted pursuant to it shall be maintained as necessary, and its proper operation inspected, at least once every two years in accordance with NEN 2559, using adequate means.

Article 6.32 Automatic fire extinguishing system and smoke control system

1. A proposed automatic fire extinguishing system that is obligatory under the Act or a provision enacted pursuant to it shall have a valid certificate issued in accordance with the CCV Fixed Fire Control and Extinguishing Systems Certification Scheme [*CCV-certificatieschema Vastopgestelde Brandbeheersings- en Brand-blussystemen*].
2. A proposed automatic fire extinguishing system that is obligatory under the Act or a provision enacted pursuant to it shall have a valid inspection certificate issued in accordance with the CCV Fixed Fire Control and Extinguishing Systems Inspection Scheme [*CCV-inspectieschema Vastopgestelde Brandbeheersings- en Brand-blussystemen*].
3. A smoke control installation that is obligatory under the Act or a provision enacted pursuant to it shall have a valid inspection certificate issued in accordance with the CCV Smoke Control Installations Inspection Scheme [*CCV-inspectieschema Rookbeheersingsinstallaties*].

Article 6.33 Signs indicating fire extinguishing agents

A fire-fighting device as referred to in Articles 6.28 and 6.31 shall be mounted in a clearly visible location or signposted with an icon as referred to in NEN 3011.

Article 6.34 Temporary structures

The construction of a temporary structure shall be subject to Article 6.28(1) to (3) and Article 6.29.

Article 6.35 (empty)

Section 6.8 Reachability for emergency services, new structures, and existing structures

Article 6.36 Guiding article

1. A structure shall be reachable for emergency services, such that the extinguishing work can be done and emergency services can be provided in time.
2. Where Table 6.36 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 6.36

functional use	applicable paragraphs															
	fire entrance			reachability of structure for emergency services					installation locations for fire-fighting vehicles					fire-fighting lift	mobile radio communications	
Article	6.37			6.38					6.39					6.40	6.41	
Paragraph	1	2	3	1	2	3	4	5	1	2	3	4	5	*	1	2
1 Residential function:	1	2	3	1	2	3	4	5	1	2	3	4	5	*	-	-
2 Assembly function:	1	2	3	1	2	3	4	5	1	2	3	4	5	*	1	-
3 Detention function	1	2	3	1	2	3	4	5	1	2	3	4	5	*	1	-
4 Health care function	1	2	3	1	2	3	4	5	1	2	3	4	5	*	1	-
5 Industrial function	1	2	3	1	2	3	4	5	1	2	3	4	5	*	1	-
6 Office function	1	2	3	1	2	3	4	5	1	2	3	4	5	*	1	-
7 Temporary accommodation function																
a in a temporary accommodation building	1	2	3	1	2	3	4	5	1	2	3	4	5	*	1	-
b other temporary accommodation function	1	2	3	1	2	3	4	5	1	2	3	4	5	*		-
8 Educational function	1	2	3	1	2	3	4	5	1	2	3	4	5	*	1	-
9 Sports function	1	2	3	1	2	3	4	5	1	2	3	4	5	*	1	-
10 Shop function	1	2	3	1	2	3	4	5	1	2	3	4	5	*	1	-
11 Other functional use	1	2	3	1	2	3	4	5	1	2	3	4	5	*	1	-
12 Structure other than a building:																
a road tunnel with a tunnel length exceeding 250 m	1	2	3	1	2	3	4	5	1	2	3	4	5	*	-	2
b structure other than a building not listed above	1	2	3	1	2	3	4	5	1	2	3	4	5	*	1	-

Article 6.37 Fire entrance

1. A structure intended for staying by persons shall have a fire entrance. The above shall not apply if it is not required due to the nature, location or use of the structure, in the discretion of the competent authority.
2. If a structure which must have a fire entrance pursuant to the first paragraph, has several entrances, then one or several of those entrances shall be designated as fire entrances, in consultation with the fire department.
3. In a structure with a fire alarm system with an alert mechanism as referred to in Article 6.20(1) a fire entrance shall be unlocked in case of a fire alarm either automatically or by a system determined together with the fire department.

Article 6.38 Reachability of structure for emergency services

1. Between the public highway and at least one entrance of a structure intended for staying by persons, there shall be a connecting road suitable for the vehicles of the fire department and other emergency services.
2. The first paragraph shall not apply:
   - to a functional unit with a usable area not exceeding 1 000 m^2 and a fire-load density not exceeding 500 MJ/m^2, determined in accordance with NEN 6090;
   - to a structure with a usable area not exceeding 50 m^2;
   - to a light industrial function intended exclusively for the commercial cultivation or storage of crops or similar products, with a permanent fire-load density not exceeding 150 MJ/m^2, determined in accordance with NEN 6090;
   - if the entrance to the structure lies at most 10 metres from a public highway, or

if a connecting road as referred to in the first paragraph is not required due to the nature, location or use of the structure, in the discretion of the competent authority.

3. Unless provided otherwise by the zoning plan or a municipal regulation, a connecting road as referred to in the first paragraph shall have:
   a. a width of at least 4.5 metres;
   b. a paving across a width of at least 3.25 metres, which is suitable for motor vehicles with a mass of at least 14 600 kg;
   c. a headroom of at least 4.2 m above the highest point in the road, and
   d. an effective drainage.
4. A connecting road as referred to in the first paragraph shall be kept clear to the height and width prescribed by the third paragraph for use by vehicles of the fire department and other emergency services.
5. Fences closing off a connecting road as referred to in the first paragraph shall allow rapid and easy opening by emergency services or shall be unlocked by a system determined together with the fire department.

Article 6.39 Installation locations for fire-fighting vehicles

1. Near a structure intended for staying by persons, there shall be installation locations for fire-fighting vehicles such that an effective connection between such vehicles and the extinguishing water supply can be made.
2. The first paragraph shall not apply:
   – to a functional unit with a usable area not exceeding 1 000 m^2 and a fire-load density not exceeding 500 MJ/m^2, determined in accordance with NEN 6090;
   – to a structure with a usable area not exceeding 50 m^2; a light industrial function intended exclusively for the commercial cultivation or storage of crops or similar products, with a permanent fire-load density not exceeding 150 MJ/m^2, determined in accordance with NEN 6090; or
   – if installation locations as referred to in the first paragraph are not required due to the nature, location or use of the structure, in the discretion of the competent authority.
3. The distance between an installation location as referred to in the first paragraph and a fire entrance as referred to in Article 6.37(1) shall be at most 40 m.
4. An installation location for fire-fighting vehicles as referred to in the first paragraph shall be kept clear to the height and width as referred to in Article 6.38(3) for use by fire-fighting vehicles.
5. Fences closing off an installation location as referred to in the first paragraph shall allow rapid and easy opening by emergency services or shall be unlocked by a system determined together with the fire department.

Article 6.40 Fire-fighting lift

A proposed building of which any floor of any staying area is more than 20 m above the terrain height shall have a fire-fighting lift.

Article 6.41 Mobile radio communications by emergency services

1. A structure intended for large numbers of visitors where the proper operation of emergency services depends on mobile radio communications shall have, if necessary for such communications, an installation, approved by the competent

authority, for mobile radio communications between emergency services inside and outside the structure.
2. A road tunnel with a tunnel length exceeding 250 m shall have an installation, approved by the competent authority, for mobile radio communications between emergency services inside and outside such road tunnel.

Section 6.9 Additional rules for tunnel safety, new structures, and existing structures

Article 6.42 Guiding article
1. A road tunnel with a tunnel length exceeding 250 m shall have such facilities that the safety of road traffic is ensured.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 6.43 Equipment of emergency station
An emergency station as referred to in section 2.123 shall have an emergency telephone and a wall-mounted power socket with an electrical voltage of 230 volts.

Article 6.44 Operations centre
A road tunnel with a tunnel length exceeding 500 m shall be connected to an operations centre with a facility for permanent video surveillance and automatic detection of accidents and fire..

Article 6.45 Drainage of flammable and toxic liquids
1. A proposed road tunnel pipe with a length exceeding 250 m shall have facilities for the drainage of flammable and toxic liquids in a carriageway floor at least every 20 m, measured along the length of the tunnel pipe, to reduce the spread of fire produced by flammable liquids and to reduce the spread of toxic liquids.
2. An existing road tunnel pipe with a length exceeding 250 m shall have a facility for the drainage of flammable and toxic liquids to reduce the spread of fire produced by flammable liquids and to reduce the spread of toxic liquids.

Article 6.46 Technical traffic aspects of tunnel pipes
1. A carriageway connecting to a road tunnel pipe shall have the same number of driving lanes as the carriageway in the road tunnel pipe. Any change in the number of driving lanes outside the tunnel pipe shall be implemented at a sufficient distance from the tunnel pipe to prevent confusing traffic movements in the tunnel pipe due to the change.
2. Two-way traffic shall not be permitted in a road tunnel pipe.
3. Notwithstanding the second paragraph, two-way traffic shall be permitted if it is demonstrated that one-way traffic is not possible due to physical, geographical or technical circumstances, and the safety of the two-way traffic is ensured by adequate measures.
4. In case of two-way traffic as referred to in the third paragraph, the road tunnel pipe shall at least contain a system for permanent surveillance and a system for closing driving lanes, and the maximum permitted speed shall be at most 70 km per hour.

Article 6.47 Communications facilities

1. A road tunnel with a tunnel length exceeding 500 m shall have a facility:
   a. which can be used to communicate notices to persons on any carriageway and escape route by means of speakers;
   b. for repeat transmission of radio signals in every road tunnel pipe, and
   c. to interrupt radio transmissions to communicate notices.
2. Notices as referred to in paragraph 1a and 1c shall be communicated at least in Dutch and English.

Article 6.48 Connection to emergency power supply

The facilities, systems and installations in a road tunnel that are necessary for an evacuation, which depend on a power supply for their operation, shall be connected to a facility which secures the operation of such facilities, systems, and installations within 15 seconds after a failure of the power supply, for a duration of at least 60 minutes.

Section 6.10 Accessibility of buildings for disabled persons, new structures, and existing structures

Article 6.49 Guiding article

1. A structure with an accessible sector shall be accessible from the public highway for persons with functional disabilities.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 6.50 Accessibility of buildings for persons with functional disabilities

1. At least one route between the public highway and at least one entrance of an accessible sector of a building shall passes along a road or path with:
   a. a width of at least 1.1 m, and
   b. in case a height gap exceeding 0.02 m has to be bridged, a ramp as referred to in section 2.6.
2. A passageway through which a route as referred to in the first paragraph passes shall have an available width of at least 0.85 m and a headroom of at least 2 m.

Section 6.11 Counteracting common crimes, new structures, and existing structures

Article 6.51 Guiding article

1. A residential building shall have facilities such that common crimes are prevented.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 6.52 Prevention of common crimes in residential buildings

1. An entrance of a proposed residential building shall have a self-closing door which cannot be opened from the outside without a key.
2. At least one entrance of a proposed residential building:

a. shall have a facility on the outside which can be used to emit a signal which is observable in a non-common staying area of a residential function that depends on the entrance;
b. shall have an intercom system which can be operated from at least one non-common space of a residential function that depends on that entrance, and
c. can be opened from at least one non-common space of a residential function that depends on such entrance.

3. A lockable entrance of an existing residential building shall have a self-closing door which cannot be opened from the outside without a key.
4. If a residential function in an existing residential building is reachable only via a lockable common circulation space, then at least at the entrance of the residential building there shall be a facility on the outside which can be used to emit a signal which is observable in a non-common staying area of that residential function.

Section 6.12 Safe maintenance of buildings, new structures

Article 6.53 Guiding article

1. A proposed building shall be such that maintenance on the building can be carried out safely.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 6.54 Safety facilities for maintenance

1. If maintenance cannot be carried out safely without building-related safety facilities, then a proposed building shall have adequate building-related safety facilities.
2. Ministerial regulations may be enacted to lay down rules with respect to the provisions of the first paragraph.

Chapter 7 Provisions for the use of structures, open premises, and grounds

Section 7.1 Prevention of fire hazards and spread of fire, new structures, and existing structures

Article 7.1 Guiding article

1. The use of a structure shall be such that the emergence of fire-hazardous situations and the spread of fire is prevented.
2. Where Table 7.1 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 7.1

functional use	applicable paragraphs										
	smoking and open fire ban		locking of self-closing structural component	furnishing	fire-safe furnishings	fire-hazardous substances	flammable, non- environmentally hazardous substances	storage in heating space	safe use of heater	residual risk of fire hazard and spread of fire
Article	7.2		7.2a	7.3	7.4	7.5	6	7.7	7.7a	7.8
Paragraph	1	2	*	1 2 3 4 5 6	1 2 3	1 2 3 4	1 2 3	*	*	*
1 Residential function:	1	-	*	1 2 3 4 5 6	1 2 3	1 2 3 4	1 2 3	*	*	*
2 Temporary accommodation function										
a in a temporary accommodation building	1	2	*	1 2 3 4 5 -	1 2 -	1 2 3 4	1 2 3	*	*	*
b other temporary accommodation function	1	2	*	1 2 3 4 5 6	1 2 3	1 2 3 4	1 2 3	*	*	*
All functional uses not listed above	1	2	*	1 2 3 4 5 -	1 2 -	1 2 3 4	1 2 3	*	*	*

Article 7.2 Smoking and open fire ban

1. It shall be prohibited to smoke or to have an open fire:
   a. in a space intended for storage of a fire-hazardous substance;
   b. when performing any activity which can cause an outflow of a fire-hazardous substance, and
   c. when filling a fuel reservoir with a fire-hazardous substance.
2. The prohibition as referred to in the first paragraph shall be indicated in a clearly visible manner by placing a standardised symbol in accordance with NEN 3011.

Article 7.2a Locking of self-closing structural component

A self-closing structural component as referred to in Article 6.26(1) shall not be locked in an open position, unless the structural component is automatically released in case of fire or smoke.

Article 7.3 Furnishing

1. Furnishings in enclosed spaces shall not present a fire hazard. Such danger is not deemed to be present if the furnishing:
   a. constitutes an insignificant contribution to the fire hazard;

b. is non-flammable as determined in accordance with NEN 6064;
c. complies with fire class A1 as referred to in NEN-EN 13501-1;
d. fulfils the requirements for structural components as referred to in section 2.9, or
e. shall have a burning time not exceeding 15 seconds and a glowing time not exceeding 60 seconds.

2. For an enclosed space intending for staying or escaping by more than 50 persons, paragraph 1e shall not apply if the furnishing:
   a. is located above a part of the floor where persons could be located;
   b. the vertical free room between the floor and the furnishing is less than 2.5 m, and
   c. is not mounted directly to the floor, staircase or ramp.
3. Material at or near equipment and installations producing heat shall comply with fire class A1 as referred to in NEN-EN 13501-1, or shall be non-flammable as determined in accordance with NEN 6064, if:
   a. a thermal radiation intensity can be emitted from the material which exceeds 2 kW/m^2 as determined in accordance with NEN 606, or
   b. the material can reach a temperature exceeding 90 °C as determined in accordance with NEN 6061.
4. In an enclosed space, there shall be no balloons filled with flammable gas.
5. The first to fourth paragraphs shall not apply to a non-common space.
6. Ministerial regulations may be enacted to lay down more detailed provisions for the contribution of furnishings to fire hazards.

Article 7.4 Fire safety of furnishings

1. Booths, stalls, shelves, podiums, and similar furnishing elements installed in a space accessible to the public shall be fire-safe.
2. The requirement of the first paragraph shall be deemed to be fulfilled if a part of the furnishing element facing the ambient air:
   a. is non-flammable as determined in accordance with NEN 6064;
   b. complies with fire class A1 as referred to in NEN-EN 13501-1;
   c. has a thickness of at least 3.5 mm and complies with fire class D as referred to in NEN-EN 13501-1;
   d. has a thickness of less than 3.5 mm and complies with fire class 4 as referred to in NEN 6065; or
   e. has a thickness of less than 3.5 mm and is glued to a part as referred to under c or d across its entire surface.
3. The first and second paragraphs shall not apply to a non-common space.

Article 7.5 Fire-hazardous substances

1. There shall be no fire-hazardous substance as referred to in Table 7.5 present in, on or near a structure.
2. The first paragraph shall not apply if:
   a. the permitted quantity per substance as given in Table 7.5 is not exceeded, with a total permitted quantity of 100 kilograms or litres for all substances;
   b. the substance has been properly packaged, where:
      1°. the packaging can withstand normal use;
      2°. the packaging carries an adequate risk statement, and
      3°. no contents can escape from the packaging unintended, and

c. the substance is used in observance of the risk statements on the packaging.

3. The first paragraph shall not apply to:
   a. fuel in the reservoir of a combustion engine;
   b. fuel in a lighting, heating or other heat-producing device;
   c. alcoholic beverages intended for consumption;
   d. gas bottles up to a total water volume of 115 litres;
   e. diesel oil, gas oil or light heating oil with a flash point between 61°C and 100 °C up to a total volume of 1 000 litres, and
   f. fire-hazardous substances whose presence is permitted by or pursuant to the Environmental Management Act [*Wet milieubeheer*] or the Living Environment Law (General Provisions) Act [*Wet algemene bepalingen omgevingsrecht*].
4. When calculating a permitted quantity as referred to in paragraph 2a, a package once opened shall be counted for its entire contents.
5. Notwithstanding paragraph 3e, the presence of a quantity of more than 1 000 litres of an oil type as referred to in that part shall be permitted if it is stored and used in such a manner that fire-hazardous situations and the spread of fire are adequately prevented in the opinion of the competent authority.

Table 7.5 Fire-hazardous substances

ADR class	Description	Packaging group	Permitted maximum quantity* in kg or l
2 UN 1950 spray cans & UN 2037 containers, small, gas	Gases such as propane, oxygen, acetylene, aerosols (spray cans)	N/A	50
3	flammable liquids such as certain solvents and acetone	II	25
3 excluding diesel oil, gas oil or light heating oil with a flash point between 61°C and 100°C	flammable liquids such as white spirit and certain inks	III	50
4.1, 4.2, 4.3	4.1: flammable solid substances, auto-decaying solid substances, and solid explosive substances in non-explosive state, such as friction matches, sulphur, and metal powders 4.2: substances susceptible to spontaneous ignition, such as phosphorus (white or yellow) and diethyl zinc 4.3: substances which produce flammable gases upon contact with water, such as magnesium powder, sodium, and calcium carbide	II and III	50
5.1	oxidising substances such as hydrogen peroxide	II and III	50
5.2	organic peroxiden such as dicymyl peroxide and di-propionyl peroxide	N/A	1

* Unit determined in accordance with Annex Ic to the Living Environment Law Decree [*Besluit omgevingsrecht*].

Article 7.6 Flammable, non-environmentally hazardous substances

1. Commercial storage of flammable non-environmentally hazardous substances shall be such that no unsafe situations can arise in case of fire for any building located on an adjacent plot or scheduled to be built on an adjacent plot pursuant to the zoning plan, which constitutes a fire compartment or part of a fire compartment as defined in Chapter 2, or for a playground, camping ground or storage facility for fire-hazardous substances.
2. The requirement of the first paragraph shall be deemed to be met in case of storage of wood, other than within a building, if:

a. in case of fire, the storage does not produce a radiation intensity greater than 15 kW/m^2 during a period of at least 60 minutes from the emergence of the fire;
b. the accessibility of the storage is ensured from two opposing sides, where a third side shall also have an entrance if it is longer than 40 m, and
c. the storage shall have an extinguishing water supply with a supply capacity of at least 90 m^3 per hour for a duration of at least four hours.

3. The radiation intensity as referred to in the second paragraph shall be measured at:
   a. the plot boundary, if the adjacent plot is a camping ground, a playground or a storage facility for fire-hazardous substances, and
   b. any point of the exterior partition of a building located on the adjacent plot.

Article 7.7 Storage in heating space

No flammable goods shall be stored or placed in a space with one or more heating appliances with a total nominal power exceeding 130 kW.

Article 7.7a Safe use of heater

1. A heater shall be used only if:
   a. the combustion air supply facility and the flue gas drainage device have not been blocked;
   b. the capacity of the combustion air supply facility, the flue gas drainage device, and the pipes connected to them is not less than the capacity necessary for a proper operation of the heater;
   c. the placement of the heater, including a connection pipe between the device and the flue gas drainage device, is fire-safe;
   d. the flue gas drainage device has been cleaned effectively, and
   e. a heater with a connection device for a flue gas drainage device has been correctly connected to such facility.
2. Placement shall be fire-safe as referred to in paragraph 1c if it is fire-safe as determined in accordance with NEN 3028.

Article 7.8 Residual risk of fire hazard and spread of fire

Without prejudice to the provisions contained in or enacted pursuant to this Decree, it shall be prohibited to place, throw or have any objects or substances, to perform any act or omission, to use or not to use any tools, devices or facilities, or to create any other impediments on obstructions, in, on, at or near a structure, such that:

a. a fire hazard is brought about, or
b. in case of fire, a hazardous situation is brought about.

Section 7.2 Safe escape in case of fire, new structures, and existing structures

Article 7.9 Guiding article

1. The use of a structure shall be such that a safe escape can be made in case of fire.
2. Where Table 7.9 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 7.9

functional use		applicable paragraphs				
		doors in escape routes	placement of seats and other furnishings	aisles	mitigation of injury risk	residual risk to safe escape in case of fire
	Article	7.10	7.11	7.12	7.13	7.14
	Paragraph	1 2 3 4	1 2 3 4 5 6	1 2	1 2 3 4 5	*
1	Residential function:					
	a for care with a UA > 500 m^2	1 2 - -	- - - - - -	1 2	1 2 3 - -	*
	b other care-related residential function	1 2 - -	- - - - - -	- -	1 2 3 4 -	*
	c other residential function	1 - 3 -	- - - - - -	- -	1 2 3 4 -	*
2	Assembly function:	1 2 - -	1 2 3 4 5 6	1 2	1 2 3 - -	*
3	Detention function	1 2 - -	1 2 3 4 5 6	1 2	1 2 3 - -	*
4	Health care function	1 2 - -	1 2 3 4 5 6	1 2	1 2 3 - -	*
5	Industrial function	1 2 - -	1 2 3 4 5 6	1 2	1 2 3 - -	*
6	Office function	1 2 - -	1 2 3 4 5 6	1 2	1 2 3 - -	*
7	Temporary accommodation function					
	a in a temporary accommodation building	1 2 - 4	- - - - - -	1 2	1 2 3 - 5	*
	b other temporary accommodation function	1 2 - 4	- - - - - -	- -	- - - - -	*
8	Educational function	1 2 - -	1 2 3 4 5 6	1 2	1 2 3 - -	*
9	Sports function	1 2 - -	1 2 3 4 5 6	1 2	1 2 3 - -	*
10	Shop function	1 2 - -	1 2 3 4 5 6	1 2	1 2 3 - -	*
11	Other functional use	1 2 - -	1 2 3 4 5 6	1 2	1 2 3 - -	*
12	Structure other than a building:					
	a road tunnel with a tunnel length exceeding 250 m	1 - - -	- - - - - -	- -	- - - - -	*
	b structure other than a building not listed above	1 - - -	1 2 3 4 5 6	1 2	1 2 3 - -	*

Article 7.10 Doors in escape routes

1. A door located in an escape route shall only be closed when persons are present in the structure, if such door can be immediately opened during an escape without using a key, at least to the minimum required width.
2. Notwithstanding the first paragraph, a door located in an escape route which starts in a space for locking persons in, as referred to in Article 6.25(6), shall be capable of being opened during an escape by using a key, at least to the minimum required width, provided the furnishings, the use, and the organisation are such that the level of fire safety envisaged by Article 7.9 is ensured.
3. The first paragraph shall not apply to a non-common escape route.
4. The first paragraph shall not apply to an escape route in a temporary accommodation space.

Article 7.11 Placement of seats and other furnishings

1. The furnishings of a space shall be such that:
   a. at least 0.25 m^2 of floor area is available for every person without a seat;
   b. at least 0.3 m^2 of floor area is available for every person without a seat, if inventory cannot shift or fall due to crowding;
   c. at least 0.5 m^2 of floor area is available for every person without a seat, if inventory can shift or fall due to crowding.

   The calculation of the available floor area per person shall be based on the floor area of the available staying space after deducting the surface area of the inventory.
2. In a space with more than 100 seats, the seats shall be interconnected or mounted to the floor, such that they cannot shift or fall due to crowding, if the seats are placed in more than 4 rows with more than 4 seats each.
3. In case of seats arranged in rows, there shall be a free space between the rows with a width of at least 0.4 m, measured between the perpendicular lines where the rows come nearest to each other.
4. If a table is placed between the seats in a row as referred to in the third paragraph, it shall not be located in the free space as referred to in that paragraph.
5. A row of seats which is adjacent to an aisle or exit at one end only shall have no more than 8 seats.
6. A row of seats which is adjacent to an aisle or exit at both ends shall have no more than:
   a. 16 seats, if the free space as referred to in the third paragraph is not more than 0.45 m, and the available width of the aisle or exit is at least 0.6 m;
   b. 32 seats, if the free space as referred to in the third paragraph is more than 0.45 m, and the available width of the aisle or exit is at least 0.6 m;
   c. 50 seats, if the free space as referred to in the third paragraph is more than 0.45 m, and the available width of the aisle or exit is at least 1.1 m.

Article 7.12 Aisles

1. Aisles between booths, stalls, shelves, podiums, and other furnishing elements in a space accessible to the public shall be at least 1.1 m in width.
2. An exit in a space as referred to in the first paragraph shall have a free available floor area to a length and width of at least the width of such exit.

Article 7.13 Mitigation of injury risk

1. Glass mounted to or below the ceiling shall be either safety glass or glass with an embedded wire-mesh reinforcement with a maximum mesh size of 0.016 m.
2. Textiles, film or paper in horizontal applications shall be supported by metal wire at intervals not exceeding 0.35 m or a metal wire in two directions with a maximum mesh size of 0.7 m.
3. Furnishings in an enclosed space shall not produce dripping in case of fire above any part of a floor intended for use by persons.
4. The first to third paragraphs shall not apply to a non-common space.
5. The first to third paragraphs shall not apply to a temporary accommodation space.

Article 7.14 Residual risk to safe escape in case of fire

Without prejudice to the provisions contained in or enacted pursuant to this Decree, it shall be prohibited to place, throw or have any objects or substances, to perform any act or omission, to use or not to use any tools, devices or facilities, or to create any other obstructions, in, on, at or near a structure, such that:

a. reporting or alerting in case of fire or fire-fighting is obstructed;
b. the use of escape paths in case of fire is obstructed, or
c. the saving of persons or animals in case of fire is obstructed.

Section 7.3 Other provisions for safe and healthy use, new structures, and existing structures

Article 7.15 Guiding article

1. The use of a structure, open premises or grounds shall be such that any hindrance, health risks or safety risks other than fire-safety risks to persons are adequately mitigated.
2. Where Table 7.15 gives rules for a given functional unit, the requirement of the first paragraph shall be deemed to be fulfilled for such functional unit by applying such rules.

Table 7.15

functional use	applicable paragraphs								
	overcrowding			asbestos fibres and formaldehyde			dilapidation	neat condition	residual risk
Article	7.16			7.17			7.18	7.19	7.20
Paragraph	1	2	3	1	2	3	*	*	*
1 Residential function:									
a caravan	-	2	3	1	2	3	*	*	*
b other residential function	1	-	3	1	2	3	*	*	*
All functional uses not listed above	-	-	-	1	2	3	*	*	*

Article 7.16 Overcrowding

1. A residential function shall not be occupied by more than one person per 12 m^2 of usable area.
2. A caravan shall not be occupied by more than one person per 6 m^2 of usable area.
3. The first and second paragraphs shall not apply to a residential function in which the Central Agency for the Reception of Asylum Seekers [*Centraal Orgaan opvang asielzoekers*] provides accommodation to asylum seekers.

Article 7.17 Asbestos fibres and formaldehyde

1. The concentration of asbestos fibres in a space of an existing structure that is accessible to persons shall not exceed 100 000 ve/m^3 as determined in accordance with NEN 2991.
2. The concentration of formaldehyde in a space of an existing structure that is accessible to persons shall not exceed 120 µg/m^3.

3. Ministerial regulations may be enacted to lay down rules for the calculation of the concentration as referred to in the second paragraph.

Article 7.18 Dilapidation

A structure, open premises or grounds shall not be used if the competent authority or an agency acting on its behalf has communicated that its use is dangerous due to dilapidation of a structure located in the vicinity.

Article 7.19 Neat condition of structures, open premises, and grounds

A structure, open premises, and grounds shall be in neat condition such that they do not produce any hindrance to persons or danger to the safety or the health of persons.

Article 7.20 Residual risk from use of structures, open premises, and grounds

Without prejudice to the provisions contained in or enacted pursuant to this Decree or the Environmental Management Act, it shall be prohibited to place, throw or have any objects or substances, to perform any act or omission or to use any tools, in, on, at or near a structure, such that:

a. smoke, soot or dust is spread in a manner disrupting or harmful to the surroundings;
b. nuisance is caused or could be caused to the users of the structure, open premises or grounds;
c. odour, dust or moisture or irritant material is spread or nuisance is caused by noise or vibration, including electrical vibration, or by harmful or objectionable animals, or by contamination of the structure, open premises or grounds, in a manner disrupting or harmful to the surroundings, or
d. a risk of collapse, falling or other danger is brought about.

Chapter 8 Construction and demolition works

Section 8.1 Preventing unsafe situations and reducing nuisance during construction and demolition works

Article 8.1 Guiding article

1. Construction and demolition works shall be carried out such that unsafe situations for the surroundings or nuisances harmful to health or usability are prevented as far as possible.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 8.2 Safety in the surroundings

During construction or demolition works, measures shall be taken to prevent:

a. injuries to persons on an adjacent plot or a public highway, public water or public green area adjacent to the construction or demolition grounds;
b. injuries to persons entering the construction or demolition grounds without authorisation, and
c. damage to or obstruction of roads, structures located within the road or other movable or unmovable property on an adjacent plot or on a public highway, public water or public green area adjacent to the construction or demolition grounds

Article 8.3 Safety plan

The measures to be taken pursuant to Article 8.2 shall be laid down in a construction or demolition safety plan. The measures shall concern at least the following:

a. the fencing off and locking of the construction or demolition grounds;
b. the accessibility and usability of fire extinguishing water supplies and other public facilities;
c. parking, locking or storing equipment, tools, materials, and installations in such a way that unauthorised persons cannot access them;
d. ensuring traffic safety;
e. preventing falling objects, and
f. the further conditions as referred to in Article 1.31.

Article 8.4 Undesirable noise

1. Construction or demolition works shall be carried out on working days between 7:00 and 19:00. These works shall be carried out without exceeding the daily exposure values given in Table 8.4 and the associated maximum exposure time in days for which the daily exposure is reached.

Table 8.4

Daily exposure	< 60 dB(A)	> 60 dB(A)	> 65 dB(A)	> 70 dB(A)	> 75 - < 80 dB(A)
Maximum exposure time	unlimited	50 days	30 days	15 days	5 days

2. The competent authority may grant an exemption from the first paragraph. Where construction or demolition works are carried out with an exemption from the competent authority on working days between 19:00 and 7:00 or on a Saturday,

Sunday or public holiday, they shall use the most silent techniques available and optimal working methods, irrespective of the provisions of the exemption.
3. The values given in Table 8.4 shall apply to façades, as defined in Article 1, in conjunction with Article 1b(5) of the Noise Protection Act [*Wet geluidhinder*], of homes and of buildings designated as "other" noise-sensitive buildings pursuant to Article 1 of the Noise Protection Act, and at the boundaries of grounds designated as noise-sensitive pursuant to Article 1 of the Noise Protection Act.

Article 8.4a Undesirable vibrations

1. In noise-sensitive spaces as defined in Article 1 of the Noise Protection Act and in staying spaces as referred to in Article 1.1e of the Noise Pollution Decree [*Besluit geluidhinder*], the vibrations caused by construction or demolition works shall not exceed the vibration intensity given in Table 4 of the 2006 Measuring and Evaluation Guideline, Part B "Nuisance to persons in buildings".
2. The competent authority may grant an exemption from the vibration strength as referred to in the first paragraph.
3. Ministerial regulations may be enacted to lay down rules for the method of determination as referred to in the first paragraph.

Article 8.5 Dust pollution

During construction and demolition works, measures shall be taken to prevent the visible spread of dust outside the demolition grounds.

Article 8.6 Ground water level

Any drainage of construction wells, pipe trenches, and other temporary excavations to facilitate construction works shall not produce changes in ground water levels which could jeopardise the safety, health or usability of adjoining objects.

Section 8.2 Waste separation

Article 8.7 Guiding article

1. Construction and demolition works shall be carried out such that any construction and demolition waste produced is properly separated.
2. The requirement of the first paragraph shall be deemed to be fulfilled by applying the provisions of this section.

Article 8.8 Separation of construction and demolition waste

Ministerial regulations may be enacted to lay down rules for the categories of construction and demolition waste to be separated when carrying out construction or demolition works, and for their storage and drainage on and from the grounds.

Chapter 9 Transitional and final provisions

Article 9.1 General transitional provisions

1. Any application for a building permit submitted prior to the entry into force of the present Decree, as well as any objection or appeal lodged against a decision with respect to such application, shall continue to be governed by the provisions of the 2003 Construction Decree [*Bouwbesluit 2003*], the Fire-Safe Use (Structures) Decree [*Besluit brandveilig gebruik bouwwerken*], section 2 of the Additional Safety Rules (Road Tunnels) Decree [*Besluit aanvullende regels veiligheid wegtunnels*], the Construction Regulation as referred to in Article 8(1) of the Act and the provisions enacted pursuant to it, in the version in force at the time of submission of the application.
2. Any application for a permit for fire-safe use submitted prior to the entry into force of the present Decree, as well as any objection or appeal lodged against a decision with respect to such application, shall continue to be governed by the provisions of the 2003 Construction Decree [*Bouwbesluit 2003*], the Fire-Safe Use (Structures) Decree [*Besluit brandveilig gebruik bouwwerken*], and the provisions enacted pursuant to those Decrees, in the version in force at the time of submission of the application.
3. Any application for a living environment permit for demolition, as referred to in Article 2.2(1)(a) of the Living Environment Law (General Provisions) Act [*Wet algemene bepalingen omgevingsrecht*], submitted prior to the entry into force of the present Decree, as well as any objection or appeal lodged against a decision with respect to such application, shall continue to be governed by the provisions of the Construction Regulation as referred to in Article 8(1) of the Act and the provisions enacted pursuant to it, in the version in force at the time of submission of the application. In such cases, a notification of demolition as referred to in Article 1.28 need not be submitted.
4. Any notification of use as referred to in Article 2.12.1(1) of the Fire-Safe Use (Structures) Decree [*Besluit brandveilig gebruik bouwwerken*], submitted prior to the entry into force of the present Decree, as well as any objection or appeal lodged against a decision with respect to such notification, shall continue to be governed by the provisions of the 2003 Construction Decree [*Bouwbesluit 2003*], the Fire-Safe Use (Structures) Decree [*Besluit brandveilig gebruik bouwwerken*], and the provisions enacted pursuant to those Decrees, in the version in force at the time of submission of the notification. Such a notification shall be considered equivalent to a notification of use as referred to in Article 1.18.
5. Any notification of demolition required by the Construction Regulation as referred to in Article 8(1) of the Act, submitted prior to the entry into force of the present Decree, as well as any objection or appeal lodged against a decision with respect to such notification, shall continue to be governed by the provisions of the Construction Regulation and the provisions enacted pursuant to it, in the version in force at the time of submission of the notification. Such notifications shall be considered equivalent to a notification of demolition as referred to in Article 1.28.

Article 9.2 Specific transitional provisions

1. Unless there is any change to the use of a structure or a space therein as prevailing at the time of entry into force of this Decree:
   a. Article 1.2(1) shall not be applied if application of the provisions related to it would allow a greater number of persons to be present in the structure or space than is permitted by Article 1.2(1);
   b. Articles 2.119 and 6.25(3) shall not be applied if application of the provisions for escape routes related to it would allow a lower capacity, expressed as a number of persons, than is permitted by Articles 2.119 and 6.25(3); and
   c. Articles 6.2 and 6.3 shall not be applied if the lighting system and the emergency power supply fulfilled Articles 2.55 and 2.64 to 2.67 of the 2003 Construction Regulation in the version in force immediately prior to the entry into force of this Decree.
2. Road tunnels with a tunnel length exceeding 250 m, opened to the public prior to 29 June 2006, shall not be subject to section 2.17 and to Articles 6.24, 6.29, 6.31, 6.41, 6.43, 6.44, and 6.46 to 6.48, until 1 May 2014.
3. Section 4.11 of the 2003 Construction Regulation in the version in force immediately prior to the entry into force of this Decree shall continue to apply until 1 January 2017 unless the zoning plan applicable to the construction contains provisions for bicycle parking spaces.
4. A document as referred to in Article 2.1.7 of the Fire-Safe Use (Structures) Decree in the version in force immediately prior to the entry into force of this Decree, that was issued prior to the entry into force of this Decree, shall continue to be considered a valid document as referred to in Article 1.17 of this Decree until it expires.
5. A document as referred to in Articles 2.2.1(9), 2.3.9, and 2.5.1 of the Fire-Safe Use (Structures) Decree, in the version in force immediately prior to the entry into force of this Decree, that was issued before 1 January 2014, shall be considered equivalent to a valid certificate as referred to in Articles 6.20(6) and (7) and 6.32(1) to (3a) until such document expires.

Article 9.3 Repeal of legislation

The 2003 Construction Decree [*Bouwbesluit 2003*], the Fire-Safe Use (Structures) Decree [*Besluit brandveilig gebruik bouwwerken*], and Section 2 of the Additional Safety Rules (Road Tunnels) Decree [*Besluit aanvullende regels veiligheid wegtunnels*] are hereby repealed.

Article 9.4 Entry into force

This Decree shall enter into force with effect from a date determined by Royal Decree, which may differ for distinct chapters or parts thereof.

Article 9.5 Short title

This Decree shall be cited as the 2012 Building Decree [*Bouwbesluit 2012*].

We order this Decree to be published in the State Journal [*Staatsblad*] together with its associated explanatory memorandum.

The Minister of the Interior and Kingdom Relations,

J.P.H. Donner

Annex 1 Fire alarm systems

		Usable surface area	Highest floor of the application measured above the measurement level	Scope of the security, pursuant to NEN 2535	Notification pursuant to NEN 2535	Inspection certificate as referred to in Article 6.20(7), required
		Larger than [m^2]	Higher than [m]			
1	Residential function					
	a Residential function for care					
	1 Care cluster residence for care on demand, in a residential building	-	-	Partial	-	-
	2 Care cluster residence for 24-hour care not in a residential building	-	-	Complete	-	-
	3 Care cluster residence for 24-hour care in a residential building	-	-	Partial	yes	yes
	4 Group care residence for care by appointment	-	-	Complete	-	-
	5 Group care residence for care on demand	-	-	Complete	-	-
	6 Group care residence for 24-hour care	-	-	Complete	yes	yes
	7 Other residential function for care	-	-	-	-	-
	b Other residential function	-	-	-	-	-
2	Meeting function					
	a for watching sport	-	-	-	-	-
	b child care for children younger than 4 years	200	-	Complete	-	-
		-	1.5	Complete	yes	yes
	C Other meeting function	-	5	Partial	-	yes
		-	50	Complete	-	yes
		500	-	Non-automatic	-	-
		1 000	-	Partial	-	yes
		5 000	-	Complete	-	yes
3	Cell function	-	-	Complete	yes	yes
4	Healthcare function					
	a health care with sleeping area	-	-	Complete	yes	yes
	b other health care function	-	20	Non-automatic	yes	-
		-	50	Partial	yes	yes
		-	4.1	Non-automatic	-	-
		250	1.5	Non-automatic	-	-
		500	-	Non-automatic	-	-
5	Industrial function					
	a light industrial function	-	-	-	-	-
	b other industrial function	-	20	Non-automatic	-	-
		750	4.1	Non-automatic	-	-
		1 500	1.5	Non-automatic	-	-
		2 500	-	Non-automatic	-	-
6	Offices function	-	20	Non-automatic	-	-
		-	50	Partial	-	yes
		500	4.1	Non-automatic	-	-
		750	1.5	Non-automatic	-	-
		1 500	-	Non-automatic	-	-
7	Hospitality function					
	a hospitality with 24 hour security	250	-	Complete	-	yes
	b other hospitality	250	-	Complete	yes	yes
8	Educational function	-	4.1	Non-automatic	-	-
		-	50	Partial	-	yes
		250	1.5	Non-automatic	-	-
		500	-	Non-automatic	-	-
9	Sports function	-	4.1	Non-automatic	-	-
		-	50	Partial	-	yes
		500	1.5	Non-automatic	-	-
		1 000	-	Non-automatic	-	-
10	Shop function	-	4.1	Non-automatic	-	-
		-	50	Complete	-	yes
		500	1.5	Non-automatic	-	-
		1 000	-	Non-automatic	-	-
		5 000	13	Partial	-	yes
		10 000	-	Partial	-	yes
		10 000	13	Complete	-	yes
11	Other application function					
	a Closed other application function for the garaging of motor vehicles	-	1.5	Non-automatic	-	-
		1 000	-	Complete	-	-

		2500	-	Complete	-	yes
	b Closed other application function for passenger transport	-	1.5	Non-automatic	-	-
		-	13	Partial	-	-
		1 000	-	Non-automatic	-	-
		2 500	-	Partial	-	yes
	c Other application function	-	-	-	-	-
12	Structure that is not a building	-	-	-	-	-

EXPLANATORY NOTE
2012 BUILDING DECREE

Contents general part

I General

1 Introduction

The 2012 Building Decree contains the regulations for building, re-building, and demolishing structures, the regulations for the condition and the use of existing structures, open properties, and grounds, and the regulations for safety during building and demolishing activities. These are the regulations which guarantee the minimum necessary quality of structures. Up until now these regulations were included in the 2003 Building Decree and the thereby associated ministerial regulations, the Occupancy of Buildings (Fire Safety) Decree, paragraph 2 of the Road Tunnel Safety (Supplementary Regulations) Decree, and all (418) municipal building ordinances.

The objectives of consolidating the regulations into one new decree are to enhance the consistency of building acts and regulations, to reduce the compliance load, and to improve the accessibility. This integration is fundamentally policy-neutral. It is not intended to increase or decrease the requirements. However, this Decree contains a considerable number of differences in comparison with the existing regulations. The differences are particularly connected with the standardisation of the system and definitions, the simplification of regulations (such as the fire safety regulations), the agreement with other legislation, the experiences with the application of the current regulations, European legislation, and commitments made to the Dutch Second Chamber (such as fine-tuning of the value for thermal insulation; the inclusion of regulations for a. outside storage/outside space with new houses, b. safe maintenance of buildings, c. sustainable building and d. building in safety zones and areas of attention for pool fire along basic network routes as referred to in the Transport Routes (External Safety) Decree (Dutch: *Btev*)).

The intention to this integration is announced by letter to the Second Chamber of 29 April 2008 (Parliamentary Documents II 2007/2008, 28 325, No 79). With the standardisation of the regulations from the municipal building ordinances also included in this decree, the last step is set in a course that is already announced in the letter of the State Secretary of Housing, Spatial Planning, and the Environment of 9 April 2002 (Parliamentary Documents II 2001/2002, 28 325, No 1). The regulations with regard to the submission of requests for a building permit (Decree on submission requirements for a request for a building permit, 2003, now included in the Decree on environmental law) and the regulations with regard to the use of structures (Occupancy of Buildings (Fire Safety) Decree, 20008) were all standardised earlier. The still remaining regulations with regard to the use of structures, open properties, and grounds and the regulations with regard to demolishing activities and safety during building and demolition now form a part of this decree. The intention is to allow this decree to come into force on 1 January 2012, on the understanding that section 2.16 with regard to building in safety zones and areas of attention for pool fire comes into force at the same time as the amendment of the Act on the transportation of dangerous substances and the Transport Routes (External Safety) Decree (Dutch: *Btev*—expected in the middle of 2012). The regulations of section 5.2 with regard to the environmental impacts of building materials used during the construction of new buildings and of section 6.12 with regard to working safely at height first come into force after the thereby associated methods of definition are determined (also expected in the middle of 2012).

Simultaneously with this extensive decree a so-called sweeping decree will come into force, including several additions and corrections. These decrees together form the final 2012 Building Decree.
At the same time the ministerial regulations belonging with this decree also come into force as well as a decree with technical amendments from other decrees which have been adjusted in the past to the 2003 Building Decree and the Occupancy of Buildings (Fire Safety) Decree. This mainly concerns amendments to references.

2 Fundament and scope

This decree is based on Articles 2, 3, 5, 6, and 120 of the Housing Act, as those articles read after the effective date of the Act to amendment of the Housing Act (simplification and rearrangement of the basis lower legislation) (Official Gazette 2009, 324, as amended by Official Gazette. 2010, 187). Stated change in the law comes into effect with this decree. On the basis of Article 2(1), of the Housing Act technical regulations are given by or by virtue of administrative order concerning:
- the building of structures;
- the condition of existing structures, and
- taking into use or using a structure.

On the basis of the second paragraph of that article regulations can be given by or by virtue of administrative order concerning:
- the condition of an existing open property or ground;
- taking into use or using an open property and ground;
- the demolition of a structure, and
- carrying out building or demolition activities.

On the basis of Article 2(3) of the Housing Act, regulations other than technical regulations are also given by or by virtue of administrative order concerning the taking into use or using a structure, the demolition of structures and carrying out building or demolition activities. This concerns among other things regulations about the notification of a use or demolition and about the availability of data and documents.
On the basis of Article 2(4), of the Housing Act, regulations other than technical regulations can also be given by or by virtue of administrative order concerning the building of structures and concerning the condition and the use of open properties and grounds.
On the basis of the fifth paragraph of that article, the regulations referred to in the first to fourth paragraphs can only be given from the viewpoint of safety, health, usefulness or environment.
On the basis of Article 3 of the Housing Act, reference can be made by or by virtue of an administrative order as referred to in Article 2(1) or (2) of that law to standards or parts of standards and to quality statements.
On the basis of Article 5 of the Housing Act, an administrative order as referred to in Article 2(1) of that Act is brought into line with technical regulations which concern building or are given by or by virtue of another administrative order.
On the basis of Article 6(1) of the Housing Act, it can be determined by or by virtue of an administrative order as referred to in Article 2(1) of that Act that in the interests of the preservation of monuments and historic buildings, a regulation issued for that about the building of a structure with an environmental permit for the building can be deviated from if it concerns the complete or partial renovation or alteration of a structure that can also be considered as an activity with regard to a listed building as

referred to in Article 2.1(1)(f) or Article 2(1)(b), of the Environmental Law (General Provisions) Act (Wabo). It is mentioned that Article 6(1) of the Housing Act also offers the possibility to determine by or by virtue of an administrative order as referred to in Article 2(1) that there can be deviated from a regulation issued for that purpose about the building of a structure with an environmental permit for the building to a level indicated by that regulation. No use is made of this exemption possibility in this decree. In variance from the 2003 Building Decree there is no exemption possibility included in this decree with the alteration of a structure but from the viewpoint of legal certainty and restriction of administrative burden a national uniform alteration level is included in the decree itself. On the basis of Article 6(2) of the Housing Act, the competent authority can grant exemption of a regulation given by or by virtue of an administrative order as referred to in Article 2(2) or (3) of that Act about the demolition or the carrying out of building or demolition activities in as far as that is permitted by or by virtue of this administrative order.
On the basis of Article 120 of the Housing Act, regulations can be given by or by virtue of an administrative order with a view to the observance of international obligations binding for the Netherlands which are related to or are linked with topics which are provided for by or by virtue of that act.
This decree is also based on the directive on construction products (Directive No 89/106/EEC of the Council of the European Communities of 21 December 1988 on the mutual amendment of the legal and administrative regulations of the Member States with regard to products intended for building) (OJ L 40), as amended by directive No 93/68/EEC of the Council of 22 July 1993 (OJ L 220), on the tunnel safety directive (Directive No 2004/54/EU of the European Parliament and of the Council of 29 April 2004 with regard to the minimum safety requirements for tunnels in the trans-European road network) (OJ L 101/56) and to the revised directive on the energy performance of buildings (Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings) (OJ L153).

3 Underlying principles

- With the drawing up of this decree the following general underlying principles are applied: as much as possible. legal certainty, equality before the law and national uniformity of technical and procedural regulations;
- maintainability and feasibility, and
- the restriction of administrative burden and costs of compliance.

Specific underlying principles:
Just as is the case with the Housing Act, this decree is based on the underlying principle that the customer/designer/builder of a structure and the owner/user of an existing structure, open property, and ground is himself primarily responsible for its quality, use, and maintenance. To ensure that the exercising of this responsibility does not lead to socially undesirable situations in the area of safety, health, usefulness, energy conservation, and environment, a statutory framework is therefore required. The regulations from this decree may not further restrict the exercising of this self-responsibility of citizens, undertakings and institutions than that which is strictly necessary with a view to the social interest. Among other things, this underlying principle is apparent in the application of a minimum level of the requirements as

well as in the free classification, the equivalence principle, and the principle of established rights (legally attained level).

Minimum level
This decree contains minimum requirements. The builder/designer/contractor and the owner/manager are always free to implement a higher quality level than is required as a minimum on the basis of this decree.

Free design
Free design means that the designer of a structure in principle has the freedom to think of solutions which match the wishes of the contractor and the market situation. The technical building ordinances in this decree are therefore focused on setting the regulations at as high a level as possible (to the greatest possible structural unit). One requirement on a property of a building is preferable above a number of requirements on building parts and one requirement on a building part is again preferable to a number of requirements for building materials.

Equivalence
The effect of the regulations of the decree is cast as much as possible in the form of functional requirements and the thereby associated performance requirements. An example of a functional requirement is that a structure to be built should be such that the occurrence of a flammable situation is sufficiently restricted (see Article 2.58). An example of a thereby associated performance requirement is that an exhaust for flue gas needs to be fireproof, determined in accordance with NEN 6062 (see Article 2.61). When this performance requirement is satisfied, then the thereby associated functional requirement is satisfied. On the basis of the equivalence as defined in Article 1.3 it is possible, as long as the functional requirement of the regulation in question is satisfied, to come up with a different solution instead of satisfying performance requirements given in the decree. Variance from a performance requirement can, for instance, be desirable or even necessary in relation to the nature or size of the structure in question or the spaces situated therein, with local circumstances or with the application of innovative materials, constructions, amenities or installations. There are technical solutions possible for ‘large fire compartments‘, or fire compartments with a larger size than to which this decree states performance requirements, possibly with an appeal on equivalence. Also see the explanatory notes to Article 1.3.

Established rights
The principle of established rights (legally attained level) implies that existing structures are spared as much as possible when existing technical requirements are increased or new requirements are introduced. Also with alteration regulations, reference is made in many cases to the legally attained level (for instance Article 2.74). Also see the explanatory notes to the concept ‘legally attained level’ in Article 1.1.

4 Setup of the decree

This decree contains nine chapters.
Chapter 1 General provisions, contains in the first article a number of definitions. The definitions used in the 2003 Building Decree and the Occupancy of Buildings (Fire

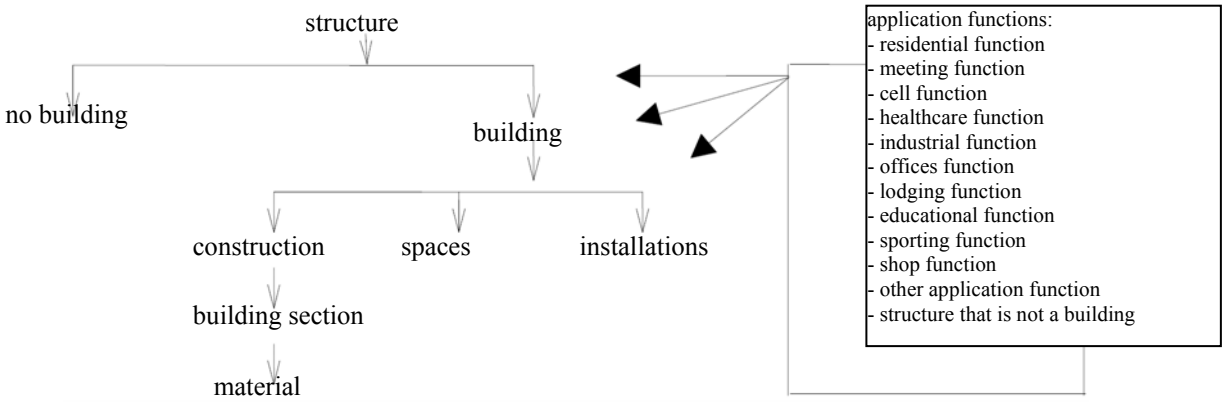
Safety) Decree are applied as much as possible. Just as in the 2003 Building Decree and—to the extent that it concerns equivalency—the Occupancy of Buildings (Fire Safety) Decree, further regulations are included in this chapter about the application of the equivalence principle, NEN standards, CE marking, and acknowledged quality declarations as well as regulations concerning listed buildings, temporary structures, and the alteration and relocation of structures. Also included are regulations about the use of certification and inspection plans. Chapter 1 furthermore contains regulations about the availability of information and documents and the duty to care in respect to installations present by or by virtue of the law. Such regulations originate from the Occupancy of Buildings (Fire Safety) Decree. Paragraphs 1.5 to 1.7 of chapter 1 contain regulations of a procedural nature concerning the requirement to notification of use, the demolition, and carrying out building and demolition activities. These regulations largely originate from the Occupancy of Buildings (Fire Safety) Decree (paragraph 1.5) and municipal building ordinances (paragraphs 1.6 and 1.7).
Chapters 2 to 5 contain technical building ordinances which are applicable to the alteration or building of structures and the technical condition of existing structures. These regulations largely originate from the 2003 Building Decree and the associated 2003 Building Decree Regulation. The regulations about fire classification and structural safety are adjusted to European developments. New regulations are also included with regard to building in risk zones and areas of attention for pool fire (see section 2.16), the required presence of an outside storage and outside space with newly built houses (see the sections 4.5 and 4.6), being able to open windows with newly built houses (see section 3.7) and the environmental impacts of building materials used during the construction of new buildings (see section 5.2). Chapter 6 contains regulations with regard to installations. These regulations originate for the most part from the 2003 Building Decree, the Occupancy of Buildings (Fire Safety) Decree, paragraph 2 of the Road Tunnel Safety (Supplementary Regulations) Decree, and municipal building ordinances. Section 6.12 contains new regulations about carrying out maintenance on buildings safely. In chapter 7 regulations are included about the use of structures, open properties, and grounds. As far as they concern fire-safe use, these regulations originate from the Occupancy of Buildings (Fire Safety) Decree. For the rest the regulations originate from municipal building ordinances.
Chapter 8 contains regulations about carrying out building and demolition activities. These regulations largely originate from municipal building ordinances and are adjusted to environmental requirements in respect to noise, vibration, and dust nuisances and the separation of building demolition waste.
Chapter 9 contains transitional and final provisions. The transitional provisions are, among other things, related to the use of regulations about the lighting system, the emergency power supply, the storage possibilities for bicycles at non-residential buildings, certification and inspection diagrams, the handling and flow capacity of escape routes, and the maximum number persons to be admitted in relation to an already made notification of use respectively an already earlier granted permit for the fire-safe use of a structure. Also included is a transitional law concerning permit requests and application and demolition notifications which have already been submitted prior to the time this decree comes into force.
The decree has one annex, which is related to requirements with regard to fire alarm and evacuation installations.

5 System and structure of the regulations

The table legislation was introduced in the Dutch 2003 Building Decree. Necessary use is made of these tables in this decree in chapters 2 to 8. The concept ‘application function’ is thereby a core concept. Each structure has at least one application function. There are 12 different main application functions, which are sometimes sub-divided into application sub-functions. Therefore under the main application function ‘residential function’ the following are distinguished as application sub-functions : the residential function for care (with a usage surface area > 500 m^2), the residential function for rental, the residential function in a residential building, the mobile home and the other residential functions. Such a sub-division is only relevant when it is strictly necessary for the desired level of the regulations. It is mentioned that the number of application sub-functions in this decree has considerably decreased. The requirements which are made on (a part of) a structure, are dependant on the application to which that (part of the) structure belongs. The type of application determines which requirements must be applied. According to the definition, ‘application function’ implies: the parts of a structure which have the same application and which together form an application unit. Parts are:

- spaces or groups of spaces;
- constructions or parts of constructions;
- installations or parts of installations, and
- (traffic and escape) routes or parts of them.

An application function contains all building technical and usage technical topics which are related to that application function. The first item refers to the private sections, and therefore the non-common spaces and facilities. The second item also refers to the common spaces and installations, such as for example a common traffic space and a lift in a residential building. This last item belongs to each apartment that is designated. Structures can be sub-divided into buildings and other structures (not being buildings). In the diagram below it is indicated in which way the decree places requirements on structures and parts of them from the point of view of application functions. The division of a structure in application functions determines the requirements which apply for the parts of that structure in question.



The question will first have to be answered whether it is a matter of a building or of a structure that is not a building. On the basis of Article 1(1)(c) of the Housing Act, a building is understood to be each structure that forms a covered space entirely or partially enclosed with walls which is accessible for people.

A building consists from the point of view of ‘spaces’ out of one or more application areas and ‘other areas’ such as technical areas and toilets. Usage areas can be sub-divided into occupancy areas or functional areas. And residential areas can be sub-divided again into one or more occupancy spaces and other spaces, and functional areas in one or more functional spaces and other spaces. Furthermore a building is divided into one or more fire compartments which can again be sub-divided into one or more fire sub-compartments. With regards to installations this concerns provisions for ventilation, provisions for gas, water and electricity, fire hose reels, and a fire alarm system.
It often occurs that different kinds or similar application functions are included in a building. Consider a shopping centre (shopping function) with houses situated above (residential function) or an office (office function) with a canteen (meeting function), a storage area (industrial function), and a fitness centre (sporting function). Constructions, building parts, and spaces which are part of these application functions must satisfy all requirements which the decree states for these application functions. When different requirements are stated for the same subject, it always applies always that the most stringent requirement must be satisfied.
An example of a multi-functional area which is used for several purposes is a sports centre which is also regularly used for holding exhibitions and the sitting of written examinations. The sports centre must then, along with the requirements for a sports function, also satisfy all requirements which apply for a meeting function (exhibition) and an educational function (written examinations). It also applies here that with different requirements for these application functions, the most stringent requirement of these three application functions is applicable.
This last does not apply if a space is only used occasionally for other purposes. For example, if people living in the neighbourhood are temporarily taken care of in a school, no structural alterations are necessary in that case. In such a case a non-structural solution can suffice, such as for example by calling in firemen.
It also happens that a structure built for a certain application function is then used more than occasionally or even permanently for another application function. Leaving aside any conflict with planning regulations, that other application function is permitted provided that the structure then at least satisfies the regulations which are applicable on the basis of this decree to an existing structure with that other application function. An example of this is the use of a single-family residence for a stay of a group of persons who have their place of residence elsewhere and are often temporarily and in changing compositions housed in the dwelling in question. For instance, it can concern the accommodation of temporary employees who have accommodation elsewhere but need temporary shelter in the vicinity of their work. In such a case the house in which they are temporarily housed is not used as a single-family house but is dependant on the circumstances, be it a residential function for room rental or for use as hospitality. Inasmuch as the single-family house does not satisfy the requirements which apply on the basis of this decree when it is used for residential use for room rental, respectively when being used for hospitality, the house must be technically altered to meet those requirements. The alteration regulations of this decree are applicable to that alteration. Also see the explanatory notes to Article 1.12 (alteration).
In the sections of chapters 2 through 8, functional requirements, performance requirements, and, where necessary, availability requirements are laid down and (in most cases) a control table is used.

Example:

Functional requirement:	A structure to be built is such that the occurrence of a flammable situation is sufficiently restricted.
Performance requirement:	An exhaust provision for flue gas is fire-resistant, determined in accordance with NEN 6062.

Control Article

The first article of each paragraph in a section (or assessment aspect) contains the functional requirement which gives the scope for the following regulations in that paragraph. In the second paragraph it is stated that the first paragraph (functional requirement) is satisfied if the performance requirements stated in the following articles are satisfied. On the basis of the control table it can be checked which regulations apply for which application,

Example: Table 3.1

application	types of applicable												
	noise from outside	industry, road or railway noise				airline noise					alteration	temporary structures	
Article	3.2	3.3				3.4					3.5	3.6	3.6
Paragraph	*	1	2	3	4	1	2	3	4	5	*	1	2
1 Residential function													
a mobile home	*	-	-	-	-	-	-	-	-	-	*	-	-
b other residential function	*	1	-	3	4	1	2	3	4	5	*	1	2
2 Meeting function													
a for child care	*	1	2	3	4	1	2	-	4	5	*	1	2
b other meeting function	-	-	-	-	-	-	-	-	-	-	-	-	-
3 Cell function	-	-	-	-	-	-	-	-	-	-	-	-	-
4 Healthcare function	*	1	2	3	4	1	2	3	4	5	*	1	2
5 Industrial function	-	-	-	-	-	-	-	-	-	-	-	1	2
6 Offices function	-	-	-	-	-	-	-	-	-	-	-	1	2
7 Lodging function	-	-	-	-	-	-	-	-	-	-	-	1	2
8 Educational function	*	1	-	3	4	1	2	-	4	5	*	1	2
9 Sporting function	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Shop function	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Other application function	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Structure other than a building	-	-	-	-	-	-	-	-	-	-	-	-	-

In most cases a complete table (with all 12 application functions) is included. In cases which for the most application functions the same regulations apply or even do not apply, a partial table is sufficient. In that case those application functions with the same control are combined under the name ‘all application functions not mentioned above’.

When the same performance requirements apply for all applications, the regulation suffices and a table is superfluous. This then follows in such a case from the second paragraph of the control article.
In several control articles, a third paragraph is included in which it is determined that the functional requirement does not apply to those application functions for which there is no regulation designated in the table. It is pointed out that it is then not permitted that further requirements are laid down for that application. In Articles 8 and 122 of the Housing Act it is strictly determined which powers the municipal government has in respect to building ordinances. It follows from this that the competent authority may not lay down requirements about application functions for which the legislator has no requirements.
A third paragraph is therefore superfluous when one or more performance requirements apply for all application functions. When there is no third paragraph included and there are application functions for which no performance requirements apply, then the functional requirement also applies for those application functions. This last is the case, for example, with all requirements for fire safety. The competent authority can then possibly prescribe that it must be shown to the satisfaction of that competent authority that the functional requirement is satisfied. This could occur, for example, when people regularly stay overnight in a barn while that barn has no fire sub-compartmentalisation. This does not mean incidentally that the competent authority with that assessment aspect (that section) may determine its entirely own requirements. The stated requirements must exactly satisfy the appropriate functional requirement.

Performance requirements
The performance requirements are included after the control article and (in most cases) after the control table. A performance requirement consists of a characteristic requirement, sometimes in the form of a boundary value, and if necessary a method of definition. The boundary value of, for instance, the heat resistance of an exterior dividing construction (3.5 m^2.K/W) is determined with a method of definition. For the method of definition reference is generally made to documents such as a NEN standard. This does not means that only this designated standard offers the solution. On the basis of the equivalence regulation in this decree (Article 1.3) it is permitted to present a different solution whereby the functional requirement is satisfied in an equivalent manner (see also, under 3). It is mentioned that in this decree the concept ‘requirement’ is also used along with the concept ‘regulation’. When the occasion arises, this has been chosen because from way back the concept requirement is used in all kinds of technical legislation. The use in this decree of both concepts, which in themselves have the same meaning, is positively appreciated by the practice and therefore supports the receptivity of the decree.

6 Contents of the decree, building technology

6.1 General

Although the integration in principle is policy neutral, such an extensive operation cannot take place without consequences for the content. It turned out to be inevitable that the new regulation in some cases turns out to be more or less severe. Several inconsistencies have also been removed. For example, the special situation that every cell and every hotel room (stay in accommodation) is in itself a separate application

has been scrapped. Such areas do remain as a separate fire sub-compartment but may from now on be considered with other areas in a jail or accommodation application. This makes the system from now on equivalent for all non-residential applications. After this each topic is assessed in respect of the most important differences to the 2003 Building Decree. It therefore concerns subjects which from now on are included in chapters 2 to 5 of this decree. It is mentioned that in the explanatory note for individual articles, at the beginning of each chapter under the heading 'general', the differences with regard to the 2003 Building Decree in that specific chapter are examined.

6.2 Quality level of structures

Just as the 2003 Building Decree, this decree contains technical quality requirements in respect to the building, alteration, and relocation of structures and in respect to the technical condition of existing structures.

New development

A structure to be built must always comply with the new building requirements of this decree.

Alteration

Under the 2003 Building Decree, it applied in principle that alterations must comply but that an exemption could generally be obtained to a lower level from the municipal council.

With regard to chapters 2 to 6 of this decree, pursuant to Article 1.12, the regulations for a structure to be built are applicable to the complete or partial renovation or alteration or the expansion of a structure unless indicated otherwise in the relevant section for a regulation. In this decree the new building level is therefore the general rule for alterations. On the basis of this alteration, actions should in principle at least comply with the quality level for new buildings. It is different when it is indicated in a regulation of a section that an alteration action must at least comply with stated specific level stated therein. That level can be an explicit alteration level indicated in the regulation or the so-called 'legally attained level'. See, for instance, Articles 2.5 and 2.12, in which with regard to several aspects of the strength of the building construction an explicit alteration level is prescribed, and Articles 3.44 and 3.74 in which, during alterations in respect to drainage provisions, respectively daylight, the legally attained level is required. When no specific quality level is prescribed for alterations in a paragraph of chapters 2 to 6, the general rule of Article 1.12 applies. Also see the explanatory notes to that article.

Legally attained level

In a number of sections of this decree it is prescribed that alterations must take place in accordance with the 'legally attained level'. This legally attained level is the current quality level of (the relevant construction component of) the structure in as far as that level is lawful and does not lie below the minimum level applicable for such an existing structure. That quality level is lawful as far as the quality of (the relevant component of) the structure is the result of the application of the technical regulations or the building permit which was applicable to the original building of the structure and to any later alteration(s) to it. This will be legitimate when there is no

question of a contravention of (technical) regulations during building or alterations, which means:

- when the structure at that time was built in accordance with the regulations applicable at the time;
- interventions requiring a permit which were carried out later in accordance with the applicable building permit(s), and
- interventions not requiring a permit which were carried out later in accordance with the technical building ordinances which were applicable at the time the intervention in question was carried out.

A regulation that alterations to an existing structure must take place in accordance with the legally attained level implies that the current quality level (provided it is lawful and not under the minimum level applicable for such an existing structure) may not fall below the legally attained level during the alterations to be carried out. If the actual quality level is higher than that prescribed for new buildings, then the level for new buildings in this decree applies as the legally attained level for that intervention. This means that for those aspects where the legally attained level is applicable, the competent authority when checking the building plan assumes this legally attained level. With permit-free structures, the owner of the building initially determines this himself, but the competent authority can act later if the legally attained level is not maintained. If a permit has been granted for a building plan, then this environmental permit indicates the legally attained level for that alteration. It is indeed not permitted to build or do alterations other than is provided for in that permit. Also see the explanatory notes on the definition of 'legally attained level' in Article 1.1.

Alteration with change of function

A change of the application function of a structure does not mean that the new application function must comply with the quality level for new buildings for that function. With a change of application function, for instance when an office building is transformed into a residential building, the regulations for existing buildings apply for the new application(s) as an absolute lower limit. If the new application is altered and the quality level of the structure is subsequently higher than the minimum quality level for the existing building, then that higher quality level applies as the legally attained level. If the alteration regulations require a specific quality level, then that specific level applies as the minimum quality level for the alterations, also if this is lower than the legally attained level. This makes it, for instance, possible in an old vacant office space with a height of, for example, 4.60 m to construct an intermediate floor for the creation of apartments, whereby the remaining height no longer satisfies the requirement for new buildings of 2.6 m.

The above also means that the new application function without alterations can be taken into use to the extent that the structure already at least complies with the regulations for the existing building for that new application function.

Relocation of a structure

The 'legally attained level' also plays a role with the relocation of structures. In reference to this see Article 1.15 and the explanatory notes to that article.

Technical condition of existing structures

For the quality level of a number of technical construction parts of a structure, it makes no difference as a rule whether or not the part in question was installed in the structure recently or (much) longer in the past. If, for example, the height of the ceiling of a space in accordance with the building permit granted at that time is 2.40 m, then that height, assuming that in the meantime no lowered ceiling has been fitted, will also still be 2.40 m after 10, 30 or 50 years. Some other parts of a structure can also be liable to an autonomous reduction in quality through ageing: windows, and doors can become difficult to close and roofing material can become porous through the course of time as a result of weather conditions. Also wear and tear can occur through the course of time, for instance, on staircase steps. As long as the level does not fall below the base level of the regulations for existing buildings, then (autonomous) reduction of the technical quality of the structure is to be considered acceptable. The quality level of such an outdated component is therefore also lawful when the actual quality is lower than the quality which resulted at that time by application of the regulations applicable during the building and later alteration(s). This is undesirable when due to the deterioration of the structure, danger for health or safety occurs. That would be the case when the level falls below the level for existing buildings from this decree. In that case provisions must be taken immediately to comply with the minimum level of the Building Decree. In some cases, repair to the level for existing buildings is insufficient due to the speed of the expected decay. This can be the case for instance with fire resistant coatings and impregnation agents.

6.3 Individual approach instead of occupancy class

In this decree the occupancy classes which were previously included in the technical building ordinances are replaced by an individual approach. The occupancy classes were intended as an instrument to introduce nuances into the severity of the regulations, dependent on the occupancy of a building or a part thereof. Since, in practice, the occupancy classes were experienced as too complicated and because there were no requirements stated for a higher occupancy than class B1, for example for heavily frequented places of entertainment, the system had its shortcomings. With a higher occupancy than class B1, the person in question must prove with an appeal on equivalence that his building plan offers a similar level of safety as intended with the relevant functional requirement. In practice, this regularly led to problems between the applicant of an occupancy permit and the competent authority.
The stated problems are removed with the individual approach. The new building ordinances and the associated tables are considerably simplified and are now also entirely in agreement with the directions for use of chapter 7, which were already based on an individual approach. It is the applicant for a permit for the building or for the fireproof use or of a notification of use who determines for how many persons a building or a part thereof is intended. He must indicate this occupancy when requesting a permit, respectively the notification of use. See Article 1.2 for further information about this subject and its explanation.

6.4 Division of areas and spaces in application functions:

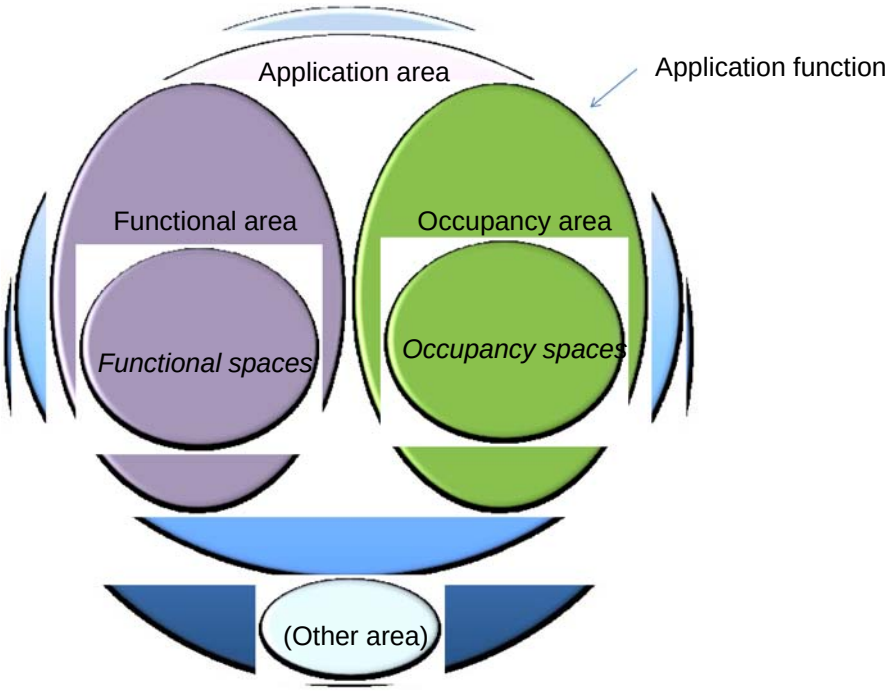
Along with the existing definitions ‘occupancy area’ and ‘occupancy space’ there are five new definitions for the further classification of an application: application area, functional area, sleeping area, function space, and sleeping space.
These new concepts are of importance for the establishment of requirements which do justice to the typical use of those specific spaces.

For naming the parts of the building intended for typical use, the 2003 Building Decree recognised the concepts ‘occupancy area’ and ‘occupancy space’. In addition, in the relevant article it was clarified whether it concerned an occupancy area or space intended for persons or alternatively not intended for persons. Various additions were also used to thereby focus requirements specifically on an area or space intended to be slept in. It was stated whether the area in question was intended to be slept in.
This decree assumes new definitions which express clearly the use for which an area or space is intended. Thereby, from coarse to fine, the following definitions are distinguished:

Application area: each area intended for the typical use of an application function is now called an application area.
In the situations where it is necessary to make a distinction between an area where people reside and an area where people do not reside (in the application area) a distinction is made between:

Occupancy area: an area in which the residence of persons is linked to the typical activities. Just as under the 2003 Building Decree an occupancy area can be sub-divided in occupancy spaces and/or other areas (whether or not functional spaces). The requirements laid down for occupancy spaces are so-called safety net requirements, directed towards the prevention of a detrimental division of an occupancy area from the viewpoint of safety or health.

Functional area: an area in which the residence of persons as part of the typical activities plays a role of secondary importance. In a functional area, just as in the 2003 Building Decree, the occupancy area not intended for the occupancy of persons can be sub-divided into occupancy spaces not intended for the occupancy of persons. However those occupancy spaces are now called functional spaces. The functional area can be divided into functional spaces and other spaces not intended for the occupancy of persons.
There can also be areas outside the application, such as toilets, bathrooms, technical rooms, and traffic spaces. The first diagram below shows diagrammatically the ranking of the spaces intended for this. Thereby the spaces situated outside the application area are referred to as the ‘other area’. The second diagram gives the ranking of occupancy areas and sleeping areas, and their division into occupancy spaces and sleeping spaces. An occupancy space can therefore lie in both a sleeping area as well as in an occupancy area. A sleeping space may only lie in a sleeping area. Also see the explanatory notes to the abovementioned definitions in Article 1.1.



Common and mutual space

As defined in Article 1.4 of this decree, every space may or may not be a common space, unless defined otherwise. This is a reversal of the old system by which a space could only be common when that was explicitly indicated.

Furthermore in accordance with Article 1.4 there can also be a question of a mutual space. Just as before in the Occupancy of Buildings (Fire Safety) Decree, the concept

‘mutual space’ appears in this decree in regulations focused on the residential function for room rental. A common space is a space which is used by several housing units situated in that residential function. Furthermore the definition ‘common’ now also applies for spaces which are used by several cells or accommodation. It covers, for instance, the common kitchen, toilet or bathroom. Also see the explanatory notes to Article 1.4.

6.5 Fire safety

General

From the final report of the deregulation commission of the building regulations discussion platform (2005): ‘In view of the fact that already for some time the relationship between fire compartments, fire sub-compartments, and types of escape routes has been difficult to fathom out even for experts, also because there is a matter of 2 different methodologies with application functions which involve sleeping, it is recommended to consider this in an entirely fundamental manner’. This quote makes it clear that the purpose of the building technical fire safety regulations of the 2003 Building Decree was open to improvement. The underlying principle in the 2003 Building Decree was the presence of two escape routes where in some cases a single route would be sufficient. The underlying principle in this decree is that one escape route with a guaranteed safety level is sufficient. This leads to regulations which, while maintaining the safety level, are easier to apply.

In principle, a fire sub-compartment must always have one escape route which must be usable for a safe escape outside the fire sub-compartment for at least 20, 30 or sometimes even 60 minutes. When an escape route becomes unusable, this is not a problem as long as there is another escape route which cannot become unusable at the same time. When the fire sub-compartment only has one escape route, the escape route must be protected against fire and smoke for at least 20, 30 or 60 minutes. Further information about how this works and the manner in which the intended fire safety level is processed in the various regulations is provided by the report ‘*Achtergronden bij de voorschriften voor ontvluchting*’ (Backgrounds with the regulations for escape), December 2009 (PRC – W0450.01.18).

Under the 2003 Building Decree an apartment was considered as a fire sub-compartment and an ordinary house as a fire compartment. There is no reason for such a distinction. In the future every house irrespective of its type is a fire compartment.

Objective and underlying principles

The objective of the fire safety regulations remains unchanged: the prevention of victims (injured and dead) and the prevention that a fire spreads itself to another building. The prevention of damage to the environment, listed buildings or social amenities or interests is not an objective of this decree, but of other legislation. The general underlying principles also remain unchanged compared to the 2003 Building Decree:

- within 15 minutes after the start of a fire that fire must be discovered and the persons threatened by that fire and the fire brigade must be alerted;
- within 15 minutes after that alarm the persons threatened by the fire must be able to escape without help from the fire brigade;
- the fire brigade is present and operational within 15 minutes following the report of the fire;

- the fire brigade must have the fire under control within 60 minutes after it started, which means that it must be prevented that the fire further spreads. At that time the last person threatened by the fire must be saved with the help of the fire brigade.

New definition of sub-fire compartmentalisation

Compared with the 2003 Building Decree, the concept 'fire sub-compartment' has been given a wider meaning. The new fire sub-compartment combines the qualities of the old smoke compartment with the qualities of the old fire sub-compartment. This removes the double requirements for escape.

With a fire the persons who find themselves for some time in a fire sub-compartment are protected against fire and smoke when the fire arises somewhere else in the fire compartment. The division into fire sub-compartments has the objective of allowing escape safely and without hindrance from the fire compartment to a safe place. In general it applies that a fire sub-compartment is the maximum spread area of fire and smoke and during a fire remains sufficiently long intact to be able to escape from the building independently or with help of third parties through other spaces than the space in which the fire has started. Therefore requirements are laid down on the quality of the partition between a fire sub-compartment and the surrounding (enclosed) spaces. To ensure that persons can leave the space in a timely fashion, a requirement is also laid down about the maximum walking distance within a fire sub-compartment. These regulations correspond for the most part with those in the 2003 Building Decree.

A fire sub-compartment must be able to provide an extra protecting function with houses and hospitality buildings (sleeping persons) and in particular with spaces in which persons are unable to rescue themselves (day-care centres), lie ill in bed (healthcare) or are locked up (cells). The persons present therein are not alert, cannot escape independently or open the door themselves, whereby there is extra time necessary for leaving the spaces in question. This extra protection is guaranteed by a higher resistance against fire penetration and fire spread and a restriction of the size of the compartment. With this last point the number of persons who are exposed at the same time to the threat by smoke and heat is also indirectly restricted before, possibly with help of emergency response officers or the fire brigade, they can leave the compartment. These regulations correspond for the most part with those for fire sub-compartments in the 2003 Building Decree.

Smoke movement of a fire sub-compartment and an escape route.

To be able to escape safely through a space, the amount of smoke in that space plays an important role. The current method of definition for the resistance against fire penetration and fire spread does not provide for cold smoke (cooled off smoke) in a sufficient restriction of the smoke penetration of a fire resistant partition construction of a fire sub-compartment. Regulations can therefore be laid down by ministerial regulations on the restriction of the smoke movement of a fire resistant partition construction of a fire sub-compartment.

New system for escape

The old regulations for escape were spread across several sections of the 2003 Building Decree. From now on the regulations are in one section, 2.12 Escape routes. Also in this way more uniformity has arisen in the requirements for the maximum walking distances, without influencing the safety level.

The underlying principle of the requirements is an escape route which starts at the place where the escape begins (at each point of a floor intended for persons) and ends

at a safe place. This only escape route must be safe over the entire length and therefore, starting from the exit of the fire sub-compartment in which the escape route begins within the fire compartment, it is a protected escape route and outside that fire compartment it is an escape route with extra protection or a safety escape route. This is not required if there are two independent escape routes, by which the underlying principle applies that if one escape route is obstructed, the other should still be available. The following types of escape routes are distinguished in this decree in an ascending order of protection:

- escape route;
- protected escape route;
- escape route with extra protection; and
- safety escape route.

Escaping within a fire sub-compartment

Persons who find themselves in a fire sub-compartment with a raging fire must be able to leave this compartment in time. For this reason a requirement is laid down for this first part of the escape route on the maximum walking distance in a fire sub-compartment and in some situations also on the number of exits from the fire sub-compartment.

Protected escape route

Outside a fire sub-compartment (but within the fire compartment in question) it must be possible to continue the escape to a safe place by a single escape route, unless the connected ground immediately after leaving the fire sub-compartment is already reached. To be able to escape safely during a longer time (at least 20 or 30 minutes) this escape route must be protected against a fire started in a fire sub-compartment. A protected escape route must therefore satisfy the following conditions:
the protected escape route passes within the fire compartment only through a traffic space and not through a(n) (other) fire sub-compartment;
the route offers adequate protection against the penetration of heat and smoke from the fire sub-compartment in which the fire rages (fire and smoke resistance of walls, floors, and ceilings);
in a space through which a protected escape route passes there may not be a high risk for the start or development of fire.
the protected escape route, if this lies in a confined space, has a limited length for the situation in which smoke may yet unexpectedly penetrate into this space;
only a restricted number of persons may be designated to a protected escape route, if there is no other independent escape route.
When there is a second escape route which is fire resistant separated from the first escape route, then the second escape route does not need to be a protected escape route and does not need to satisfy the abovementioned conditions. If one of the routes is blocked by fire or smoke, the second escape route then offers an alternative. Also see the explanatory notes to the definitions in Article 1.1.

Escape route with extra protection

When a lot of people are designated to a protected escape route, the escape route must have extra protection. This also applies for an escape route from a fire compartment in which people sleep or are otherwise confined to bed. Extra time, and therefore extra protection to be able to guarantee that time, is necessary in that case to

be able to escape safely. Important differences between a protected and an escape route with extra protection are:
the escape route with extra protection, in contrast to a protected escape route, may not lie in a fire compartment. This gives a smaller chance of fire in the space and offers a greater protection against the penetration and spread of fire from another space;
the risk of the development of fire is further restricted in a space through which an escape route with extra protection passes;
there may be no more persons designated to a single escape route with extra protection than to a protected escape route;
at a child care centre, in health care facilities with a sleeping area, hospitality, and with schools and education, the walking distance in an escape route with extra protection may not be less than with a protected escape route. Also see the explanatory notes to the definitions in Article 1.1.

Safety escape route
Whenever more than 150 persons make use of an escape route with extra protection or if for other reasons a higher safety level is necessary and there is no independent second escape route available, the escape route must be a safety escape route. A safety escape route is an escape route with extra protection which is preceded by a smoke airlock. With a safety escape route there are no restrictions placed on the walking distances or the number of persons who can make use of that escape route. In contrast to the regulations of the 2003 Building Decree which were restricted to a safety stairwell, the safety escape route can be applied both horizontally as well as vertically. Also see the explanatory notes to the definitions in Article 1.1.

Escape from a residential function
On the basis of the 2003 Building Decree, a dwelling located in a residential building must lie in a separate fire sub-compartment and a dwelling not located in a residential building must lie in a separate fire compartment. From now on every house, whether or not situated in a residential building, must lie in a separate fire compartment. The maximum walking distance from the house to an exit is made to correspond to the maximum walking distance in a fire sub-compartment of a non-residential building. From now on it concerns a corrected walking distance of at most 30 m from a point in an occupancy area to an exit from the house. In a residential building the level of protection in an escape route located outside a house is not dependent on the number of persons that is designated to that escape route and the walking distance over an escape route with extra protection in a common traffic space is also not limited. In the place of this for residential buildings with a total floor area of an occupancy area of more than 600 m^2, a requirement applies for the minimum width of the staircase (1.2 m) in the stairway through which the escape route passes. This corresponds to the width requirement of a staircase in accordance with ‘Table B’ in the 2003 Building Decree.
Requirements are laid down for dwellings with regard to the self-closing of front doors just as under the 2003 Building Decree. Therefore the possibility still remains that an escaping person leaves the front-door open so that early smoke can enter into a common escape route with the risk that this becomes unusable. For this reason it is prescribed that the single (extra protected) escape route in a common traffic space of a residential building may not pass along a movable construction component of

another residential function. This condition does not apply if it is possible to escape from the dwelling in two directions at traditional flats with a communal entrance hall or if the escape route is a safety escape route which passes through a stairway.

Two or more escape routes
The requirements for the single protected escape route, escape route with extra protection or safety escape route are not applicable if an independent second (alternative) escape route is available. The underlying principle thereby applies that during a fire, during sufficient time at least one escape route remains available to be able to escape safely. The second escape route is independent of the first escape route if the resistance to fire propagation and flashover (Dutch *wbdbo: weerstand tegen branddoorslag en brandoverslag*) between these escape routes, insofar that they pass through the same fire compartment, is at least 30 minutes and these escape routes after leaving the fire compartment pass through different fire compartments. The exception to this is that in an escape route in a stairway in which a difference in height of more than 8 m is spanned there must always be an escape route with extra protection, even if there is an independent second escape route.
With the use of two escape routes, it remains possible to open up a sub-fire compartment by means of one aisle or corridor if escapes can be made in two directions, the escape routes in this aisle or corridor is at least a protected escape route, and the two escape routes outside this space are two independent escape routes. The walking distance in the aisle or corridor may, if the space is a confined space, not be greater than 30 m in both directions.
Existing buildings
For existing buildings a different level of requirements applies on several points than the abovementioned regulations for new buildings. The most important differences are related to:
- the protected route;
- the smoke movement;
- limiting the walking distances;
- two independent escape routes, and
- the handling and flow capacities.

Protected route
In the regulations for existing buildings there is no mention of a protected escape route but of a protected ‘route’. With this concept the level of requirements remain almost equal to the level of requirements for the previous smoke-free escape route and established rights in the existing building are not affected. A protected route is comparable with the protected escape route with new buildings. The difference is that the protected route, as previously, through a traffic space (outside the sub-fire compartment in which the escape route begins) may also pass through or along another space. Therefore, for instance, in healthcare a counter or an open waiting room on the traffic space through which an escape route passes is permitted and in a penal institution for instance a recreation room which is in open connection with that escape route. The protected route may also pass through a different sub-fire compartment than the compartment where the escape route begins. This may not of course cause or maintain an unsafe fire situation.

Smoke movement

Regulations can be given by ministerial regulations for new buildings about the permeability of smoke of an internal partition construction for which, from now on account is also taken of cold or cooled off smoke. To prevent a toughening of requirements for existing buildings, the requirement based on NEN 6075 for the resistance against smoke movement (Dutch: WTDR) remains applicable.

Restricted limitation of walking distances
The requirements on walking distances for existing buildings are not stricter than in the 2003 Building Decree of existing buildings.

Two independent escape routes
If two escape routes starting from the exit of a sub-fire compartment pass through the same space, that space, in contrast to the requirements for new buildings, does not need to be a protected or extra protected space. A maximum walking distance does apply within that space and it must be possible to escape in two directions.

Handling and flow capacity
From now on the existing building requirements can also be laid down for the handling and flow capacity of escape routes. To avoid that through the regulations to be laid down by ministerial regulations all earlier granted permits for fireproof use and submitted notifications of use must again be re-examined, a transitional provision is included in chapter 9 so that situations which were earlier considered to be safe, for instance during an application for a building permit, a notification of use or a request for a permit, can be maintained without amendment.

6.6 Outside storage and outside space

Until 2003, requirements were laid down on the presence of an outside storage with every house and an outside space with apartments. Those requirements lapsed at that time because it was expected that the market in this area would be sufficiently self-regulating. In practice it turned out that since then the number of houses and apartments built without outside storage or outside space has steadily increased, despite the fact that from various studies on housing needs it appears that residents find these facilities important.
An outside storage is of particular importance to easily and safely store bicycles and thereby stimulate the use of bicycles. Furthermore in many cases the erection afterwards of an outside storage is not always possible and an outside space is hardly or not achievable. It has therefore been decided to re-write the regulations for storage space and outside space. For the storage a fixed minimum surface area applies for each house, irrespective of the size of that house. For an outside space a surface area of at least 4 m^2 applies for each dwelling.

6.7 Cells and other spaces for locking people up

The 2003 Building Decree only recognised the cell function and cell building. In this decree not only the cell function but also the cell is defined. Some regulations also discuss (other) spaces for locking people up. These last spaces are spaces which are not cells and therefore do not lie within the cell function. Such spaces do not need to satisfy the regulations for the cell or the cell function. With the introduction of this distinction between the cell and other spaces for locking people up, it becomes clear

which requirements other spaces in which persons are held against their will must satisfy.
See for an explanation of the concepts ‘cell’ and ‘cell function’ the explanatory notes to Article 1.1.

Apart from the cell there are also other (occupancy) spaces for locking people up. Such spaces occur in police stations, courthouses, railway stations, airports, and healthcare buildings and are designated as observation room, transient room, holding room, interrogation room, waiting room or isolation room. Such a room can, for instance, also be a sports centre, an education room or a shopping area in a jail or a house for the mentally handicapped or a shopping area of a jeweller that has extra security.
Such a space for locking people up is not a cell as intended in this decree but a normal occupancy space which mostly lies with a restricted number of other occupancy spaces in a fire sub-compartment, by which there is no fire resistant partition construction at the level of a fire sub-compartment present between the spaces. Just as with every other occupancy space it must be possible for people to immediately open the door themselves during a fire. This is not the case. Therefore the layout, the use, and the organisation of the space must be such that the intended fire safety level is guaranteed (see Article 7.10). This means among other things that the layout must be sober and almost fireproof and that smoking must be prohibited.
A different example of a regulation where the space for locking people up plays a role is Article 6.25(6) that places requirements on a door in an escape route which begins in a space for locking people up. Insofar in this decree as no specific requirements on the space are laid down for locking people up, then for such a space the normal regulations for an occupancy space of the application function in question apply.

Equivalent fire safety with other (occupancy) space for locking people up
With regard to fire safety it makes no difference where someone stays. For building ordinances the underlying principle applies that people must be able to escape from a fire safely. Special building technical requirements apply for a cell. These do not apply for an ordinary occupancy space in which persons are locked up. For an occupancy area, not being a cell, where persons can be locked in, a solution must therefore be chosen which offers equivalent safety during fire.
The competent authority assesses the measure(s) proposed by the requestor of a permit, user or owner of the building for that other space for locking people up at an equivalent fire safety level compared to every other normal occupancy space. If necessary, advice about this can be obtained from the Advisory Committee on the Practical Application of Fire Safety Regulations (www.adviescommissiebrandveiligheid.nl)). This site also offers further information on this subject.

6.8 Sustainable construction

In section 5.2 Environment in which requirements for sustainable construction are already included in the policy memo ‘Sustainable construction’ of 19 February 1998 (Parliamentary Documents II 1997/98, 24 280, No 160) the intention was stated to embed the permanent measures of the National Packet on Sustainable Construction, in use at that time, into the statutory regulations. To this end, the so-called fifth pillar

'Environment' was included in the 1991 Building Decree at that time and later in 2003 Building Decree. With Articles 5.8 and 5.9 completion is now given to the intention to reduce the harmful environmental impacts of material usage with the new building of houses, residential buildings, and office buildings. Also see also explanatory notes to in section 5.2.

6.9 Mobile homes

The number of building technical regulations for mobile homes has been greatly reduced and where possible brought in line with the general regulations for the other forms of residence. Additionally, for this special form of residence, typical regulations such as for instance the ceiling height of 2.1 m apply. The 2012 Building Decree also makes it possible to build mobile homes which can be moved over the road.

6.10 Tunnel safety

For road tunnels longer than 250 m, the regulations from the 2003 Building Decree Regulation and paragraph 2 of the Road Tunnel Safety (Supplementary Regulations) Decree are included in this decree. These regulations find their origins in the tunnel safety directive (Directive No 2004/54/EU of the European Parliament and the Council of 29 April 2004 with regard to the minimum safety requirements for tunnels in the trans-European road network (OJ L 101/56).

6.11 Safety zones and areas of attention for pool fire

Regulations are included in this decree for building in so-called safety zones and areas of attention for pool fire. These regulations will come into force at the same time as the amendment of the Act on the transportation of dangerous substances and the Transport Routes Decree (expected in the middle of 2012).

7 Content of the decree, installations

7.1 General

The regulations with regard to installations are included in chapter 6. Up until now these regulations were spread over the 2003 Building Decree, the 2003 Building Decree Regulation, the Occupancy of Buildings (Fire Safety) Decree, and the municipal building ordinances. Insofar as they were included in the 2003 Building Decree or 2003 Building Decree Regulation, there was a functional requirement with a specification in performance stipulations. In the Occupancy of Buildings (Fire Safety) Decree and the municipal building ordinances it was predominantly a matter of performance requirements or of functional requirements without being specified in performance stipulations. Now these stipulations are combined, a functional requirement with a specification in performance stipulations is included with all topics of chapter 6. This is also of importance for the assessment of an appeal on equivalence as intended in Article 1.3.
The most significant amendments in respect to the statutory regulations which were in use prior to the implementation of this decree are included below.

7.2 Electricity, gas, and drinking-water supply

Until now the regulations for a number of application functions contained the obligation to provide electric, gas, and/or water facilities. Those obligations have

lapsed in this decree. From now on it is only determined that if a structure has such a provision, then that provision must be safe or healthy.

7.3 Lighting

Previously the lighting intensity of a lighting installation in certain spaces must be at least 10 lux (new buildings), respectively 1 lux (existing buildings). In this decree limiting values for a lighting intensity of at least 2 lux have been included for new buildings as well as existing buildings. It is thereby assumed that a lighting intensity of at least 2 lux is sufficient to be able to leave a structure safely. A transitional provision is included in chapter 9 on the basis of which in some cases the regulations of the 2003 Building Decree may remain applicable.

7.4 Emergency power supply

Previously there was an obligation with regard to occupancy spaces for more than 115 persons (new buildings), respectively 120 persons (existing buildings) to connect the lighting installation in that space to a provision for emergency power. In consultation with the fire brigade, a general lower limit of 75 persons is included in this decree. In chapter 9 of this decree a transitional regulation is included for all existing occupancy spaces for more than 75 persons. On the basis of this the boundary value which previously applied for such spaces remains applicable.

7.5 Drainage of domestic waste water and rainwater

The regulations on the drainage of domestic waste water and rainwater are adjusted to the regulations regarding domestic waste water and rainwater which are included in the environmental regulations as an extension of the EU directive on urban waste water. This adjustment means that the environmental regulations prescribe how discharging may or must take place and that this decree arranges the physical-technical consequences of the connection on the public sewage system, respectively the public rainwater system.

7.6 Fire alarm system

The regulations about the fire alarm system are adjusted as a result of the report of a working group ‘fire alarm system’. Apart from several other changes in limiting values in the table belonging to these regulations, the most important change is that the number of cases in which a fire alarm system must directly notify the regional of emergency centre of the fire brigade (Dutch: RAC) has been substantially reduced. The regulations in respect of so-called ‘dead ends’ in traffic spaces with only one escape route have been clarified.

7.7 Evacuation alarm system

For clarification, a regulation about the requisite type of installation has been added to the regulations regarding the evacuation alarm system.

7.8 Dry extinguishing pipes

Up until now dry extinguishing pipes were only required in buildings with a floor higher than 20 m (vertical extinguishing pipes). In the ministerial regulations with this decree, regulations can be given from now on for such pipes in deep buildings (horizontal extinguishing pipes). Such extinguishing pipes can also be necessary in such buildings to be able to combat a fire.

7.9 Fire Extinguishing System

As a result of a study regarding the question about which elements of the so-called fire protection concepts of the Ministry of Home Affairs lend themselves for inclusion in the statutory regulations, a regulation has been added to the existing regulations about the fire extinguishing system regarding the highest permitted distance between the fire extinguishing system and a fire brigade entrance.

7.10 Locations for fire vehicles

A regulation has been added to the existing regulations about fire engines for the implementation of this decree regarding the highest permitted distance between those locations and a fire brigade entrance.

7.11 Fire brigade entrance

Until the implementation of this decree, the obligation to have a fire brigade entrance was linked to the obligation to have a fire alarm system with direct notification to the RAC. With the view to reducing the number of cases in which a fire-alarm system must notify the RAC, that link is not continued in this decree. In connection with this there is an obligation in this decree to have a fire brigade entrance coupled to the nature, the location, respectively the use of the structure.

7.12 Safe maintenance of buildings

In compliance with commitments made to the Second Chamber of Parliament, regulations are included in this decree about the safe maintenance of newly built buildings. On the basis of this the applicant for a permit for the building must be able to sufficiently demonstrate that regular building maintenance can be carried out safely. If necessary building linked solutions can be included for this in the building plan, such as a window-cleaning system.

7.13 Residential use for room rental

The underlying principle with the new regulations for residential use for room rental is that it must be possible to warn the residents in time. Until the implementation of this decree it was compulsory in certain cases to have a fire alarm system, sometimes complemented with a smoke detector. In the regulations of this decree for residential use for room rental, the general obligation is included to have smoke detectors (just as this obligation also applies for the planned building for residential use), complemented with a smoke detector in every occupancy space. The link of a fire alarm system to fire compartmentalisation, a second escape route, and the height are removed. In combination with the amendment of the definition of room-rental, this amendment leads to a considerable simplification of the regulations with a constant safety level.
See for the remaining changes the explanatory notes of the individual articles in chapter 6.

8 Content of the decree, the use of structures, open properties, and grounds

8.1 General

Chapter 7 is to a certain extent a new chapter. In this chapter the regulations are included with relation to the use of structures, open properties, and grounds. Up until now these regulations were mainly included in the Occupancy of Buildings (Fire Safety) Decree and the municipal building ordinances. Until now they were only formulated as a performance requirement. In an attempt to achieve unity in the systems, in this decree the various sections in chapter 7 are now also provided with a functional requirement. For an overview of the various topics which are organised in chapter 7, reference is made to the explanatory notes in that chapter. Below is a brief summary of the new setup of the regulation with regard to asbestos fibres and formaldehyde.

8.2 Restriction of concentration of asbestos fibres and formaldehyde

Until this decree came into force, regulations about concentrations of asbestos fibres and formaldehyde were included in the regulation 2003 Building Decree. The scope of those regulations was restricted to concentrations which originated from building materials. Excessive concentrations of asbestos fibres and formaldehyde in a space accessible for people can however also originate from other sources, for instance from ventilation ducts (asbestos) or from material that is used for the furnishings of the space. Since from the viewpoint of health it is not relevant from which source an excessive concentration originates, the regulation in question from the 2003 Building Decree Regulation in this decree is no longer formulated as a building technical regulation but as regulation about the use of structures, so that from now on if there is excessive concentration, action can be taken irrespective of the source of the concentration. See Article 7.17.

9 Content of the decree, building, and demolition activities

Chapter 8 is also to a certain extent a new chapter. In this chapter regulations are included with regard to the demolition of structures, the actual execution of building and demolition activities and in relation to waste separation. Up until now these regulations were included in the municipal building ordinances and the environmental regulations. In an attempt to achieve unity in the systems in this decree the three sections in this chapter are now also provided with a functional requirement.

10 Feasibility and enforceability, judicial

10.1 Building

On the basis of Article 1(1), opening lines and under a, of the Housing Act for the application of that determined by or by virtue of that law, ‘building’ is understood as: the placing, entirely or partly building, renovating or alteration and the extension of a structure. On the basis of Article 1(3) of that Act under ‘structure’ it is also understood as the installations which form a part of that structure. The placing and

such like of an installation being part of that structure therefore also fall under the description of ‘building’ in the sense of this Act.
On the basis of Article 2(1)(a) of the Environmental Law (General Provisions) Act (Wabo) it is forbidden to build without an environmental permit from the competent authority. Therefore, on the basis of Article 1(1) of that Act, the same is understood under ‘building’ as in the Housing Act. On the basis of Article 2(1)(a) of the Environmental Law (General Provisions) Act (Wabo) the intended permit must be rejected if the request and the thereby supplied information and documents do not demonstrate in the judgement of the competent authority that it is likely that the building of the structure to which the request is related, satisfies the regulations which are laid down by or by virtue of an administrative order as referred to in Article 2 or 120 of the Housing Act. The regulations which are alluded to in that section of the article are the regulations which are included in this decree about the building of structures. From the stated articles from the Environmental Law (General Provisions) Act (Wabo) it ensues that the permit for building must be rejected if the building for which a permit is requested does not satisfy the regulations which are included in chapters 1 to 6 and 8 in this decree with regard to building. The regulations against which requests for an environmental permit for building on the basis of Article 2.10(1)(a) of the Wabo must be checked were included up to the effective date of this decree in the 2003 Building Decree, the Occupancy of Buildings (Fire Safety) Decree, paragraph 2 of the Road Tunnel Safety (Supplementary Regulations) Decree, and the municipal building ordinances. With the coming into force of this decree these regulations are indeed included in this decree but the assessment framework on the content for requests for a permit for building is hardly changed. The most important differences with regards to the content in that assessment framework ensue on the one hand from the deletion of several regulations from the ‘old’ assessment framework and on the other hand the addition of several new regulations to this decree. At the same time that this decree comes into force a change of the Ministerial Regulations on Environmental Law (Mor) comes into force whereby the regulations about the submission requirements for the request for a permit for building are adjusted to those changes.
On the basis of Article 2(1), of the Environmental Law (General Provisions) Act (Wabo) regulations are laid down by or by virtue of an administrative order with regard to the manner in which the request for an environmental permit takes place and the information and documents which are supplied by the applicant with the view to the ruling on the request. These regulations are included in the Environmental Law Decree (Bor) and the Ministerial Regulations on Environmental Law (Mor). It is up to the applicant of the permit to sufficiently show through the request for a permit and the thereby associated information and documents to the satisfaction of the competent authority that the building plan satisfies the regulations included in chapters 1 to 6 and 8 of this decree which are applicable to the building.
Incidentally not all building activities require an environmental permit. On the basis of Article 2.1(3) of the Environmental Law (General Provisions) Act (Wabo) it can be determined by order in council that with regard to the thereby designated activities as referred to in the first paragraph (such as ‘building’) in the thereby indicated categorised cases, the prohibition stated in that paragraph does not apply. On the basis of that article a summary is given in Annex 2 of the Environmental Law Decree (Bor) of categories of building activities which may be carried out without an environmental permit being required for building.

On the basis of Article 1b(1) of the Housing Act, unless a permit for building as referred to Article 2(1)(a) of the Environmental Law (General Provisions) Act (Wabo) explicitly permits it, it is forbidden to build insofar that the regulations applicable to the building referred to in Article 2(1), opening lines and section a (= new building regulations of this decree) are not satisfied.
From this composition of legal regulations it ensues that 'building', irrespective of whether a permit is required or that building is permit-free, must satisfy the regulations which are included in chapters 1 to 6 and 8 in this decree about building (unless the exception as referred to in Article 1b(1) of the Housing Act occurs).

10.2 Alterations

Perhaps unnecessarily it is commented that in principle it makes no difference whether a construction activity concerns new buildings or alterations to a structure. In both cases that are stated above, the term 'building' is applicable. With regard to the requirements level that is included in the regulations of chapters 1 to 6 of this decree, in respect to building, the distinction between building and alterations can certainly be of significance. In certain cases the application of the new building requirements of this decree would have an unreasonable effect. This occurs especially with alterations to an existing building. With regard to (partial) alterations, a specific alteration level is often included in the regulations of chapters 1 to 6 that is situated between the new building level and the level for existing buildings. The new building level generally applies for complete re-building. Please refer further to part 6.2 and also Article 1.12.
Furthermore of importance is that, if a structure is partly renewed, altered or enlarged, the regulations included in this decree on the basis of Article 4 of the Housing Act are only applicable to this renewal, alteration or enlargement. The regulations about building are therefore only applicable to the alteration in question and not to a part of an existing structure that is not being altered. In the report of the written consultation about the amendment of the Housing Act which came into force on 1 April 2007, the following passage is included in respect to this: 'During building or alteration activities to an existing structure, the new building regulations apply in principle, but exemption can be granted for most new building regulations to the quality level for existing buildings. Incidentally those new building regulations are then only applicable to that building intervention and therefore not to all parts of that structure which remain unchanged.' (Parliamentary records II, 2005–2006, 29 392, No 14, p. 2). Only the physical interventions during the alterations therefore need to satisfy the regulations in question which are applicable on the basis of this decree, and the parts of the space which remain unchanged during the alterations must not be taken into consideration. For example when a skylight is installed in a house in a space which prior to this intervention was used as an unnamed space (such as a storage space) and which will be used as occupancy space after the intervention (such as a bedroom), only the placing of the skylight needs to satisfy the requirements which are laid down in this decree for this alteration. The alteration in question of the use of this unnamed space is permitted on the basis of the regulations of this decree on condition that the alterations satisfy the relevant alteration regulations of this decree and the parts of the space which have remained unchanged during the alterations at least satisfy the quality level that is applicable on the basis of this decree for existing houses. A skylight may therefore also be placed in the unnamed space when the ceiling height

(and the door height and such like) of that space possibly do not satisfy the new building requirements of this decree for an occupancy space.
On the basis of Article 1b(1) of the Housing Act, unless a permit for building explicitly permits it, it is forbidden to build (or to alter) a structure insofar that thereby the regulations which are included in this decree about the execution building activities are not satisfied. These regulations have direct effect. The same applies for Article 1b(2) with a prohibition in respect to the condition of existing structures, open properties, and grounds, Article 1b(3) with a prohibition in respect to the use of structures, open properties, and grounds, and Article 1b(5) of the Housing Act with a prohibition in respect to the demolishing and execution of demolition activities. On the basis of Article 125 of the Municipalities Act and Article 5:32(1) of the General Administrative Law Act, the competent authority can act by the imposition of an order under administrative enforcement or an order to pay a penalty against violations of the above stated regulations.

10.3 Listed buildings

The regulations of this decree also apply in principle in respect to the technical condition, the alterations, the use, and the demolition of listed buildings. In this decree, similarly to the 2003 Building Decree, in respect to the alteration of such structures, an exception possibility is included, which guarantees that through the application of these regulations the listed building character is not adversely affected. The exception included in Article 1.13 implies that in the event that a regulation is linked to an environmental permit in respect of a listed building that deviates from a regulation determined by or by virtue of this decree, only the regulation linked to that permit is applicable. On the basis of Article 2(1)(f), respectively Article 2(1)(b) of the Environmental Law (General Provisions) Act (Wabo), such an environmental permit is required if the intended activity consists of the demolition, disruption, relocation or in any respect alteration of a listed building or the repair, use or allowing use of a listed building in a manner in which it is flawed or is endangered. A restriction on the application of the listed building can ensue from the regulations linked to such an environmental permit. A consequence can be, for instance, that the intended use of a listed building as a discotheque is not possible when, on the basis of the environmental permit, it is not permitted, on the basis of this decree, to implement the required fire protection systems in the building or to alter the building such that the escape routes required on the basis of this decree can be implemented. Such usage restrictions are in such cases inherent to the listed building status of the structure.

10.4 Criminal

Violations of that specified in Articles 1b and 120(2) of the Housing Act are economic crimes by virtue of the Economic Crime Act. The same applies for violations of the prohibitions which are included in Article 2(1) of the Environmental Law (General Provisions) Act (Wabo) in respect of building and use of structures without an environmental permit.

11 Relationship with other statutory regulations and private documents

11.1 General

In addition to the relationship with statutory regulations of a general nature (such as the General Administrative Law Act and Municipalities Act), which will not be taken into consideration here, this decree relates primarily to the provisions of the Housing Act (Articles 1a to 7a, 13, 120b, and 122), the Environmental Law (General Provisions) Act (Wabo), the Environmental Law Decree (Bor), the Ministerial Regulations on Environmental Law (Mor), and the ministerial regulations accompanying this decree, as well as a number of private documents. In addition, there are other statutory regulations that apply to specific parts, such as the Noise Abatement Act (*Wet geluidhinder*) and the Aviation Act (*Luchtvaartwet*); these specific relationships are dealt with in the explanatory notes in respect to the relevant provisions of this decree.

11.2 Relationship with the Housing Act (*Woningwet*)

The provisions of this decree are based on Articles 2, 3, 5, 6, and 120 of the Housing Act. Additionally, Articles 1a, 1b, 4, 7, 7a, 13, 120b, and 122 of this Act have some significance. Furthermore, the definitions included in Article 1 of this Act also apply to the definitions used in this decree. Insofar as not already mentioned above, under 2 or 6, the relationship between those provisions of the Housing Act and the provisions of this decree imply the following in broad outline.

Article 1a of the Housing Act contains a general duty of care. By virtue of the first paragraph of this article, the owner of the structure, open land or premises or the person who is otherwise authorised to make provisions to this end must ensure that no health or safety hazards are forthcoming or continue as a result of the general state of repairs of the structure, open land or premises. By virtue of the second paragraph, in this capacity, anyone who constructs, occupies or demolishes a building (or has this building occupied), or occupies open land or premises or has these occupied, must ensure that no risk to health or safety arises or continues as a result of construction, occupancy, and demolition. These provisions function as a safety-net, by virtue of which the competent authority can act in situations not foreseen by the decree but where nevertheless an unhealthy or unsafe situation is said to exist.

Articles 7 and 7a of the Housing Act contain experimental provisions. By virtue of Article 7, in special cases, on the request of an applicant, the Minister of Internal Affairs can grant dispensation for an environmental permit from the provisions regarding construction with respect to or by virtue of the order in council as referred to in Article 2(1) of this Act. By virtue of Article 7a of this Act, for the purpose of sustainable construction, in a special case, a competent authority can be permitted to impose more detailed provisions to satisfy the technical provisions relating to construction which have been issued in respect of or by virtue of an order in council, as referred to in Article (1) of the Housing Act.

Insofar as it may be of significance here, the competent authority can, by virtue of Article 13 of the Housing Act, oblige the individual authorised, as owner or acting in another capacity, into taking measures, within deadlines set by the competent authority, as a result of which the condition of the building attains a higher standard than the standard contained in this decree for exiting buildings, without this standard being any higher than the standard included in this decree for new buildings,

providing these provisions are deemed necessary in the view of the competent authority. Insofar as this is of significance here, by virtue of Article 122 of the Housing Act, the municipality cannot take any legal measures in civil law with respect to matters foreseen in respect of or by virtue of this decree. Municipalities are not permitted to deviate from the provisions which have been issued in respect of or by virtue of this decree even under private law, for example, in the allocation of land.

11.3 Relationship with ministerial regulations

Complete harmonisation between the decree and the standards, CE markings, quality declarations, and any other documents is essential. To this end, more detailed provisions can be issued in the ministerial regulations pertaining to this decree with respect to the scope and the date of publication of these documents specified. As far as the CE-marking for building materials is concerned, the regulation provides the test criteria for certification and inspection agencies and test laboratories. Provisions may likewise be issued in the regulations in respect of building materials to be used and the use of certified building materials, constructional elements or facilities. Furthermore, for a number of evaluation aspects (sections) in this decree, reference is made to the regulation where it involves a more detailed specification of provisions, for example, the requirements for smoke movement or the horizontal dry riser in deep buildings and in the use of hazardous substances or radiation.

11.4 Relationship with Wabo, Bor, and Mor

Just as for the effectuation of this decree, the system of the Housing Act and the Environmental Law (General Provisions) Act (Wabo) apply equally to this decree in respect of the administrative supervision of compliance, administrative enforcement, and penalisation. With respect to building or occupancy-related activities where permits are obligatory, the provisions of the Wabo relating to the environmental permit (procedure) apply. Annex 2 of the Environmental Law Decree (Bor) then lists the situations in which no environmental permit is obligatory for such an activity.
In situations listed in chapter 1 of this decree, the competent authority is required to be notified beforehand of the proposed use of a building or the proposed demolition of a building which is exempted from an environmental permit. In general, this use or demolition can be deemed to be sufficiently safe when applying the relevant general rules and regulations of this decree. In a number of hazardous situations, the competent authority nevertheless has the possibility to oversee these activities preventively and to impose more detailed provisions (inserted as a clause) relating to the use or demolition insofar as the proposed use is deemed to be insufficiently fire-resistant or the demolition insufficiently safe. The (procedures for) permit for use, notification of use or notification of demolition provides the competent authority with this possibility.
The requirements for submitting an application for an environmental permit for building or usage activities is regulated in the Ministerial Regulations on Environmental Law (Mor). The submission requirements for submitting a usage or demolition notification are regulated in chapter 1 of this decree. For submitting such a notification, use needs to be made of the same form as when an application for an environmental permit is required to be submitted. A possibility has also been created to submit an electronic application via the digital facility Omgevingsloket (Olo).

11.5 Relationship with designated private documents

The decree refers to NEN standards and other documents. The NEN standards, for example, provide the methods for determining whether a performance requirement has been satisfied or not. For implementation of the directive on construction products, use of construction materials and construction elements with a CE-marking is obligatory. Additionally, in the decree, a colour code (RAL) or a quality declaration is specified, issued by a recognised certification agency. If a construction product or a construction process must satisfy specific requirements because the building in which it is used or applied meets a requirement that this decree imposes, this requirement is satisfied if the construction product is applied in compliance with a quality declaration tailored to this requirement. The quality requirement then serves as sufficient proof that the relevant requirement of this decree has been satisfied. The use of a quality declaration when applying for an environmental permit for construction is not obligatory, but can speed up settlement of the application. It should also be noted here that a client or a municipality is not permitted to demand a quality declaration or approval mark, or make these obligatory, which relates to the technical specifications provided by the manufacturer for a CE-approved construction product. The manufacturer's declaration provides sufficient proof that the CE-approved product meets the requirements.

The administration of standards in this decree takes place in the same way as was the case for 2003 Building Decree, the Occupancy of Buildings (Fire Safety) Decree, and municipal building ordinances. With respect to the standards referred to in the 2003 Building Decree, in several recent legal procedures, legal questions have been asked. The rulings of the Court of Appeal in The Hague[1] and the Administrative Law Division of the Council of State[2] in these procedures do not give any reason for an amendment in this administration. It should be noted here that restraint has been exercised in administering the standards in provisions of this decree. This means that such an administration is aimed, in particular, at designating a clear-cut method to determine whether a performance requirement included in this decree is satisfied and that performance requirements must be included as much as possible in the provisions of this decree.

11.6 Euro codes

The performance requirements for new building refer to the Euro codes for constructional safety in this decree. Previously, for constructional safety, reference was made to the national construction standards or the so-called TGBs (*Technische grondslagen voor bouwconstructies*). The European construction standards (Euro codes) have been created under the auspices of the European Committee for Standardisation (CEN). With the introduction of the Euro codes, an important step forward has been taken in European harmonisation in the construction industry. It should be noted that the Euro codes incorporate pre-conditions for constructional product specifications for CE-marking for construction products.

To guarantee effective harmonisation with the safety levels prevalent within a specific member state, the member states provide every Euro code with their own binding 'national annex'. In the Dutch national annexes, the choices which are key to

[1] The Court of Appeal in The Hague, 16 November 2010, case numbers 200.029.693/01 and 200.031.136/01, LJN: BO4175.

[2] Administrative Law Division of the Council of State, 2 February 2011, case number 201002804/1/H1, LJN: BP2750.

the Netherlands have been set down, as well as any necessary parameters, formulas, tables, and texts. The content of these national annexes is determined by the TGB-standards committee in a so-called 'calibration phase'. Every NEN-EN (standard) for constructional safety must be read in conjunction with the national annex. The definitions in the national annexes tie in as much as possible with the definitions used in the Euro codes. One of the consequences of this is that the old definition *hoofddraagconstructie* (main supporting structure) has become redundant. For the material standards for which no Euro code has been developed, the national NEN standards remain in force.
For existing structures, the NEN 8700 standard has been developed. This standard builds a bridge between the Euro codes and existing buildings. Furthermore, this standard also defines the construction level for renovation which in general lies in between the level for new buildings and the level for existing buildings. See also explanatory notes in 2.1.

11.7 Euro classes

From 2003, the ministerial regulations for the 2003 Building Decree contain a so-called dual system whereby the prescribed Dutch fire and smoke classes can be used in preference to the European methods for determining how materials behave in the event of fire to building materials. In view of the fact that almost all harmonised European product standards and technical approvals are either now in force, or permissible for use, the Euro classes in this decree are definitively embedded in the provisions for new building.
The European classification and the accompanying methods for determining reaction to fire have been harmonised in NEN-EN 13501-1. This classification system for material reaction in the event of fire has the same structure as the Dutch system that had been in place beforehand, namely a limit value and an accompanying method of definition. This method of definition is based as much as possible on testing the 'end use' situation, that is, in a way which corresponds to the way in which the building product is applied in construction. The standard can therefore be used for determining the material reaction of a building product and a (prefab) structure or structural element in a specific application. If a building structure or a constructional element has been tested for a specific application, any other application will have to be re-tested unless it is clear that the test results retain their value for this other application. For assessing constructional elements produced (assembled) on the construction site, NEN shall develop practical guidelines (NPR) for building in practice.
The basis for the limit values used in this decree is the comparative TNO study 2001-CVBR03659. This study compared the performance of building products on the basis of the Dutch test method and the new European test method in line with NEN-EN 13501-1. The underlying principle in this, where possible, was the retention of the current safety level. The study revealed that the European fire classes and smoke classes do not always match each other properly and that only the s2 smoke class can be linked to the fire classes prescribed. For this reason, only smoke class s2 is prescribed in this decree. The research results specified represent the determining factor for the conversion of the national fire and smoke classes for new building to European fire and smoke classes, such as previously with the dual system in the ministerial regulations. For existing buildings, the Dutch fire and smoke classes provide the starting point, but Euro classes are also permitted. Such a dual system for

existing building is necessary because over the years more and more structures will be built with Euro classes, which will then fall under the regulations for existing buildings after delivery.

11.8 CE marking

By virtue of Article 120(1) of the Housing Act, regulations can be issued with or by virtue of order of council with a view to compliance with international obligations which are binding for the Netherlands, which relate or are concomitant to aspects provided for in respect of or by virtue of this Act. The regulations which are contained in chapter 1 of this decree regarding CE marking, which ensue from the directive on construction products, are based on this particular paragraph. By virtue of the second paragraph of Article 120 of the Housing Act, actions in breach of these regulations are forbidden. By virtue of Article 120b of the Housing Act, the minister of internal affairs is charged with the administrative enforcement of this prohibition and therefore has the authority to impose an order under administrative enforcement. As an extension to this, he or she also has the authority to impose a penalty by virtue of Article 5:32(1) of the General Administrative Law Act.

12 Origination of the decree

12.1 Consultation and participation

As part of an attempt to reduce the regulatory and administrative burden, as early as 1999, the Dutch association of local authorities (VNG) made a proposal to standardise the technical and procedural regulations of municipal building ordinances at a national level. That proposal was taken on board by the Dutch government at the time. A first step in this process was the coming into force of a decree governing the submission requirements for a building permit (*Besluit indieningsvereisten aanvraag bouwvergunning*) on 1 January 2003. The second step was the coming into force of the Occupancy of Buildings (Fire Safety) Decree (*Besluit brandveilig gebruik bouwwerken*) on 1 November 2008. The coming into force of the decree under consideration here can be seen as the third step. This decree standardises the regulations regarding demolition, safety during construction and demolition, and the other regulations pertaining to the use of structures, open land, and premises. The relevant provisions laid down in the VNG's model building ordinance are used as a basis for this. This decree integrates these standardised provisions in a single decree, together with the provisions of the 2003 Building Decree, the Occupancy of Buildings (Fire Safety) Decree and section 2 of the Road Tunnel Safety (Supplementary Regulations) Decree.

12.2 Consultation and participation

Following the motion of Vietsch/Van der Burg with respect to the harmonisation of the 2003 Building Decree and the Occupancy of Buildings (Fire Safety) Decree (Parliamentary documents II 2007–2008, 28 325, No 71), the then Minister of Housing, Communities, and Integration informed the Second Chamber by letter of 29 April 2008 about its plans to integrate the 2003 Building Decree, the Occupancy of Buildings (Fire Safety) Decree, and section 2 of the Road Tunnel Safety (Supplementary Regulations) Decree and a number of provisions taken from municipal building ordinances in a single decree (Parliamentary Documents II 2007/2008, 28 325, No 79). Extensive consultation on the matter took place with a

large number of interested parties. This involved not only formalised consultation, but also ad-hoc bilateral discussions. Formalised consultation took place in the Interdepartmental Consultative Committee on Building Regulations (IOB), the Legal-Technical Committee (JTC), the Consultative Platform for Building Regulations (OPB), the Feedback Group on the Occupancy Decree, and the Steering Group with respect to the 3rd reform package for building regulations (a steering group formed after the coming into force of the 2003 Building Decree to prepare the ongoing deregulation of the building regulations). On several occasions, the OPB issued recommendations with respect to the draft versions of this decree, most recently in April 2010 (Parliamentary Documents II 2009/2010, annex with Parliamentary Document 28 325, No 124) In his letter of 4 May 2010, the then Minister of Housing, Communities, and Integration indicated that these recommendations, barring one section, would be adopted (Parliamentary Documents II 2009/2010, 28 325, No 124) This letter was discussed on 11 May 2010 in a general consultative meeting of the general committee for Housing, Communities, and Integration (WWI) (Parliamentary Documents II 2009/2010, 28 325, No 126). In compliance with pledges made in this letter and in the consultative meeting, the draft decree was submitted to the Advisory Committee on the Practical Application of Fire Safety Regulations for its advice in July 2010. On the basis of this version, the decree was subjected to a practical evaluation by a number of organisations. The recommendations of the OPB and the Advisory Committee on the Practical Application of Fire Safety Regulations and the report on the practical evaluation were included in this decree where necessary and where possible. These recommendations and the report on the practical evaluation were sent to the Second Chamber by letter on 23 November 2010 (Parliamentary Documents II 2010/2011, 28 325, No 130). This letter was discussed on 9 February 2011 in a general consultative meeting of the fixed committee for Internal Affairs (BZK) (Parliamentary Documents II 2009/2011, 28 325, No 138).
On several occasions, draft versions of this decree have been submitted to a large number of interested parties for reaction. On the basis of the draft versions of February 2010 and July 2010, around 50 reactions were received. Where necessary, the decree was amended as a result of these reactions. In conformity with Article 2(6) of the Housing Act, the draft decree was sent as a memorandum item to both Chambers of the States General. PM.

12.3 Studies

As indicated previously, in the period prior to the effectuation of this decree, a large number of studies were carried out. A summary of more than 30 of these studies can be found on www.overheid.nl/bouwregelgeving. A number of these studies can also be consulted in full on this site.

13 Consequences for regulatory and administrative burden

13.1 Regulatory burden

This decree leads to a considerable reduction in regulatory burden. By adding, harmonising and, where possible, simplifying the provisions, the complexity of building regulations is reduced and accessibility improved. The number of provisions has been cut back by more than 30 %.

13.2 Administrative burden

On the basis of the draft version of this decree, a study was carried out into the administrative burden directly ensuing for businesses and private citizens from the decree (SIRA, February 2011). Direct effects are understood to mean the effects (obligations) that ensue directly from the provisions for businesses and private citizens in terms of providing information. The indirect effects, which are connected to the consequences arising from the provisions of this decree with regard to submission requirements for a permit application for building or occupancy of a structure, are identified independently when drawing up the amendments for the Ministerial Regulations on Environmental Law (Mor), with respect to which the submission requirements are changed for this decree.

The SIRA report adopts an approach in which the negative and positive effects are identified and balanced out. A distinction is made between the systemic and the one-off effects of this burden. One-off burdens for undertakings and private citizens arise from the know-how that is required of the changes in the regulations relating to their obligations to provide the relevant information. It concerns around 25 000 to 27 000 undertakings, the one-off financial costs of which are estimated at around 1.2 to 1.3 million euros. For private citizens, these one-off costs will be negligible, because in most cases, they will engage a business to do this. In the main, the majority of the provisions in this decree relate to technical provisions to which no direct administrative burdens are attached. Any related indirect administrative burdens result from the administrative and procedural obligations which apply. Since 1 October 2010, these obligations have largely been included in the statutory regulations on environmental law: the Wabo, the Bor, and the Mor. This relates primarily to the obligation to acquire permits for building, renovation, use, and demolition of structures. When the Occupancy of Buildings (Fire Safety) Decree came into force in 2008, the number of those obliged to obtain a permit for use was reduced by 80 %. On the coming into force of the Wabo and associated statutory regulations in 2010, the number of those obliged to obtain a building permit, in which preventive testing against the 2003 Building Decree was required, was reduced by 50 %. Further reductions occurred on account of this decree since the obligation to obtain a demolition permit (on the basis of municipal bye-laws) was replaced by an obligation to report demolition. The new procedural and administrative obligations included in this decree have had a favourable effect on the reduction of systemic administrative burdens. Examples of this include:

- the authority to make exemptions, which was ascribed to the competent authority in the renovation of structures, has been replaced by uniform national regulations covering renovations;
- the obligation to obtain a permit for demolition has been replaced by an obligation to report a demolition;
- the obligation to provide information with respect to carrying out building and demolition work has been downsized, and
- the obligation to keep a logbook, included in the Occupancy of Buildings (Fire Safety) Decree, has been deleted.

For the rest, the decree makes no significant changes in the administrative burden, which can nevertheless vary from municipality to municipality. Due to the standardisation of the regulations, national requirements will apply, as a result of which any local differences in provisions disappear. This effect will however be limited because municipalities in general have harmonised their building ordinances

to the model building ordinance of the Dutch association of municipalities (VNG). Insofar as it relates to regulations hitherto included in municipal building ordinances, following the enforcement of this decree, businesses which operate in more than one municipality no longer have to focus on the regulations which apply in each municipality. For these undertakings, a reduction in the administrative burden can be said to take place, because they are no longer confronted with regulations that might differ per municipality. Nevertheless, these effects are not directly quantifiable.
As a result of the transfer of provisions from the municipal building ordinances to this decree, there is a shift in the administrative burden from the municipal provisions to the national provisions. This shift—in respect of the administrative burden—will be transferred to the national administration.
Conclusion
With implementation of the new 2012 Building Decree, the systemic quantitative administrative burden—on balance—will remain the same. Nevertheless, the qualitative aspects of the regulatory burden will vastly improve for businesses.
On 24 March 2011, the Advisory Board on Administrative Burden (ACTAL) decided not to issue recommendations with respect to the draft decree on the grounds of its selection criteria.
For more information on this, see 18, which deals in more detail with the planned implementation of the terms of reference for limiting the burden, which is contained in the current coalition agreement.

13.3 (Local) government burden

The effects of this decree on (local) government burden are limited. Municipalities will have limited one-off administrative burdens because the municipal building ordinances must be adapted to the changes in the Housing Act, whereby the executive powers of the council to issue provisions for the use of structures, open land, and premises, the demolition of structures, and the implementation of building and demolition work have been transferred to national government. On the other hand, municipalities will experience a systemic reduction in the administrative burden on account of the fact that their building ordinances no longer need to be adapted to periodic changes in the VNG's model building ordinance.
Furthermore, in replacing the powers of exemption ascribed to the competent authority for the renovation of structures, it can be expected that the uniform national regulations for renovation will result in a systemic reduction in the administrative burden. Henceforth, the competent authority no longer has to go through a decision-making procedure with respect to the granting of exemptions, thus bringing about savings in personnel.
By replacing the existing obligation to apply for a demolition permit by an obligation to report this, municipalities can expect to receive around 10 million euros less in charges on an annual basis. However, this is offset by savings in personnel costs because a complete decision-making procedure for individual cases, ultimately resulting in a ruling, is no longer necessary. From now on, the competent authority can decide on a case-by-case basis on how it deals with a report of a demolition it receives. Likewise there are also savings in publication costs, because the demolition no longer needs to be openly publicised. Furthermore, municipalities will continue to receive fees relating to the handling of applications for demolition permits, required on the basis of other regulations. Here, it concerns applications for a demolition permit as referred to in Article 2.1(1)(f), (g), and (h), and Article 2.2(1)(b) and (c) of

the Wabo which relates to the demolition of a listed building, the demolition of a protected urban of village conservation area, and the demolition of a structure in cases where this is defined in a zoning plan, management regulation or a spatial preparatory resolution.
In addition, it is expected that municipalities will use their information activities for the information material provided by the Ministry of Internal Affairs (BZK). The expenditure for municipal information provided by the local authority will therefore diminish.
On balance, the effects of this on local government burden are expected to be marginal.

14 Commercial and environmental effects

14.1 Effects on businesses

On the basis of the draft decree, a study was made into the commercial and environmental effects ensuing from the decree (SIRA, March 2011). The findings of this are as follows. The decree is the product of the integration, harmonisation, simplification, and clarification of the provisions which were hitherto contained in the 2003 Building Decree, the accompanying ministerial regulations, the Occupancy Decree, paragraph 2 of the Road Tunnel Safety (Supplementary Regulations) Decree and municipal building ordinances. This results in greater transparency and coherence in building regulations. It is to be expected that the effects of this will work advantageously to some extent or other on businesses, citizens, and statutory authorities alike.
The provisions of the decree have some bearing on almost all businesses in the Netherlands because the provisions relate to renovation/building, the state of repair, the use and the demolition of structures, and the execution of building and demolition work. These provisions apply to all structures in the Netherlands. However, many of the current provisions will not change in terms of content as a result of these changes. In particular, the changes in the statutory regulations will have direct effects on:

- an estimated 117 700 businesses that are directly or indirectly involved in construction work. This concerns relatively many small businesses;
- the 15 000 to 17 000 institutions with lesser obligations with respect to the reporting of the fire-alarm system;
- a very small number of businesses involved in the installation, maintenance, and certification of automatic fire-extinguishing systems, and businesses that will possibly do this in the future.

The administrative burden for businesses would seem to remain more or less the same. The costs of compliance for new buildings may possibly rise as a result of the more stringent requirements for thermal insulation in these buildings, the Rc and U value. However, against this, there are advantages resulting from the integration and simplification of the regulations, as a result of which the net effects are deemed to be limited. In some specific cases, for example, for temporary structures, costs might rise because of the more stringent requirements.
Otherwise, the changes in the regulations have no direct bearing on the market dynamics in the Netherlands. An exception to this is undertakings that install,

maintain, and certify automatic fire-extinguishing systems, where access by new undertakings is simplified.
The relationships with respect to the international market will improve somewhat because the decree refers to European standards for constructional safety (Euro codes) and fire safety (Euro classes). This now relates to Dutch standards. However, it is not clear the extent to which these standards differ and to what extent the regulations abroad work with the standards. What is clear however is that these changes can only have benefits for a limited number of undertakings involved because, in the main, it involves small businesses who have hardly any dealings, or none at all, with foreign markets, either now or in the future.

14.2 Environmental effects

Insofar as this decree has environmental effects, these will be positive. In the first place, the minimum required heat resistance of external partition constructions such as outer walls, roofs, and the ground floor (Rc value) and the minimum required coefficient of heat transmission for windows, frames, and doors has been tightened for buildings to be constructed. Because of this improved thermal insulation, for new buildings less energy is required to heat the building (see explanatory notes to Article 5.3). Secondly, this decree contains a new requirement with respect to the sustainability levels of new housing and office buildings, as a result of which the environmental effects of the materials used can be restricted in the construction of such buildings (see the explanatory notes to section 5.2).

15 Technical feasibility and enforceability

The legal effects of the provisions of this decree have been described in section 10 above. The enforceability and feasibility are not negatively influenced by this decree. With respect to the current provisions, greater uniformity and transparency at a national level exist, which furthers compliance of the provisions. This compliance is improved even more so since implementation of this decree will be supported by publicity and transfer of know-how (see below, under section 13).
Replacement of the current obligation for a demolition permit by an obligation to report a demolition does not detract from the feasibility and enforceability. The scope of this obligation remains unchanged; the obligation relates to the same category of cases. The requirements for submitting the reporting of a demolition are the same as those for applying for a demolition permit. In terms of administrative and criminal law, measures against breaches of this obligation to report can be taken in the same way as is the case now with respect to breaches of the permit obligation. Nevertheless, despite these similarities, the fact that a deliberate choice has been made to replace the permit obligation with a reporting obligation is related to the fact that the scope of this decree's general regulations and the 2005 Asbestos Removal Decree are adequate to guarantee the social interests which need to be guaranteed when a demolition is carried out. From this perspective, a permit obligation does not have any added value in such a case and reporting can be sufficient.
Extensive consultation took place with representatives from the business community as well as local government in respect of the provisions and the feasibility of this draft decree. The draft decree has been subjected to practical testing by a number of organisations (see also above, under 8.1). Where possible, the suggestions put forward were included in the formulation of the provisions. The inspectorate of the

Ministry of Environment (VROM) has evaluated the draft decree on the basis of the standard test for enforceability, feasibility, and fraud resistance (the so-called HUF test). Where necessary, the provisions of this decree have been amended as a result.

16 Notification

The draft decree was notified on […] to the Commission of the European Communities (notification number …/…/NL) in accordance with the provisions of Article 8(1) of Directive 98/34/EC of the European Parliament and of the Council of the European Union of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on information society services (OJ L 204), as amended by Directive 98/48/EC of 20 July 1998 (OJ L 217). ... Most conditions of this decree may contain technical requirements on the basis of the said directive (notification directive). These conditions are compatible with the free movement of goods; they are proportionate and come where necessary with an equivalence provision with a view to mutual recognition (see Article 1.3). By the commission .....(to be determined). Notification to the Secretariat of the World Trade Organisation pursuant to Article 2(9) of the Agreement reached on 15 April 1994 in Marrakech with respect to technical trade barriers (Trb. 1994, 235) has not yet taken place in the case in question as no significant consequences for trade are foreseen.

17 Publicity and transfer of know-how

The coming into force of this decree is supported by an extensive publicity campaign and implementation process. Communications on the subject started at early stage. A degree of clarity with respect to the planning, but also an explanation of the decree's bearing on those who use, apply, and oversee it, are seen as essential. This takes into account the diversity of the target group and their information needs. This publicity material also deals with issues on which the provisions of this decree have a strong bearing, such as the Environmental Law (General Provisions) Act (Wabo) and provisions in the field of environment and external safety.
The publicity material used to this end is diverse. In addition to general information about the decree—what is the same and what has changed (for example, in the form of a correlation table)—more specific details are given on special themes or subjects. These pages have been made available on the internet free of charge. As part of this exercise, the large number of information sheets about permit-obligatory and permit-free structures, developed at a previous stage by the Environmental permit programme agency, have been updated. The same applies to the brochures on the Occupancy of Buildings (Fire Safety) Decree. The information sheets have been made available in digital format free of charge. This is the case too for the practical manual for those who will be working with the decree in practice. The manual will also be used for 'train-the-trainer' courses which will be given specifically for issuers of permits and enforcement agencies with the competent authority. These training courses will be given to key figures in local authorities. They will then transfer this know-how to colleagues within their own organisation. The course will provide an explanation of the contents of the decree and how this can be applied in practice. These courses will be held prior to the decree coming into effect. For the organised business community, one or more workshops will be organised to provide more

information about the decree. They themselves will organise the transfer of this know-how to rank-and-file employees.
The digital help desk, *Bouwregelgeving en Brandveilig gebruik*, providing information on building regulations and fire-safety will remain in place. Answers to the most frequently asked questions will be updated: these questions and answers are available via www.rijksoverheid.nl/bouwregelgeving. The Advisory Committee on the Practical Application of Fire Safety Regulations will be continued and its remit will be widened to include all provisions of the decree.
A number of existing (ICT) tools will be updated and reconfigured. This involves, for example, the *Omgevingsloket*, an online environmental permit application service, which will be adapted in the wake of the merger of building, demolition, and occupancy provisions in a single decree. Likewise, the online formulas for the Occupancy of Buildings (Fire Safety) Decree and the Building Decree will be adapted. In the '*Bouwen met kwaliteit*' and '*Bouwregels in de praktijk*' newsletters, articles on the timetabling and the content of the decree and on specific aspects of the decree will be published at regular intervals. All up-to-the-minute information on the decree can be found at (www.rijksoverheid.nl/bouwregelgeving). This site is regularly updated.

18 Future

This decree integrates existing provisions, leading to greater simplification, uniformity, legibility, harmonisation, and transparency. This marks an important step forward in reducing the regulatory burden. In the coming years, more work will be done to reduce this regulatory burden yet further. To this end, in whatever event, the following aspects will be involved.
In conformity with the coalition agreement, the recommendations of the Dekker Commission (*Commissie Fundamentele Verkenning Bouw*), which is reviewing the construction sector, will be implemented. Part of this is the certified Building Decree test (*Bouwbesluittoets*). In concrete terms, this means that a building plan that has come about in the prescribed certified private way no longer needs to undergo further testing by the competent authority with respect to the provisions of this decree in the procedure for obtaining an environmental permit for building. The circumstances in which the building plan has been effectuated are considered to be sufficient evidence that the building plan meets the provisions in this licensing procedure. Likewise, in conformity with the coalition agreement, further consideration will be given to reducing the regulatory and administrative burden ensuing from the building regulations. This will involve a fundamental review of how the building regulations are likely to develop in the future. In this context, investigations will take place as to the extent to which general regulations can be developed for cases where a permit for use or reporting usage is required by virtue of the Wabo or this decree. Whenever it would appear possible to develop practicable general regulations in such cases, the number of cases where a permit for use obligation or usage reporting obligation is in place might also diminish.
In addition, the harmonisation between NEN standards and the provisions of this decree will be optimised. The underlying principle here is that the requirements which structures and their use must satisfy should be included in this decree, and that—insofar as administration of this is required—a NEN standard, in terms of public law, only has the function as a method of definition with an associated

performance requirement. In addition, the harmonisation between NEN standards and the provisions of this decree will be optimised.
Consultation with the fire services and organised business community will give consideration to whether, and under what conditions, the upper limit of the performance requirements in this decree for so-called large fire compartments (see section 2.10) can be raised. In this case, if required, additional performance requirements will be added to the decree for this category. The application of such general regulations means that the development of a building plan for such buildings is less reliant on the judgement of the competent authority, which will enhance legal certainty and legal equality. A similar process will be developed in respect of high-rise buildings (higher than 70 m). In this context, consideration will be given to whether the legal framework for such buildings—at least as far as (fire) safety is concerned—can be based on a so-called risk approach in the long-term. Furthermore, consideration shall be given to whether the number of situations where a fire-alarm system, by way of obligation, must be linked to the regional control centre of the fire-services can be reduced even further.
Moreover, at the moment work is being done to standardise the regulations at a national level, which are currently still included in the municipal building ordinances with respect to counteracting construction on contaminated land. These provisions will be included in this decree in the long term. The necessary changes in the Housing Act to this effect are expected to be submitted to the Second Chamber in 2011. After standardising these provisions, there remains provisions in respect of just two issues in the municipal building ordinances. In the first place, these relate to provisions of an urban planning nature. Because the entire country will be covered by a (current) zoning plan in the wake of the Spatial Planning Act, it is no longer necessary to make such provisions by means of the building ordinance. In the long term, the urban planning provisions in the building ordinances will no longer hold any force. In the course of a transitional period, they will remain valid in parts of a municipality where there is no zoning plan (currently) in place. Secondly, the municipal building ordinances still include procedural provisions with respect to the amenities committee and the urban planning chief. The future of these provisions depends on the ongoing development of the legal framework for the supervision of amenities. In 2011, the government will inform the Second Chamber with regard to its vision on the preferred development. At the same time, consideration will be given to expanding the existing tools in the field of building regulations with a sanctions instrument (administrative fine or administrative transaction by virtue of the Economic Offences Act), so that ‘on-the-spot’ treatment can be applied in the event of the provisions of this decree being contravened.

II Explanations of the individual articles

Chapter 1 General stipulations

Section 1.1 General

Article 1.1 Glossary
This article contains concepts and definitions taken from the 2003 Building Decree, the Occupancy of Buildings (Fire Safety) Decree, the Road Tunnel Safety (Supplementary Regulations) Decree, and a number of concepts from the Model Building Ordinances of the VNG (Association of Netherlands Municipalities). New definitions have been included as well, in view of the new setup of the fire safety regulations.
Where necessary, definitions have been altered or dropped.

First paragraph
Adjacent site
This concept is from the 2003 Building Decree, but they did not include a definition. When combining those regulations with regulations from the Occupancy of Buildings (Fire Safety) Decree and the building ordinances, which only use the concept 'site', it turned out to be useful to describe the concept of 'adjacent site' too. An adjacent site is taken to mean an undeveloped plot or public area bordering (adjacent to) a building. That concept is therefore distinct from the concept of a 'site'. Firstly, an adjacent site refers to the entire undeveloped plot for a building, therefore including any open land that may be part of the plot. Secondly, an adjacent site not only consists of the undeveloped plot that is part of the building in question, but also the undeveloped plot bordering an adjacent building (the latter insofar as the adjacent plot can be used by the users of the building as a place people can escape to in the event of a fire, and accessible to persons who are going to or leaving the building). Thirdly, the concept of an 'adjacent site' also includes public areas bordering a building, such as roads, footpaths, squares and paths in parks, public gardens, and other public areas that are generally accessible to people. See also the explanations of the concepts 'property', 'open land', and 'site'.

ADR class
ADR is the acronym for the French title of the European treaty on international transport of hazardous goods by road, *Accord Européen relatif au transport international des merchandises dangereuses par route*. This treaty includes the conditions under which hazardous materials have to be transported within Europe. These regulations use the ADR classification to indicate the hazardous/inflammable materials in, on or near a building.

Sleeping area and sleeping space
Sleeping area and sleeping space are new concepts with an existing content. The term sleeping area replaces the various terms used in the 2003 Building Decree: 'area for overnight accommodation with a residential function', the 'part used for sleeping' in childcare, the 'part used for patients confined to their bed', and 'area for overnight accommodation of patients confined to their bed' in the healthcare function.

A sleeping area is therefore a special form of an occupancy area and a sleeping space, a special form of an occupancy space.
An occupancy space always lies within an occupancy area, and so a sleeping space is always located in a sleeping area. Within the context of the free layout rules, sleeping areas may have one or more regular occupancy spaces and other spaces in addition to at least one sleeping space. This could include a nurse's post or washing room in a sleeping area in a hospital, or playroom in a sleeping area at a childcare centre.
It is also possible that a particular part of an area with a given function may be considered only as a sleeping area, not associated with another occupancy area. It should be noted that a regular occupancy space could be located in a sleeping area, because the requirements imposed on a sleeping space are usually more stringent than those imposed on a regular occupancy space. Conversely, a sleeping space cannot be within a regular occupancy area, because the requirements imposed on a sleeping space are more stringent than those imposed on a regular occupancy space.

Protected route
The protected route is the part of the escape route situated outside the fire sub-compartment in which the escape route begins. This is a new concept that is only used in existing constructions. This concept replaces the old smoke-free escape route and is similar to the concept of a 'protected escape route', which is only used in the regulations for new construction work.
A protected escape route may not run through a fire sub-compartment, whereas this was allowed for the old smoke-free escape route. For that reason, different concepts needed to be used for new construction work and existing construction work from then on. The concept of a 'protected route' is therefore used for existing construction work, with the requirements in the associated regulations for the smoke-free escape route not being at a stricter level of than before. This means that escape routes created under the old regulations will not require modifications.
A protected route is always outside the fire sub-compartment in which the escape starts. As well as running through traffic spaces, this protected route may also run through another fire sub-compartment (including the occupancy areas and occupancy spaces within it). This means that physical separation between a protected route and an occupancy area or occupancy space is not required; the escape route may even run across the floor of an occupancy space. This is not the case for a protected escape route (new construction work), which may not run through a fire sub-compartment and therefore not through an occupancy area or occupancy space.

Protected escape route
The protected escape route is a part of the escape route outside the fire sub-compartment that only runs through a traffic space. This new concept is only used for new construction work.
A protected escape route may be in a fire compartment, but never in a fire sub-compartment. The protected escape route only runs through traffic spaces, thus reducing the risk of a fire on that escape route. If there is only one escape route, that escape route must be a protected escape route from the point at which it leaves the fire sub-compartment from which the escape starts. In many cases, the protected escape route replaces the old smoke-free escape route. However, the difference is that more stringent requirements are imposed on a protected escape route. On the other

hand, a protected escape route is only required for situations where there is only a single escape route. See also the concept of an ‘escape route with extra protection’.

Construction element
A ‘construction element’ is any part of a building used to bear a load. This could be a load-bearing wall, a floor, a staircase or access ramp, a window or the roof structure. In this context, the ‘load’ is taken to mean any effect causing forces on or distortions in the construction element.

Fire compartment
A fire compartment is that part of one or more buildings intended to restrict the maximum extent of a fire. Its purpose is, for a specified interval, to prevent the fire from extending further than the fire compartment in which the fire started. The fire brigade can act within this period to prevent the fire from extending beyond the limits of the compartment. Users can also use this period of time to get to safety, outside the compartment in which the fire is located. In new and existing construction work, fire compartments therefore have to comply with a variety of regulations. In addition to the resistance to fire propagation and flashover (Dutch *wbdbo: weerstand tegen branddoorslag en brandoverslag*) provided by a dividing structure between the fire compartment and another space and a limited production of smoke from that dividing structure, the new system for fire safety also means that new construction work must henceforth comply with regulations regarding the reduction of permeability to smoke. The concept of a ‘fire compartment’ is also used for the regulations regarding tunnels.

Fire-fighters lift
In most cases the fire-fighters lift is a normal passenger lift used by the fire brigade for transporting fire-fighting and rescue equipment in the event of a fire. Its definition does not refer to the European product norm (NEN 81-72) for fire-fighters lifts; the decree only states the regulations regarding whether they must be present. The general duty of care under Article 1.16 applies to maintenance and checks.

Cross passage (cp)
The concept of ‘passage’ is new and replaces the old concept of ‘entrance’. A passage (or ‘cross passage’) is taken to mean an access, an exit or another opening that persons in a building can go through. Depending on the direction from which or into which a person uses the passage from an area, the terms access or exit for that space are used in the regulations. This matters most in the case in fire safety regulations, which focus primarily on exits. The term passage is used when the regulation are referring to both accesses an exits.

Property
The Environmental Licensing Decree (Dutch: *Besluit omgevingsrecht*, BOR) has been used as the reference for the concept of a property. In Article 1(1) of Annex II of that decision, a property is defined as ‘a plot, developed or undeveloped, or part thereof, directly situated next to a main building and actually laid out for the use of that building, and insofar as any zoning plan or management regulation that may apply does not prohibit this layout.‘ For a detailed explanation of this concept, please

refer to the explanation given in the Environmental Licensing Decree. See also the explanations of the concepts of ‘open land’, ‘site’ and ‘adjacent site’.

Escape route with extra protection
The escape route with extra protection is a part of a protected escape route that is not situated in a fire compartment. This concept replaces the old fire-free and smoke-free escape route. The escape route with extra protection is a special type of escape route: it is never located in a fire compartment and therefore never within a fire sub-compartment either. If the number of persons indicated in Article 2.105 may have to use a protected escape route in a non-residential construction, then that escape route has to comply with the requirements for an escape route with extra protection. An escape route with extra protection always begins at the exit of a fire compartment. Escape route with extra protections, like protected escape routes, only run through traffic spaces. See also the concept of a ‘protected escape route’.

Functional area and functional space
Functional area and functional space are concepts that replace the old concepts of ‘occupancy area’ and ‘occupancy space not intended for the accommodation of persons’. In certain cases, an area or space may be intended for activities for which the accommodation of people is not so important. In that case it is deemed a functional area or functional space. The functional area is defined within the area of utilisation of a particular usage function. A functional space is then defined as a space in a functional area. Processing or handling materials or goods, provision of services or practising sports are examples of typical activities associated with the accommodation of persons, so that the space in question will have to comply with the requirements for an occupancy area.
A toilet or shower building at a campsite is an example of a building for which the characteristic use focuses particularly on toilet and bathing spaces; the toilet and bathing spaces are therefore functionally in the scope of the functional spaces in the sanitary building.

Application function
An application function is taken to mean the parts of one or more buildings that have the same intended use and form a functional unit together. Those constructions or parts of them are on the same plot or at the same location. Activities typical of that application function are carried out in a given application function. This decree distinguishes between twelve (main) application functions (please refer to the second paragraph).
Depending on the level of the regulations, application functions can be further classified into application sub-functions (please refer to the third paragraph). An application function consists of one or more non-shared spaces. Application functions sometime shares certain spaces, routes or facilities with other such functions. These are shared spaces, routes, and facilities. A building may have various application functions, as decided by the applicant. An office building for instance, may have meeting functions (conference rooms and canteen) as well as one or more office functions. When requesting planning permission, the applicant indicates the intended use of the various distinct parts of the building.

Application area
Occupancy area refers to part of an application function of one floor that can be laid out freely and where the activities typical of that application take place. The second paragraph states for each application function what the activities typical of the various applications are. Depending on the type of application, usage areas can be subdivided into occupancy areas and functional areas, which can be further subdivided into e.g. sleeping areas with sleeping spaces or occupancy spaces and other spaces.
Toilet spaces, bathing spaces, technical rooms, and traffic spaces are not part of any application. An exception to this is a separate building with such facilities, such as a sanitary building at a campsite. The use of the sanitary facilities in a sanitary building is the typical use of that building. The toilet and bathing spaces are therefore functional spaces in the functional area of the application function of that sanitary building (other application functions). (See also the explanation of the concepts ‘functional area’ and ‘functional space’.

Usable surface area
The usable surface area as defined in NEN 2580 is taken to mean all the floor surfaces situated between the enclosing walls of spaces for a given application function. This usable surface area does not include the surfaces that are occupied by load-bearing construction parts, the surfaces of floors above which a height of less than 1.5m is available, and the floor surfaces of e.g. storage spaces, boiler rooms or stairwells situated outside the housing in a residential building. The usable surface area of a house in a residential building consists of all the floor surfaces situated between enclosing walls of the non-shared spaces of the residential function (the house), plus a proportional share of certain common spaces within the residential building that are used by the house. The usable surface area as defined in NEN 2580 can be determined analogously for a fire compartment or any separate space.

Integrally accessible bathing space
An integrally accessible bathing space is a bathing space that is accessible for wheelchair users and others who cannot get about so well. The regulations for this space depend on the type and size of the application function. An integrally accessible bathing space is always situated in an accessibility sector.

Integrally accessible toilet space
An integrally accessible toilet space is a toilet space that is accessible for wheelchair users and others who cannot get about so well. The regulations for this space depend on the type and size of the application function. An integrally accessible toilet space is always situated in an accessibility sector.

Internal dividing structure
An internal dividing structure is a structure that separates two enclosed spaces in a building that are accessible for people. This could be a wall that separates houses (a separator wall, not exposed to the open air, between two houses) an interior wall, or a floor that separates floors. Doors, windows, shafts, ducts, and columns within an internal dividing structure are part of that dividing structure.

Climbing line
The climbing line shows an imaginary route that persons follow on the staircase. A number of regulations relating to how easily a staircase can be used are associated with this climbing line, such as the width of the tread surface.

Lift
A lift in the sense of this decree is a passenger lift as defined in the Lifts (Commodities Act) Decree. This means that the lift must have a lockable cage and that lifts only intended for transport of goods (referred to as goods lifts in the said decree) are excluded. A system for the vertical transport of persons in accordance with the Machines (Commodities Act) Decree, such as a platform lift or a lift without a lift shaft pit or lift shaft head can only be used as an equivalent solution (see Article 1.3, Equivalence)

Reference measurement level
The reference measurement level is the upper side of the site at the entrance to a building. If a building can only be entered through a staircase or access ramp, the reference measurement level is the height of the site at the foot of the staircase or the access ramp.

Subsidiary function
A subsidiary function is an application function that is provided for another application function. A subsidiary function may include open-air storage space near a house, a home office, an office bicycle shed, a workplace in a prison complex or a lift shaft for a tunnel. A subsidiary function must at least comply with the requirements that are applicable to the application function of that subsidiary function in its own right.
In principle, a home office must meet the requirements for an office function. In this decree, additional requirements can be imposed on a subsidiary function or declared invalid. This depends on the specific subject and the specific main function. A subsidiary function (home office) of a residential function may be situated in the same fire compartment as the residential function, while the escape route requirements imposed on a subsidiary function of a prison cell function are adjusted to the special safety regulations that apply to that prison cell function.

Emergency door
An emergency door is only intended for escaping in the event of an emergency and will not be used under normal circumstances. It must be possible to open an emergency door from the inside without a key under all circumstances, for example using a panic bar. An emergency door must not be a sliding door either. If a door that is situated in an escape route is also used under normal circumstances for getting to rooms within a building, then this door is not an emergency door; instead, it is an entrance door that can be used as an emergency door too. It is therefore not possible to exclude the possibility that a sliding door may have been installed in the main entrance or another entrance of the building.
This decree does not actually prescribe emergency doors, but only states the requirement that an emergency door situated in a smoke-free or fireproof and smoke-free escape route must not be a sliding door. An emergency door can be used

for reducing the number of accidents in a fire and when combating a fire, as well as for escape.

Open land
Based on Article 2(2)(b) and (c) of the Housing Act, this decree also includes regulations about the status, first use and subsequent utilisation of open land and sites. For the application of this decree, the term ‘open land’ is taken to mean the undeveloped part of a property. See also the explanations of the concepts of ‘adjacent site’, ‘property’, and ‘site’.

Parcel
A plot as indicated in a planning application may correspond to a plot registered in the land registry, but this is not necessarily so. For instance, the application may take account of a future cadastral change. On the other hand, a cadastral change made later on will not lead to a change of previously granted planning permission. It is not intended that the environmental permit for a business block, which was situated at a single plot when the permit was requested, will be tested against any new cadastral subdivision later on after parts of the building have been sold to separate undertakings.

Pool fire attention area
The pool fire attention area is an area as defined in Article 7 of the Transport Routes (External Safety) Decree (Dutch: *Btev*). It is a 30m area parallel to either side of certain transport routes across which large amounts of highly flammable materials are transported.
If a municipality allows construction work in that area, the reasons that led to making development possible within that area have to be stated in the explanation of the development plan, given the possible consequences of an accident with highly flammable liquids (a pool fire).
It is possible under certain conditions to realise vulnerable or somewhat vulnerable objects in a pool fire attention area. The possibilities are the most limited for vulnerable objects, such as adjacent housing or a hospital. Spatial developments that make it possible to build vulnerable objects are only allowed in that part of the pool fire attention area that is outside the safety zone. See also the explanation of the concept of a ‘safety zone’.

Legally attained level
For the application of this decree, legally attained level shall be taken to mean the level resulting from the application at any given moment of the relevant technical regulations applicable at that moment; that level shall not be lower than the level in the said regulations for an existing building (the absolute minimum level of the Housing Act) and not higher than the level of the said regulations for a building yet to be built (new construction level). A number of sections of this decree prescribe that rebuilding has to be made in accordance with the legally attained level. As the concept of ‘legally attained level’ now plays a larger role in this decree than in the 2003 Building Decree, it has been chosen to define this concept. If necessary, the competent authority can test if a particular regulation for rebuilding work has been complied with, using the new definition.

The important role of the concept of ‘legally attained level’ when renovating buildings is based on the idea that renovations should in general not lead to a lower quality level than the actual quality level of a building, if the regulations in question were used when it was built and during any later renovations. The legally attained level is therefore the quality level resulting from the application at any given moment of the relevant technical regulations that are applicable at that moment. This is therefore the level that the municipality can enforce. This requires looking at the technical regulations and the permit that applied to the original construction of the building and to any later renovation work done on it. It is possible that the planning permission may have deviated from the technical regulations applicable at that moment. In such a case, the regulations resulting from the permission as granted shall apply (see Article 1b(1) of the Housing Act). For that reason, the definition of a ‘legally attained level’ refers to ‘applicable technical regulations’ and not to ‘applicable regulations’.

The phrase ‘the level resulting from the application of’ makes clear that allowances have to be made for the effects of autonomous ageing of parts of the construction such as staircases, windows, and doors. The Housing Act and this decree do not contain any general obligations regarding the maintenance of a building. Autonomous ageing, which may be caused by weathering or use, may cause the level of technical quality of a building to reduce over time. The building ordinances do not oppose this, as long as the applicable baseline level under this decree for an existing building with such an application function is still met. An exception to this is the items for which (based on Article 1.16) regulations apply for maintaining the quality level. This may for instance include maintaining the quality of fireproof coatings.

In most cases, the legally attained level will match the actual quality level of the building. In that case, the actual quality level is the result of applying the regulations that applied to the original construction and the later renovations. This is different for situations where no allowances were made for the applicable technical regulations at some moment during the life of the building. It is possible in such a situation that the legally attained level is higher than the actual quality level of the building. In such a situation, the regulations applicable at that moment were not used during the construction and/or later renovations, and the actual quality of the building will have to be improved until the legally attained level has been reached in order to comply with the regulation in question.

Examples of the role of the legally attained level:

- if a room with a width of 1.75 m is extended and the prescribed minimum width for new constructions is 1.80 m at the moment of extension, the extension width can still be 1.75 m in accordance with the legally attained level (see Article 4.4);
- if rat shields had not been prescribed during the construction of new housing, this will not have to be installed either during renovations based on the legally attained level or, if the constructed depth of the shield permitted during the original construction was 0.5 m, this construction depth of 0.5 m can be maintained during renovations based on the legally attained level, and this also applies if—based on the construction regulations that applied at the time of the renovation work—a construction depth of 1 m would have been prescribed (see Article 3.69).

The legally attained level also plays a role when relocating a construction. Please refer to the explanatory notes to Article 1.15 for this.

The concept of a ‘legally attained level’ may also play a role when the function changes. In the event of a change in function, such as the transformation of an office

building into a residential building, the regulations for existing constructions are the lower limit for the new application function. If the building is being renovated because of usage under the new application function and the existing quality level of the construction is higher than the minimum quality level for an existing construction under the new application function, then the higher quality level will be deemed to be the legally attained level. If the renovation regulations prescribe a specific quality level, then that specific level is considered the minimum quality level for the renovation. This also means that the new application function can be applied without any renovation work if the building already complies with the regulations for existing buildings with that new application function.

Boiler room
A boiler room is a location for a combustion unit used for burning solid fuels, such as open-hearth heating units that use wood (solid cellulose-based fuel).

Fire sub-compartment
A fire sub-compartment is a part of a fire compartment used to limit the dispersion of smoke and for further restriction of the extent of a fire. Each fire compartment is subdivided into one or more fire sub-compartments. In new and existing construction work, fire sub-compartments (like fire compartments) therefore have to comply with certain regulations. Apart from the resistance to fire propagation and flashover (Dutch *wbdbo: weerstand tegen branddoorslag en brandoverslag*) of any dividing structure between the fire sub-compartment and other spaces within the fire compartment and limited smoke production from that dividing structure, another regulation will be applicable henceforth that relates to smoke leakage. The smoke compartments from the 2003 Building Decree are currently considered to be fire sub-compartments, on the understanding that less stringent requirements apply to those fire sub-compartments that were previously smoke compartments than to the fire sub-compartments that had already been designated as such in the past. Examples of the latter category are fire sub-compartments for a bedroom in a childcare centre or prison cell.

Technical room
A technical room is an area for installing equipment required for the functioning of the building. Examples are a meter room, boiler room, and a lift machine room. In general, a room specifically intended for air-conditioning will be considered a technical room. This definition does not cover systems that have to be placed in occupancy spaces or other non-technical areas because of the way they function; this may include lighting, sprinkler systems or fire alarms. Machines intended for the production of goods are not covered by this definition either. A space does not have to be enclosed in order to be deemed to be functioning as a technical room. Above a certain size, any technical room (whether enclosed or not) must be considered to be a fire compartment.

Site
Based on Article 2(2)(b) and (c) of the Housing Act, this decree also includes regulations about the condition, first use, and subsequent utilisation of open land and sites. For the application of this decree, a ‘site’ shall be taken to mean an undeveloped plot or part thereof associated with a building, other than the actual

premises. In order to be considered to be a site in the sense of this decree, four conditions must therefore be complied with: 1) it is a plot of land; 2) it is undeveloped; 3) it is associated with a building; and 4) not the actual premises. See also the explanations of the concepts ‘adjacent site’, ‘property’, and ‘open land’.

Accessibility sector
An accessibility sector is a part of the building that can be independently used by and is accessible for wheelchair users. Wheelchair users must be able to move independently in such a zone. This means that there should be sufficient manoeuvring room, that there should be no differences in floor height that cannot be bridged by wheelchairs, and that layout elements and control elements can be independently used by and are accessible for persons with such functional disabilities.

Tunnel tube length and tunnel length
The definition of ‘tunnel length’ is necessary to determine unambiguously whether a road tunnel is or is not covered by this decree. The tunnel length is the length of the longest road tunnel tube. The tunnel tube length is the length of the ‘enclosed’ part of the tunnel. In principle, the enclosed part of the tunnel stretches from one mouth of the tunnel to the other. However, the enclosed part may start after the tunnel mouth, for example if there are large openings in the tunnel roof or tunnel walls that are sufficient to remove the smoke and heat produced by a fire. The presence of an ‘enclosed part’ in a given situation (when requesting an environmental permit) is to be assessed by the municipality. It should be noted that the concept of ‘tunnel length’ used in this decree does not literally match the tunnel safety directive (Directive No 2004/54/EC for the European Parliament and the Council of the European Union on 29 April 2004 regarding the minimum safety requirements for tunnels in the trans-European road network) (OJ L 167, rectified in OJ L 201). Because it is typical of road tunnels that they are open at the tunnel’s mouth, this decree refers to a ‘totally enclosed part’, whereas the Dutch version of the directive wrongly refers to the ‘totally closed part’. This decree therefore does justice to the objectives of the directive.

External dividing structure
An external dividing structure is the structure that separates an area accessible for people off from the open air, ground or water. This structure also includes the adjacent parts of other structures, insofar as those parts affect the dividing structure. An outer wall, roof or dividing structure between a house and a non-enclosed traffic space such as a walkway can be considered to be an external dividing structure. The floor of the ground floor located above a crawler space cannot be considered as a dividing structure, because that floor constitutes a separation between the indoor air above and the air in the crawler space and not with the ground, open air or water.

Safety escape route
A safety escape route is that part of an escape route with extra protection that runs through a non-enclosed area and after that through an area that can only be reached from within non-enclosed areas. The concept of a ‘safety escape route’ replaces the old concept of a safety staircase. Fire and smoke cannot reach a safety escape route, because the components of the escape route function that are deemed to comprise the safety escape route act as a non-enclosed smoke airlock. A safety escape route can

run horizontally or vertically, unlike the old concept of a safety staircase, which was only intended for vertical use. The phrase ‘that can only be reached from within non-enclosed areas’ makes clear that there should not be any direct connection anywhere between enclosed areas on the safety escape route and other enclosed areas. In other words, fire or smoke from an enclosed area must not reach the enclosed area of a safety escape route anywhere.
The concepts of an ‘escape route with extra protection’ and a ‘protected escape route’ have also been explained in this article.

Security zone
The Basic Transport Network for Hazardous Materials refers to all the transport routes that are considered important for the transport of hazardous materials. These so-called basic network routes (roads, railways, and waterways) are designated by the Ministry of Infrastructure and Environment. Maximum permissible risk levels within which the transport of hazardous materials must be handled are indicated for the basic network routes. Those maximum permissible risk levels indicate the maximum permissible location-specific risk related to the transport of hazardous materials at a given distance from the transport route in question. The area between a basic network route and any location where the location-specific risk must not be more than 10–6 per year is called the safety zone. The safety zones are the decisive factor for spatial developments. The regulations for spatial developments within safety zones are laid down in the Transport Routes (External Safety) Decree (Dutch: **Btev**). The safety zones are included in the *Btev* regulations in the form of tables including distances for each road, railway or waterway or parts thereof. Development possibilities for vulnerable constructions such as adjacent housing, hospitals, and large offices may not be built within these zones. Building somewhat vulnerable objects such as small offices and scattered houses should preferably not be allowed in safety zones either. Should a municipality nevertheless decide to do so, it should substantiate the important reasons that led to this decision. If, based on the above, the decision was made to build in safety zones, please refer to section 2.16 of this decree.

Occupancy area and occupancy space
An occupancy area is an application area or part thereof used for the accommodation of persons and an occupancy space is a space in an occupancy area that is used for the accommodation of persons. This makes clear that an occupancy space is always in an occupancy area. An occupancy area can be subdivided into occupancy spaces and other spaces. The regulations for an occupancy space are appropriate for the accommodation of people. Imposing requirements on an occupancy area also guarantees a minimum level for the occupancy spaces within it. This is the best possible way to do justice to the free layout rules for the occupancy space. To a certain extent, the planning permission applicant can indicate which parts of the application function will be considered application areas and occupancy areas or spaces. The competent authority will then check the construction plan against the preconditions for this decision. The working rooms for the administrative activities of an office function and the classrooms of schools must be considered as occupancy spaces. See also the explanation of the concept of an ‘application area’.

Traffic route
A traffic route is a route that starts at a passage (in this case an exit) of a space, only runs across floors, stairs, or access ramps, and ends at the passage into another space. It is not a room in itself, but a route that leads to the entrance of a house, for instance from a bedroom through a corridor, a staircase, the living room and the hall, or a route that runs through an open-plan office. The route between a living room and toilet is a traffic route too. A traffic route can coincide with the escape route, but this is not necessarily the case.
The traffic route is associated with the application function that relies on it and must comply with the regulations for that application function.
It is not always necessary to separate the space through which the traffic route runs physically from the adjacent spaces. However, physical separation between the space of the traffic route and an adjacent space is required if the two application functions may not be located within the same fire compartment or if requirements regarding soundproofing have to be complied with.
It is therefore possible that the regulations of a different application function may apply to the space than those applicable to the route that runs through it. In that case, two sets of regulations apply to that part of the route and the most stringent regulations will have to be complied with.

Traffic space
A traffic space is a space intended for reaching another room, other than a space in an application area or function area, a toilet space, a bathing space or a technical space. If the traffic route runs through an occupancy area, a function area, toilet or bathing space or a technical room, then that space is not a traffic space; instead, it is an occupancy area, function area, toilet space, bathing space or technical space through which a traffic route runs.

Escape route
An escape route is a route that starts in a space intended for persons, runs only via floors and staircases and access ramps, and ends at a safe location. Because using lifts in the event of a fire poses risks, routes in which lifts have to be used may not be considered to be escape routes. Please refer to section 2.12 for an explanation of the concept of a ‘safe location’.

Floor or space intended for persons
A floor or space intended for persons is a floor or area for which the typical use is associated with the presence of people. In other words, it has to be assumed that when the floor or room is being used normally, there will be people there. A technical room is therefore generally not a ‘space intended for persons’. The typical use of that space involves the presence and operation of a system, not the occasional presence and activities of maintenance engineers. If the system has to be operated by staff members who are generally present, then the space is intended for persons.

Road tunnel
A road tunnel is a tunnel or tunnel-shaped structure only or also intended for motor vehicles as defined in Article 1(1)(c) of the Dutch Road Traffic Act 1994. The inclusion of this concept guarantees that the regulations for road tunnels in this decree relate only to tunnels for cars, motorcycles, and freight traffic by road. A

tunnel tube with a different use (e.g. tunnels for pedestrians, cyclists or pipelines) and service buildings associated with a tunnel are not ‘road tunnels’. Depending on the use of the construction, the terms ‘other tunnel’, ‘other building’, ‘construction other than a building’, and an office function, industrial function or meeting function may be used.

Second paragraph
The decree, like the 2003 Building Decree, lists twelve different (primary) application functions, namely eleven functions for buildings plus one function for structures other than buildings. Article 1 of the Housing Act defines the concept of a ‘building’ as any structure forming a covered space, entirely or partially enclosed by walls and accessible to people. The concept of a ‘construction’ is not defined. Jurisprudence is available on the concept of a ‘structure’ or ‘construction’ as described in the Model building ordinances of the VNG (Association of Netherlands Municipalities).

Meeting function
The meeting function is an application function for gatherings of groups of people. This application function may include the typical spaces of a conference centre, a church, a community centre, a cinema, a theatre, a casino, a pub, a restaurant, a canteen, a disco, an exhibition centre, a museum, a children’s day care centre or a stand in a sports centre.

Structure other than a building
A structure other than a building is a structure or part thereof insofar as this is not inside another building. Examples of a structure other than a building are a bridge, a viaduct, a dog kennel, scaffolding or a tunnel.

Prison cell function
A prison cell function is an application function for people whose stay there is compulsory. A prison cell function can be found in penal institutions, detention centres (including those for juveniles and those under hospital orders), closed departments for asylum and expulsion centres, police stations, and isolation cells in mental healthcare institutions. A prison cell function has two or more cells that rely on a shared traffic route. See also the explanation of the concept of a ‘prison cell’ included in the third paragraph.

Healthcare function
A healthcare function is an application function for medical examination, nursing, care or treatment. This may include spaces for treating or caring for patients in a hospital, care home, nursing home, psychiatric institution, medical centre or outpatient clinic as well as consultation rooms for a physician, physiotherapist or dentist.

Industrial function
An industrial function is an application function for operational processes or storage of materials and goods, or for agricultural purposes. An industrial function may include a workplace, or a warehouse in a factory, storage area in a warehouse, an archive room in an office, a farm stable or a greenhouse.

Office function
An office function is an application function for administrative activities. An office function may include a building or part thereof from which e.g. a consultancy agency, an accountancy office or law firm, an insurance undertaking or town clerk's office operates.

Lodging function
A lodging function is an application function for the provision of recreational accommodation or temporary shelter for persons, where the main residence of those persons is elsewhere. A lodging function covers uses such as a summer house, hotel, motel or boarding house. Any hotel room or suite is a lodging room within a lodging function. However, like a holiday house, a group accommodation building such as a farm campsite may be considered in its entirety to be one single lodging. See also the explanation for the concepts of 'lodging building' and 'lodging room' included in the third paragraph. It should be noted that if people have been registered at a particular address in the Municipal Personal Records, it may be assumed that the given address is their main place of residence. There is no lodging function in such a case.

Educational function
An educational function is an application function for the provision of education. This may include the classrooms in a school or a lecture hall of a university. However, a gymnasium associated with the school has a sporting function rather than an educational function, with a subsidiary educational function at the same time.

Other application function
The term 'other application function' is any application function not stated elsewhere in this paragraph for which activities involving accommodation of people has a subordinate role. An other application function therefore applies to a building, and not to a structure other than a building. An example of an other application function is a transformer substation.

Sporting function
A sporting function is an application function for practicing sports. Examples are a swimming pool, gymnasium, sports centre or fitness centre. A space for spectators in a sports centre, e.g. a stand, is not covered by the sporting function but is instead a meeting function. This also applies if there is no physical separation between the playing field and that stand. A stand in a football stadium on the other hand, is a 'structure other than a building' because it is not within a building.

Shop function
A shop function is an application function for trading materials, goods or services. A shop function may be an independent function such as a department store, a supermarket or a travel agency, or a shop at a petrol station, but this is not necessarily the case. The shops associated with a single shopping mall can form a single shop function together. However, there may be shops in a shopping centre that comprise individual usage units. These are individual shop functions. A shopping centre often has other application functions in the same building or on the same plot, such as a restaurant as a subsidiary meeting function of a shop function or as an independent meeting function.

Residential function
Residential function includes structures or parts thereof zoned for residential use, such as detached houses, single family houses, apartments or tenement houses, student houses, and mobile homes. The regulations in this decree apply to the form of accommodation form known as ‘floating houses’ too; on the other hand, a houseboat is not a structure in the sense of the Housing Act.

Third paragraph
Besides the twelve (primary) application functions stated in the second paragraph, the decree also contains a number of application functions or sub-functions. These are frequently occurring subtypes of the application functions stated in the second paragraph.

Meeting function for childcare
This definition has been included to distinguish between the meeting function for childcare and other meeting functions. The meeting function for childcare covers day care with sleeping accommodation. This refers to childcare as a service/business. A house-sitter or child minder as defined in the Childcare Act and preschool quality requirements, who takes care of one or more children, is not covered by this function. Facilities where children live such as an orphanage are not considered to have a meeting function for childcare; they are covered by the residential function. Medical facilities such as a medical child day-care centre or a children’s hospital are covered by the healthcare function. Childcare with a sleeping area refers to childcare for children up to 4 years old or for 24-hour care irrespective of age.

Cell
A cell is a part of a (prison) cell function intended for a single person or a separate group of persons. A cell function may therefore have one or more cells. The definition shows that it is possible to have more than one room in a separate cell, for example a sanitary space as well as an occupancy space.
A detention room or interrogation room is not a cell in the sense of this decree and therefore only has to comply with the regulations of a regular occupancy space. It must to be possible to open a regular occupancy space immediately for an emergency escape. A detention room or interrogation room that locks from the outside requires technical measures or organisational measures to ensure that the fire safety of the space, given the architectural situation, is equivalent to that of a regular occupancy space. See also the explanation of the concept of a ‘prison cell function’, included in the second paragraph.

Light industry function
A light industry function is an industry function in which activities are carried out for which the accommodation of people plays a subordinate role. Examples are a storage building, a greenhouse, and a stable. A light industry function is not taken to mean a dog kennel or similar structure not accessible for persons (structure other than a building).

Lodging building and lodging space
A lodging building is a building or part thereof with more than one lodging space, which also uses a shared traffic route. A lodging space is a part of a lodging function intended for one single person or a separate group of persons.
A lodging building offers lodging, e.g. a hotel or boarding house. That building may contain other application functions, such as office space, meeting space, a dining room, and kitchen, but that is not necessarily the case. In the latter case, the lodging building is a lodging function. A lodging space is a part of a lodging function intended for one single person or a group of persons. Examples are a room or suite in a hotel, a holiday house or apartment or a group accommodation such as a holiday farm.

Residential unit and residential function for renting a room
A residential unit is a part of a residential function used for renting rooms, and intended for separate housing. The residential function for renting per room is the non-shared part of a residential function in which there are five or more residential units.
A residential unit may consist of one or more rooms. The people living in a residential unit usually share a number of facilities such as traffic spaces, the front door, the kitchen and the sanitation with other residential units in the same house. The main residence of the inhabitants is the residential unit. A residential unit is not an application function but is instead part of a residential function. See also the explanation for the concept of an ‘application function’. The concept of a ‘residential unit’ is necessary for imposing specific demands on individual residential units and their associated shared facilities (shared spaces and other facilities) for the residential function of rental per room. A residential function for renting rooms therefore has five or more residential units.
It is assumed that there are no fire safety risks related to the subdivision of a residential function into not more than four residential units, compared to a regular residential function. If a house owner or principal tenant rents four or more residential units and lives in that residential function too, then there are five or more residential units and the regulations for the residential unit for rent per room are therefore applicable too.
The residential function for renting rooms has no restrictions regarding the size and the number of residential units. Large student floors comprising 16 residential units are therefore considered as rental per room. Not all student housing is incidentally automatically rental per room. A residential building with independent student houses is covered by the normal residential function and is therefore not a residential function for rent per room. A few examples of renting per room are a house where 5 persons live, each of them having a residential unit (room) of their own and shared facilities. A typical aspect of rental per room is that it is assumed that the main residence of the persons involved is the residential unit.
It should be noted that an independent residential function is not necessarily always a complete house. Pursuant to Article 1.4 of this decree, a residential function can use shared facilities (structures, spaces or other facilities), insofar as this has not been determined otherwise in the regulations for the facility in question.
It should also be noted that a residential function for care can be a residential function for rental per room at the same time. A classic example is an old people’s home, which is considered a single residential function (also known as a ‘megahome’) but

which consists of a number of residential units. As soon as such a residential function contains five or more residential units, it must comply with the requirements for both the residential function for rental per room and for the residential function for care.

Residential function for care
The residential function for care is a residential function where professional care is provided to those living there with a link between housing and care, organised from within the care supply chain within a residential function intended and equipped for the purpose. In such a residential function, professional care is provided to the inhabitants of a care cluster homes or group care homes, usually based on the Exceptional Medical Expenses Act ('Dutch: AWBZ') or the Social Support Act ('Dutch: WMO'). This is therefore not informal care (non-professional care). For an explanation of the care cluster home and the group care home and further subdivisions depending on the need for care, please refer to the explanatory notes in Article 6.20 (Fire alarm installation).

Residential building
A residential building is a building or part thereof with residential functions only (or subsidiary functions thereof) that has more than one residential function, which uses a shared traffic route. This concept refers to a residential building with e.g. tenement houses or apartments with outside access. The spaces in such a building with an application function other than a residential function (such as basement storage or garages) are subsidiary functions of those houses. An apartment in a residential building is a separate residential function. The fact that a residential function has more than one household, such as an old people's home or 'megahome', does not make the residential function a residential building. A residential building must at least have two residential functions.

Mobile home
A mobile home is a residential function on a plot intended for placing such a mobile home. Only a mobile home placed on a plot specifically intended for the purpose, is deemed to be a mobile home in the sense of this article. The development plan shows whether the plot is specifically intended for this special form of housing.

Article 1.2 Number of people
A number of regulations in this decree contain requirements that depend on the number of persons. See Article 2.109 about the flow capacity of escape routes and Article 6.25 about (the rotating direction of) doors in escape routes. In such cases, the first article prescribes that a building or part thereof may not have more persons at the same time than allowed, based on the person-related regulations. The number of persons for which the structure is intended according to the applicant for an environmental permit/user or owner of the building is used here. The purpose of this regulation is to prevent an undesirable situation in (a room within) a structure in terms of safety, health or usability. An undesirable situation may arise if there are more persons in a space than the number of persons for which the escape possibilities or the ventilation facilities are dimensioned. For that reason, the number of persons must always be tested against the second paragraph.
The *second* paragraph sets a limit on the number of persons per m^2 of occupancy area when planning permission is requested. This is irrespective of what is stated in the

first paragraph. This means in principle that the number of persons may be assumed for which the structure or part thereof is intended in accordance with the first paragraph. If the number of persons per m^2 of occupancy area is lower than indicated in the table of the second paragraph, then the number of persons indicated in the second paragraph must be assumed when requesting planning permission. This prevents an assumption, whether intentional or not, of an unrealistically low number of persons when requesting a permit for that building. This could lead to serious enforcement problems should the building be used by more people if the facilities are meant for that lower number. For example: in the first instance, the intended number of persons for an office function with an occupancy area of 100 m^2 is four. Checking the table shows that the indicated minimum number of persons per m^2 of occupancy area is 0.125. In that case, this means that the request for planning permission should assume at least 13 persons and that the facilities should be suitable for that. It should be noted that performance requirements are imposed on the number of persons per structure or part thereof, in addition to what is determined in this article in Chapters 2 through 7.

Article 1.3 Determination of equivalence

The *first* paragraph offers the option of deviating from the performance requirements stated in Chapters 2 through 7. The applicant, notifying party or user is free to choose between one or more (different) construction-specific, usage-specific or organisational solutions or combinations. If you claim equivalence, you will have to prove to the competent authority that the structure or its usage offers at least the same level of safety, protection of health, usability, energy-efficiency or environmental care as intended by the regulation in question. If the proposed solution is equivalent, then the competent authority will accept the claim of equivalence.

The system of equivalence regarding the use of a structure works in the same way as the system for equivalent architectural solutions. If the user has stored flammable materials in a different way than prescribed in this regulation, this will not result in a violation of that regulation if that different storage method offers the same level of fire safety as defined in this decree. Of course, the determination of equivalence has to be claimed. If the owner/tenant of a building has a certificate that sufficiently guarantees the fire safety of the use of the structure, this certificate can be used to show that an equivalent solution has been applied.

Fire compartments and equivalence

The 2003 Building Decree used to contain a section on Large Fire Compartments (section 2.22). The essence of that section was that a large fire compartment or fire sub-compartment had to offer the same level of fire safety as the (smaller) compartments for which performance requirements had been included. Such a section is not included in this decree.

In the future, the determination of equivalence has to be used for the realisation of a larger fire compartment.

The determination of equivalence makes it possible to create a larger fire compartment or fire sub-compartment than allowed, based on the performance requirements stated in sections 2.10 (Restriction of fire extent) and 2.11 (Further restriction of fire extent and reduction of smoke production). When using the determination of equivalence, the compartment and its layout must be such that fire safety is equivalent to the fire safety of the compartments in question. A construction

plan may therefore not be rejected merely because the fire compartments or fire sub-compartments are larger than indicated in sections 2.10 and 2.11.
The *second* paragraph makes clear that an equivalent solution associated with an environmental permit must also be maintained during the operational phase of a building.

Article 1.4 Common and shared
The *first* paragraph contains the general rule that any space or facility stated in this decree may be chosen to be a shared or non-shared space, unless stipulated otherwise in a specific regulation. In such a case the regulation only applies to either a shared space or facility only, or to a non-shared space or facility only. An example is the regulation stating that a residential function has a floor surface of at least 18m^2 of non-shared occupancy area (Article 4.2(1)).
The *second* paragraph states that the designation as shared is used for parts of a structure, spaces or facilities that are used by more than one application function. For the application of this decree, such a part or space or facility, except for the subsidiary function, is considered part of all application functions that rely upon it. This may include various types of application functions and multiple application functions of the same type. An example of a shared space for multiple application functions of the same type is the gallery/walkway used by the apartments leading off it.
The *third* paragraph indicates when the concept of shared is used. This concept is used if a part of a residential function, a cell function or a lodging function or a space or facility used by such an application function is used by more than one residential unit, cell or lodging space of that application function. Rental per room involves facilities and spaces such as a shared kitchen or a shared escape route within the house. This may also be important for a cell in a prison cell function or a lodging space (e.g. a hotel room) in a lodging function (e.g. hotel). Such spaces cannot be considered shared spaces, because these are spaces within the same application function.

Section 1.2 Application of norms, certification schemes, and inspection schemes

Article 1.5 Application of norms, certification schemes, and inspection schemes
Based on the *first* paragraph, (further) regulations can be given in a ministerial regulation about the application of the norms that this decree refers to. This may involve indicating which edition of a certain norm applies or the inclusion of corrections or supplements to a norm.
The *second* paragraph indicates that if a NEN-EN for which a national annex had been defined has been used for or pursuant to this decision, the said NEN-EN applies, including this national annex. This paragraph is the result of the implementation of the European construction norms, the so-called Euro codes. See also the explanatory notes in section 2.1 (General strength of the building construction elements).
The *third* paragraph is similar to the first. Based on that paragraph, (further) regulations can be created for the application of certification schemes or inspection schemes stated in Chapter 6.

Section 1.3 CE-marking and quality certificates

General

The regulations of paragraph 1.3 have been included to ensure the implementation of the directive on construction products (see also Article 1.1, Glossary). The textual changes made with respect to the 2003 Building Decree are meant to make it clearer that the essence of this paragraph is to prevent trade barriers.

Violations of the regulations included in this paragraph are considered economic offences, based on Article 120(2) of the Housing Act plus Article 1a of the Economic Offences Act.

[A change to the content of this paragraph will be made when the European decree on construction products, which is currently being drawn up, is implemented].

Article 1.6 Placing on the market

This article states that a product for which the European Commission has published a harmonised European norm and for which any coexistence period has expired cannot be placed on the market without that CE marking. For as long as the coexistence period has not expired, CE marking on the product will not be necessary. The website www.nando.com has included a summary of the construction products for which the European Commission has defined a harmonised European norm. It also shows whether the coexistence period has expired. The summaries are updated regularly.

Article 1.7 CE marking

The *first* paragraph states that putting a marking similar to a CE marking on a construction product, a label, packaging or associated documents is prohibited. The *second* paragraph states that, for construction products for which the European Commission has published a harmonised norm, it is prohibited to demand or make obligatory a quality statement or quality mark targeting the requirements that the CE marking already covers. This also applies if the coexistence period related to the norm has not yet expired. A quality statement relating to aspects other than those covered by the CE marking is always possible. In addition, a manufacturer may voluntarily put a quality statement on a product that already has a CE marking. He is not obliged to do so. Neither may suppliers be forced to deliver such products. It is important that access to the market is guaranteed on the basis of the CE marking. The *third* paragraph shows that if a construction product with a CE marking has been applied in accordance with that CE marking, the structure in which this construction product has been applied complies with the relevant technical requirements in this decree. In other words, if a construction product with CE marking has been used properly, you can trust that this construction product has the characteristics indicated by the manufacturer. For example: if the compressive strength of a batch of bricks is 10 N/mm^2 in accordance with the associated CE marking and the construction drawing has assumed bricks with a compressive strength of 10 N/mm^2, then the CE marking is sufficient proof of the correctness of the compressive strength as stated by the manufacturer.

Article 1.8 Application of quality statements

This article shows that if a construction product or construction process with a quality statement has been applied in accordance with that quality statement, the structure in which this construction product or construction process has been applied will comply with the relevant technical requirements in this decree.

Article 1.9 Certification and inspection bodies for quality statements
The *first* paragraph states the regulations for the publication of the specifications related to CE marking, which is done by publication in the Netherlands Government Gazette. The *second* paragraph states the minister appoints the bodies that are allowed to grant the European approvals. The *third* paragraph deals with the appointment of the certification and inspection bodies and test laboratories.

Article 1.10 Implementation of the construction products directive
Based on this article, further regulations regarding the implementation of the construction products directive can be given by ministerial regulation.

Article 1.11 Recognition of quality declarations
Quality declarations issued within the system for the issue of quality declarations recognised by the ministry are considered sufficient proof, within the context of the permit procedure, that the requirements of the building ordinances have been complied with, insofar as these are requirements about which a statement is made in the declarations in question (*first* paragraph). Further explanation of this system of recognised quality declarations will be included in the explanatory notes for the ministerial regulation associated with this decision (*second* paragraph).

Section 1.4 Special stipulations

Article 1.12 Rebuilding
Article 1.12 states that the requirements for any new structure that is to be built apply (under Chapters 2 through 6) to the entire or partial renovation or alteration or extension of a structure, unless stated otherwise in the paragraph in question. This article has replaced Article 1.11 of the 2003 Building Decree. In the future, it will be immediately clear what the specific level of requirements is for renovations. In many cases, this decree refers to the 'legally attained level'. The legally attained level is explained in the general part of the explanatory notes and in Article 1.1(1), under the concept of 'legally attained level'. The legally attained level is used if the requirements for new construction work are not reasonably feasible or if they will be disproportionate to the existing quality level of the project to be renovated. For example: the resident/owner of a house from the fifties who has not made use of the options for later insulation subsidised by the government because of serious traffic, industrial or aviation noise. If that house is extended, the owner/resident personally has to arrange any insulation for that extension against noise nuisance. The application of the stringent noise nuisance requirements of section 3.1 to the extension, when the house itself is not insulated against it, is hardly sensible. The legally attained level suffices for such cases. It goes without saying that if the requirements for new construction work are no longer applicable (without the legally attained level or another specific level of requirements replacing them), the relevant requirements for existing constructions must be met as a minimum. This is the lower limit that has to be complied with at all times.

Article 1.13 Historic buildings and listed buildings
This article refers to the environmental permit for the execution of work on a historic or listed building protected by the government, a province or municipality (from 1 October 2010 this is part of an environmental permit based on the Environmental

Law (General Provisions) Act (Dutch: WABO)). Like under the 2003 Building Decree, this article prevents the regulations from having undesirable effects on the character of the listed building when renovating it. If the environmental permit deviates from the regulations of this decree, then the regulations of the environmental permit apply and they exclude the relevant regulations in this decree.

Article 1.14 Temporary structures
This article stipulates that a temporary structure should at least comply with the regulations for existing structures as stated in Chapters 2 through 6. Deviations are only possible insofar as a certain section has been designated explicitly for a certain application function. Examples of a temporary structure are a building site cabin, temporary classrooms for a school or a temporary shop/store.

Article 1.15 Relocation
The *first* paragraph determines that an existing structure, placed in exactly the same layout at another location, must meet the legally attained level at that new location. This may include a mobile home that is to be moved to another plot, a building site cabin that (whether or not after being dismantled) is moved from one location to the other in the same layout, or a permanent structure (for instance, an old mill) that is moved. If a structure is erected in a changed layout elsewhere, this therefore means that a new (temporary) structure is erected and that this structure has to comply with the requirements for new construction work. The *second* paragraph states that the first paragraph applies to a temporary structure, if the structure is once again a temporary structure after it has been relocated. If the structure is no longer considered a temporary structure at the new location, this means that a new permanent structure has been erected and the structure will as a minimum have to comply with the regulations for new construction work or be brought in line with them if necessary.

Article 1.16 Duty of care
The *first* paragraph of this article contains a general duty of care that applies to systems as defined in Chapter 6. It refers to systems that are present by virtue of legislation. The reference to ‘by virtue of legislation’ is made because this concerns not only the systems prescribed in this decree, but also systems that are prescribed based on a determination of equivalence (Article 1.3) and systems prescribed by the Housing Act (based on Article 13).
Such a system must function at all times in accordance with the regulations that apply to the system. Furthermore, the system must be managed, maintained, and inspected properly. It must also be used in such a way that it does not pose any danger to health or safety. Irrespective of what is determined in this article (1.16), this duty of care is discussed in detail in a number of articles of Chapter 6. For an example, see Article 6.29(7), where a specific test frequency is indicated.
It should also be noted that the functioning (including management, maintenance, and checks) of systems that are not stated in Chapter 6 is covered by the duty of care stated in Article 1a(2) of the Housing Act. An example of such a system is a ventilation system (including the fire shutters placed in the ventilation ducts).
The *second* paragraph concerns the checks of pipe/cable conduits. To prevent an incipient fire and smoke from spreading quickly within a building, sections 2.10, 2.11, and 2.12 impose requirements on the resistance against fire propagation and flashover and the resistance against smoke penetration for dividing structures (such

as walls and floors). If a conduit in or through such a dividing structure for cables, pipes, a tube mail system or air conditioning, etc. has been improperly installed (or an existing conduit modified improperly), this may have such a negative effect that the resistance requirements can no longer be met. To avoid such situations, this paragraph prescribes that these conduits must be properly checked immediately after placing or changing them. In this context, conduits are also taken to mean the facilities associated with the conduit, such as fire protection sleeves. If it should turn out that the regulations of Chapter 2 are no longer complied with, the shortcomings must be resolved immediately.

Article 1.17 Availability of data and documents

Based on sections 2.2, 2.8, and 2.9, a number of structural elements in a construction must be able keep performing as required in terms of fire resistance and fire propagation if they have received appropriate additional treatment. This may be the case for steel supporting structures (in that their fire resistance also depends on the paint applied to them), wooden wall cladding (insofar as it complies with fire restriction requirements because it has been impregnated) and thatched roofs. Because aging, wear or damage can reduce the effect of such an additional treatment over time, even causing it to disappear in the long run, it may be possible that the required level of fire safety is no longer met. For that reason, this article prescribes, as a guarantee for maintaining that quality level, that there must be a valid document for the construction parts in question, accepted by the competent authority, which shows that this additional treatment has been applied properly. In practice, this means that the document shows that the required additional treatment was carried out properly, that it is maintained and will be repeated when necessary. By accepting this document, the competent authority declares, as it were, that it trusts that the parts of the construction elements in question comply with the requirements set. The term ‘valid’ is taken to mean that the document has not expired.

Section 1.5 Notification of use

General

This paragraph contains regulations for notification of use. In principle, Chapters 2, 6, and 7 guarantee a sufficient level of fire safety. In a limited number of cases, a preventive assessment was chosen, done by prescribing an environmental permit for safe use in terms of fire safety. In a number of cases (also only limited) where a relatively high number of persons have been planned for a structure, the authorities must be notified of the use of that building. This report informs the competent authority at least four weeks in advance about the planned use of a building. After this notification, the competent authority can decide (based on its own priorities) to check if the actual or intended use in fact meets the prescriptions of this decree, before usage commences or during usage or not at all. Notification of use is case-specific. New notification is not required for a new user who continues the old form of use. In principle, the validity period of a notification of use is unlimited. In the event of an intended change in use, the user will have to assess whether notification of the use is still required, and must make a new report if so. Because the municipality does not provide any services to the notifying party when handling the notification, the notifying party does not have to pay fees for submitting the notification.

Article 1.18 Obligation to give notification of use

The *first* paragraph of this article states in which cases it is forbidden to commission or use a building without reporting its use. Notification of use is required if:

a. equivalence as defined in Article 1.3(1) is claimed for a regulation stated in Chapter 6 or 7;
b. there will be more than 50 persons in a building at the same time, or
c. it concerns rental of rooms.

The *second* paragraph states that the first paragraph does not apply in those cases where an occupancy permit is required. This regulation makes sure that if a specific use would be covered by the 'obligation to give notification of use' and by the permit requirement, then the occupancy permit takes precedence. An example of such a situation is a nursing home with 60 beds. 'The use as a nursing home requires an occupancy permit based on Article 2.2(1) of the Environmental Licensing Decree (BOR') 'because it offers accommodation for the night to more than 10 persons.' The fact that there will be more than 50 persons in this nursing home does not mean that notification of use should also be made as defined in Article 1.18 of this decree.

The *third* paragraph states that Article 1.18a(1) does not apply to single family homes or multi-family homes, or to road tunnels. This makes it possible to have a party at home without having to report it.

The *fourth* paragraph ensures that when a structure or its use has been changed, as a result of which the data submitted is no longer correct, a new report must be made.

The *fifth* paragraph states that, when applying Article 1.18, a structure is also taken to mean parts of a structure that are intended (designed or adapted) for separate use. This paragraph makes sure that several users of a structure can submit individual notifications, appropriate for their specific situation. This special explanation of the concept of a 'structure' is only applicable to Article 1.18 and therefore not to other articles of this decree.

Article 1.19 Submitting a notification of use

This article includes the procedural regulations for the submitting a notification of use. The *first* paragraph states that a notification of use must be submitted to the competent authority in writing at least four weeks prior to the intended start of use. The second and third paragraphs relate to the practical layout of the notification of use. It should be noted in a general sense that the form for notification of use is fully integrated in the request form for an environmental permit. If a separate notification of use is submitted, only the part dealing with the report is completed. If the notification is given at the same time that the application for a permit is submitted, that part is completed too. The integration of the form for notification of use into the form for applying for a permit was chosen with an eye on accessibility for and services to the reporting party.

The *second* paragraph concerns electronic notifications of use, referring to the electronic form that can be obtained through the national facility, as defined in Article 7.6 of the Environmental Law (General Provisions) Act (WABO). Article 4.3(1) and (2) of the Environmental Licensing Decree (BOR) apply accordingly. These are detailed procedural regulations relating to an electronic request for an environmental permit.

The *third* paragraph concerns electronic notification of use. In that case the form as defined in Article 4.2(1) of the BOR must be used. This is the paper application form

for the environmental permit, in which, as is the case for the electronic variant, the form for notification of use is integrated.
The second sentence of paragraph 3 states that if notification of use is submitted at the same time as the application for an environmental permit is made, the number of copies submitted for the notification of use and the data and documents to be submitted with it must be the same as the number of copies that have to be submitted for the permit application and the data and documents to be submitted with that, based on Article 4.2(2) and (3) of the BOR.
The third sentence states that if the notification of use is given separately, the report and the data and documents to be provided with it must be submitted in triplicate.
The 'fourth' paragraph states that when reporting an equivalent solution as defined in Article 1.18(1)(a)(2), data and documents must be submitted that (in the judgement of the competent authority) prove this.
The *fifth* paragraph concerns the data and documents that have to be submitted when notifying use as defined in Article 1.18(1a)(1) and 1.18(1b). Two types of drawings must be delivered here: a situation sketch of the structure that the request relates to, and a map of each floor in that structure. The requirements that are set here are the same as those for applying for an occupancy permit. The *sixth* paragraph requires the that requesting party, when submitting notification of use for temporary or season-related use, must indicate for which periods and to which intervals in the calendar year the intended use applies. The *seventh* paragraph states that a report may also relate to multiple structures at the same site or associated sites (not necessarily adjacent sites). This is important when submitting a single notification for a complex of shops, for instance.

Article 1.20 Handling the notification of use
This article states that the notifying party receives confirmation of receipt from the competent authority. In addition to this, the general principles of the Administrative Law Act apply to the way a notification of use is handled. In other words, if the submitted data and documents are not sufficient, the competent authority will give the reporting party an opportunity to supplement the data within a reasonable period of time set by the reporting party.

Article 1.21 Further conditions after notification of use
The *first* paragraph concerns the imposition of further conditions. The competent authority assesses if the reported intended use of a structure in which more than 50 persons are present at the same time (Article 1.19(1a)(1)) may be considered safe in the event of a fire. If the intended use, assessed against the principles of this decree, is not considered sufficiently safe, the competent authority can decide to impose further regulations about fire safety. If the notifying party wants to allow more persons at the same time in the building (or a part thereof) than allowed under this decree, action can be taken to resolve this. In such a case, there are no further conditions for the notification, but the existing regulations will be enforced. The additional conditions may only concern the requirements for the use and not architectural requirements. If an entrepreneur, when giving notification of use, assumes escape capacities for more persons than allowed if Article 2.109 is applied, the above means that the competent authority (except when a equivalent solution has been applied, e.g. with sprinklers) has to assume Article 2.109 and therefore cannot adjust the number of persons downward further than the number of persons allowed

based on that article or that equivalent solution. The further conditions can also imply a restriction of the type of use in exceptional situations. As has been indicated above, the competent authority must substantiate this and the conditions must not be the same as those that are already applicable under this decree. The *second* paragraph states that acting in a manner that conflicts with the further conditions as defined in the first paragraph is prohibited.

Article 1.22 Changes to further conditions for notification of use
The *first* paragraph states that the competent authority can change any conditions imposed after the notification of use if insights into the situation or circumstances outside the structure change and such a change has arisen after the notification. The further conditions can also be changed on request by the notifying party.
The *second* paragraph states that the competent authority must not use the powers given in the first paragraph without giving the notifying party an opportunity to present its opinion on the matter.

Section 1.6 Procedure for building activities

General
Several procedural (administrative) regulations about the execution of building activities are included in this paragraph. Until the coming into force of this decree similar regulations were included in the municipal building ordinances, which in general were based on chapter 4 of the Model Building Ordinances of the VNG (Association of Netherlands Municipalities). The regulations of this paragraph are applicable along with the regulations which since 1 October 2010 as a consequence of the coming into force of the Environmental Law (General Provisions) Act (Wabo) are applicable to the procedural aspects of the permit for building. The technical regulations for the execution of building activities are included in chapter 8 of this decree.
Fewer regulations are included compared with chapter 4 of the model building ordinance. Only procedural regulations are included in this paragraph which must apply in general during the execution of building activities. This therefore concerns general regulations with direct effect. Any other procedural regulations for the execution of building activities are customised. This customisation can concern both technical as well as administrative (what must be notified when by whom and must this notification then be made verbally, by telephone, in writing or electronically) regulations. On the basis of Article 2.22(2) of the Environmental Law (General Provisions) Act (Wabo), the competent authority can provide procedural customisation by attaching such regulations to the environmental permit. In this way it is avoided that regulations which are attached to an environmental permit which is granted for several activities (such as a project that consists of the activities building, alterations to a listed building, and establishment of an environment institution) are not adjusted to each other because general rules oppose them.

Article 1.23 Lapsed

Article 1.24 Availability of documents
This article prescribes the documents or transcripts of them which must be present on the building site. Under the stated documents fall at least (transcripts of) the environmental permit and the building safety plan (see also Article 8.3). For the

supervisory and maintaining services it is of importance that these documents are present on the site and can be provided on request, so that they can check whether the regulations applicable to the building are and will be observed.

Article 1.25 Setting out the building boundaries
In the situations to be determined by the competent authority, it may be necessary that prior to building, building lines, building boundaries or the reference measurement level of the structure to be built on the building site are determined and marked out (set out) by or on behalf of the competent authority.

Article 1.26 Notification of start and termination of building activities
The regulations of this article are related to construction activities for which a permit is granted for building. By notifying the competent authority of the date of starting and the date of termination (notification of completion) of the building activities the competent authority is able to carry out supervision during the execution of the activities and when the structure is complete. In addition, on the basis of Article 2.33(2) of the Environmental Law (General Provisions) Act (Wabo), the competent authority can withdraw a permit for building if the work has lain still for 26 weeks. Therefore there may be no uncertainty about the date of starting the building activities or about the date of termination. Notifying the competent authority must take place in writing. This means that it may also take place electronically. The *first* paragraph is about the start of and the *second* paragraph about the termination of the building activities.
In the first paragraph it is also indicated that the competent authority must be notified about excavation activities. On the basis of the *third* paragraph a structure for which a building permit is granted may not be released or taken into use if the completion of the structure is not notified to the competent authority. The purpose of this regulation is to avoid that unsafe situations arise as a result of taking uncompleted structures into use.

Section 1.7 Procedure for demolition activities

General
In Article 1(1) of the Housing Act demolition is understood as: the breaking up of a structure or a part of it.
This paragraph contains procedural (administrative) regulations for demolition. Until the coming into force of this decree, similar regulations were included in the municipal building ordinances, which in general were based on chapter 8 of the model building ordinance. The regulations of this paragraph are applicable along with the regulations which are applicable on the basis of the Environmental Law (General Provisions) Act (Wabo) since 1 October 2010. The technical regulations for the execution of demolition activities are included in chapter 8 of this decree.
Until this decree came into force, demolition or the requirement for a permit for demolition or the requirement for notification of demolition was totally free. From now on demolition on the basis of the Housing Act either requires notification of demolition or is free of the requirement of notification of demolition. The requirement for a permit for demolition category is thereby included in the category notification. This incidentally leaves intact that for demolition not only a notification but also a demolition permit on the basis of other legislation and statutory regulations can be necessary. This can, for instance, be the case during demolition activities

which take place to a listed building or in a protected view of a city or village; in reference to this see Articles 2.1(1)(f) to (h), and 2.2(1)(b) and (c), of the Environmental Law (General Provisions) Act (Wabo). With a view to such cases, a concurrence regulation is included in this paragraph (see Article 1.33).
The regulations of this paragraph and those of chapter 8 are directed towards the demolisher. This is in principle also the person who should make a notification of demolition as intended in Article 1.28. However, the regulations do not oppose that a different person makes the notification. If a notification of demolition is required and a notification is not made, then the demolisher contravenes the ban on demolishing without a permit included in Article 1b(5) of the Housing Act.
Insofar as is necessary, the regulations of this paragraph are adjusted to the regulations of the 2005 Asbestos Removal Decree.

Article 1.28 Notification of demolition
A demolition activity for which a reasonable estimation of the quantity of demolition waste will amount to more than 10 m^3 or by which asbestos is removed must be notified. This avoids that every demolition activity falls under the notification requirement of the *first* paragraph. With smaller demolition activities, such as internal alterations by which less than 10 m^3 of demolition waste is released and no asbestos is involved, then no notification of demolition is required. In that case safety and health of the surroundings is guaranteed with chapter 8 of this decree in connection with the care provision of Article 1a of the Housing Act. The demolition must be notified in writing to the competent authority at least four weeks prior to the start of the demolition activities.
The second and third paragraphs contain exceptions to that specified in the first paragraph. The *second* paragraph indicates in which cases with asbestos removal no notification of demolition is required. This exception only applies if the products containing asbestos are removed within the scope of the exercising of a profession or business. The exercising of such a profession or business falls under the 2005 Asbestos Removal Decree. The *third* paragraph contains an exception on the period of notification. Instead of at least four weeks, the notification of demolition may be done up to five working days prior to the start of the execution of the demolition activities. This makes it possible to remove asbestos at short notice from houses which are in use or other buildings, so that the benefit of use is restricted as little as possible. Unnecessary long lasting lack of occupancy in connection with the asbestos removal is also avoided. This exemption possibility is therefore restricted to cases in which repair maintenance must be carried out on an application containing asbestos in houses or other buildings which are in use or where there is a delay with the removal of the asbestos until the execution of so-called alteration maintenance at the time that the buildings have become empty.
The information and documents are named in the *fourth* paragraph which together forms the notification of demolition. This information and these documents must in principle be submitted together with the notification. However, the *fifth* paragraph makes it possible to deliver the information, intended in section b of the fifth paragraph, at a later date. This information still needs to be provided in that case at least two working days prior to the start of the execution of the demolition activities.
The *sixth* paragraph states that if during the demolition, the existence of asbestos is found that is not included in the asbestos inventory report, this must still be brought immediately to the attention of the competent authority.

Article 1.29 Manner of submission of the notification of demolition
The notification of demolition can take place digitally or with the use of a form. The *first* paragraph of this article arranges the manner of electronic submission of a notification of demolition. This fits in with the national regulation as referred to in the Environmental Law (General Provisions) Act (Wabo). The *third* paragraph concerns electronic notification of demolition. In that case the form as defined in Article 4.2(1) of the BOR must be used. This is the paper application form for the environmental permit, in which, as is the case for the electronic variant, the form for notification of demolition is integrated.
The second sentence of this paragraph states that if notification of use is submitted at the same time as the application for an environmental permit is made, the number of copies submitted for the notification of demolition and the information and documents to be submitted with it must be the same as the number of copies that have to be submitted for the permit application and the information and documents to be submitted with that, based on Article 4.2(2) and (3) of the BOR. The third sentence states that if the notification of demolition is given separately, the notification and the information and documents to be provided with it must be submitted in triplicate.

Article 1.30 Handling of a notification of demolition
This article prescribes that by or due to the competent authority an acknowledgement of receipt of the submitted notification of demolition will be sent to the notifying party. This acknowledgement of receipt is of importance because the period which on the basis of Article 1.28(1) and (2), must lie between the notification of demolition and the actual start of the notified demolition activities, begins at the moment of submission of the notification.

Article 1.31 Further conditions after notification of demolition
On the basis of this article, after receipt of a notification of demolition, the competent authority can impose further conditions. In principle the procedural regulations of this paragraph together with the regulations of chapter 8 are sufficient to allow responsible execution of demolition activities to take place. The same applies in connection with the regulations of the 2005 Asbestos Removal Decree for demolition activities by which asbestos is removed. In general the competent authority will see no necessity to impose further conditions after a notification of demolition. In the incidental situation that the imposition of such further conditions still appears to be necessary, this article offers the possibility for that. On the basis of the *first* paragraph, the competent authority can impose further conditions which are necessary with a view to avoiding or restricting nuisance or of an unsafe situation during the demolition activities. See also paragraph 8.1 in which the general rules regarding the safe execution of demolition activities and the restriction of (noise, dust, and vibration) nuisance are included. The *second* paragraph offers the competent authority the possibility to also impose further conditions for the separation and keeping demolition waste separated on the demolition site (see also paragraph 8.2) and for the manner in which the notification of completion as referred to in Article 1.35(2) must be done. For this last point, consider that a further condition is that the notification of completion must be done in writing.
The *second* paragraph states that acting in a manner that conflicts with the further conditions as referred to in the first and second paragraphs is prohibited.

Article 1.32 Changes to further conditions for notification of demolition
The possibility is included in the *first* paragraph for the competent authority to change the further conditions, referred to in Article 1.31, when there is a change of insight or of circumstances which make this change necessary. The conditions can also be changed on request by the notifying party.
The *second* paragraph states that the competent authority must not use the powers given in the first paragraph without giving the notifying party an opportunity to present its opinion on the matter.

Article 1.33 Concurrence of a notification of demolition and environmental permit
It is indicated in this article how it must be handled if the demolition for which a notification of demolition is required is linked with an activity for which a permit is required on the basis of Article 2(1), or 2.2(1) of the Environmental Law (General Provisions) Act (Wabo). In such a situation the *first* paragraph determines that the notification of demolition must be submitted in the same manner as the request for the environmental permit. The *second* paragraph indicates that in such a situation the competent authority for the notification of demolition is the competent authority on the basis of the request for a permit. If the competent authority, referred to in the second paragraph, is a different administrative body than the municipal council, then that competent authority on the basis of the *third* paragraph must immediately inform the municipal council about the notification of demolition. This is notified simultaneously to the notifying party.

Article 1.34 Availability of documents
This article prescribes the documents which must be present on the building site. Under the stated documents fall at least the notification of demolition and the demolition safety plan (see also Article 8.3). For the supervisory and enforcing services it is of importance that the original or transcripts of these documents are present on the site and can be provided on request, so that they can check whether the regulations applicable to the demolition by or by virtue of this decision are and will be observed.

Article 1.35 Notification of start and termination of demolition activities
By notifying the competent authority of the date of starting and the date of termination of the demolition activities, supervision can be exercised in time on the execution of the demolition activities. The *first* paragraph is related to the notification of the start of the execution of the activities. This notification must be made in writing and at least two working days prior to the start. If the date of the actual start corresponds with that specified for this in the notification of demolition (see section d of Article 1.28(4)), a separate written notification is not necessary. If the date of the actual start differs from that specified in the notification of demolition, then a written notification does need to be made.
The *second* paragraph is related to the notification of the date of termination of the demolition activities. This notification (notification of completion) must be made at the latest on the day of the actual termination. If the date of termination corresponds with that specified for this in the notification of demolition, this specification applies as the notification as referred to in the second paragraph and a separate notification is not necessary. In principle, the notification as referred to in the second paragraph does not need to be made in writing unless the competent authority has included that

as a further condition (see Article 1.31(2)(b)). On the basis of the *third* paragraph, within two weeks after termination of demolition activities which are (also) related to asbestos removal, a copy of the results of the final assessment as referred to in Article 9(1) and (2), of the Asbestos Removal Decree 2005 must be submitted to the competent authority.

Chapter 2 Technical building regulations from the viewpoint of safety

General
Subject of this chapter is the guarantee of the quality of a building through building technical regulations and thereby to guarantee the safety of people in and around that building. It does not concern thereby the avoidance of any material damage to a structure. That damage is less likely to a structure built in accordance with the regulations of this chapter is a secondary effect.

Compared to chapter 2 of the 2003 Building Decree this chapter is limited as a result of the lapsing of regulations, the combining of old sections and regulations, and the relocation of a number of topics to chapter 6. Important are the introduction of the Euro classes and the new systems for fire sub-compartmentalisation and escape. The Eurocodes are included in the sections for structural safety and strength during fire for new buildings, while for existing buildings the Dutch construction standards (TGBs) remain applicable (see further hereinafter section 2.1).
See for the new systems for fire sub-compartmentalisation, the general part of the explanatory notes and section 2.11.
In addition, the regulations for the separation of a floor, a staircase and a ramp are from now on included in one new section 2.3. This has the advantage that there can no longer be any question of unintended differences in requirements with regard to the dimensions.
The regulations for the direction of rotation and self-closing of doors, dried extinguishing pipes, fire hose reels, electricity and emergency power supplies, lighting, gas facilities, and access to a residential building are moved to chapter 6.
There is no section for large fire compartments included in this decree. Large fire compartments can from now on be realised with an appeal on equivalence. Also see the explanatory notes to article 1.3.

Section 2.1 General strength of the building construction

General
Through the subject of structural safety reference is made in the 2003 Building Decree to the national construction standards, or the so-called TGBs (*Technische grondslagen voor bouwconstructies* - Technical fundamentals for building constructions). In the meantime on the initiative of the European organisation for standardisation (CEN), European construction standards (Eurocodes) have come into being for this subject. With the coming into force of this decree these Eurocodes or NEN-ENs are designated.
With the introduction of the Eurocodes, an important step forward has been taken in European harmonisation in the construction industry. It should be noted that the Eurocodes also incorporate pre-conditions for constructional product specifications for CE-marking for construction products.
To guarantee effective harmonisation with the safety levels prevalent within a specific member state, the member states can provide every Eurocode with their own binding national annex. Certain parts, which in the NEN-EN are even considered as

‘informative’ (recommend), can in the national annex be declared as ‘normative’ (binding).
These choices which are key to the Netherlands have been set down in the Dutch national annexes, together with any necessary parameters, formulas, tables, and texts. The content of these national annexes is determined by the TGB standards committee in a so-called ‘adjustment phase’ (calibration). Every NEN-EN (standard) for constructional safety must be read in conjunction with the associated national annex. The definitions in this chapter tie in as much as possible with the definitions used in the Eurocodes.

Section 2.1.1 New buildings

Article 2.1 Control article
The functional requirement of the *first* paragraph, that a structure to be built is sufficiently resistant against the forces working against it, makes clear that the construction of a single structure must be so that it cannot collapse with the intended use. It is indicated in the performance regulations which loads and which usage period (design life span), dependent on the type of structure, must be assumed.
The table of the *second* paragraph indicates regulations for each use which are applicable to that use. Compliance with these regulations ensures compliance with the functional requirement of the first paragraph.

Article 2.2 Fundamental stress combinations
The purpose of this article is to guarantee that a building construction during the design life span (sustainable) is resistant against the forces which work on that building construction. The design life span, as described in NEN-EN 1990, is the period during which a construction or a part of it is usable for the intended purpose, taking into account the anticipated maintenance, but without extensive repair being necessary. The main regulation is that a building, such as is indicated in NEN-EN 1990, must last for 50 years.
The fundamental stress combinations are combinations of more detailed simultaneously occurring permanent and changing stresses. Permanent stresses are for instance the own weight of a construction. Examples of changing stresses are stresses through furniture, machines, and persons.
In the 2003 Building Decree for the calculation of the abovementioned fundamental stress combinations, reference is made to NEN 6702. Insofar as the forces working on a building where construction could not be determined with NEN 6702, reference was made to NEN 6700. This national standard is replaced in the Eurocode system by NEN-EN 1990 ‘Fundamentals of the constructive design’. (Dutch: ‘*Grondslagen van het constructief ontwerp’*). This fundamental Eurocode is applicable to those stress combinations to which NEN 6700 and 6702 were applicable in the past. In principle, with the implementation of the Eurocodes including the associated national annexes, section 2.1 General strength of the building construction, the content compared to the section from the 2003 Building Decree with the same name has remained unchanged. NEN-EN 1990 refers for the further specification of the different sorts of stress to NEN-EN 1991 (respectively, NEN-EN 1991-1-1 to 1991-17). When determining whether a construction part of a structure will not collapse, the forces working on a structure must always be determined with help of NEN-EN 1990 in connection with the relevant standard from the NEN-EN 1991.

It should be noted that the Eurocodes also provide for requirements to the structural safety of greenhouses, so that therefore from now on no separate regulation is necessary anymore.

Article 2.3 Extraordinary stress combinations

The *first* paragraph states a requirement on the strength and stability of a structure or a part of it with extraordinary stress combinations. The underlying principle is that a building construction which is directly loaded may itself collapse as long as this does not lead to the collapse of other building constructions than building constructions which lie in the immediate vicinity. If a construction part collapses then construction parts situated directly in the vicinity may also collapse. This may however not occur with building constructions situated further away because that could lead to a progressive collapse. Compared with Article 2.2 from the 2003 Building Decree, the regulation is not substantively amended. In the national annex with NEN-EN 1991-1 to NEN-EN 1991-7 the known extraordinary (special) stresses are included that play a role in the assessment of a design. This concerns impact loads through vehicles, trains, and ships, stresses through internal gas explosions, stresses through extreme increases in (ground) water levels, the effect of storm with opened windows and doors, and the effect of the loss of a stability provision of a different building.
In the *second* paragraph the regulations are given for the non-collapse of a roof or of a protective barrier as a result of a calamity (for instance someone who trips on the roof or falls hard or is pushed against a protective barrier). This impact load is included in the national annex with NEN-EN 1991-1-1.

Article 2.4 Method of definition

This article contains the methods of definition with which it can be checked whether the structure satisfies that stated in Articles 2.2 and 2.3. The *first* paragraph of this article refers to the standards in which properties of known materials are recorded. In these standards it is described for each building material how the forces affecting a building construction affect it with regard to moments, standard and cross forces and tensions. This affect, which is also dependent on the rigidness of the building construction, is called the response. Additionally, these standards contain calculation rules with which it can be determined which maximum moments, standard or cross forces and tensions or combinations thereof in the building construction can be absorbed. The so-called capacity of a building construction is determined with these calculation rules. When the so determined response is greater than the capacity, then this concerns the exceeding of an extreme boundary situation.
The national standards NEN 2608 and NEN 6707 for respectively glass (e) and the fixing of roofing material (f) are maintained. There are still no Eurocodes available for these items.
The *second* paragraph determines that with the use of other materials and methods of definition, the non-collapse of a construction must be determined with NEN-EN 1990.
The *third* paragraph gives a regulation for a dwelling not located in a residential building or lodging building and of a hospitality function. In such cases account may be taken with the stability provisions of an application function of the same type situated on an adjacent plot. This means that when assessing the stability of a terraced house or a semi-detached holiday home, account may be taken of, for instance, wind bracing (specific stability provision) of an adjacent dwelling or hospitality function.

With all other application functions, all requirements which are laid down on the stability must be satisfied independently (within the boundaries of the own plot).

Article 2.5 Alteration
Article 2.5 gives a regulation for the partial renovation or alteration or the extension of a structure. In such cases Articles 2.2 to 2.4 apply by analogy, by which the level as indicated in NEN 8700 must be assumed. The new building ordinances are fully applicable to the entire renovation. Article 1.12 determines that unless agreed to otherwise, the new building ordinances are applicable. See also for this the general part of the explanatory notes.

Section 2.1.2 Existing buildings

Articles 2.6 to 2.8
See the explanatory notes to Section 2.1.1, New buildings.
In addition to that, the following is noted.
Just as the case is with new buildings for the assessment of the structural safety of existing buildings, use is made from now on of European standards. Since in principle the Eurocodes are focused on new buildings, the variations from the Eurocodes for existing buildings are described in NEN 8700. NEN 8700 contains the fundamentals of the assessment of the structural safety of existing structures and is therefore based on the Eurocodes. This standard can be seen as an addition for existing buildings on NEN-EN 1990 with the associated national annex and the other standards associated to it in the Eurocode series (NEN-EN 1991-1 to NEN-EN 1991-7). Numerous references to those standards are then made from this standard.
The functional requirement with existing buildings indicates that the building construction during the remaining life span must offer sufficient resistance against the forces working on it. The main regulation for new buildings that a building, as is indicated in NEN-EN 1990, must last for 50 years is therefore not applicable here. With existing buildings the remaining life span referred to in NEN 8700 is decisive. The underlying principle for existing buildings is that the building construction at the moment of assessment must just still be sufficiently safe. With the assessment of this, the remaining life span (briefly) described in NEN 8700 is assumed with the associated stress combinations.

Section 2.2 Strength during a fire

General
In this section it is regulated that no or only limited progressive collapse may take place as a result of fire. In the 2003 Building Decree the concept ‘Main supporting structure during a fire’ that was defined in NEN 6702 was used for this purpose. However, the Eurocodes which are used instead of NEN 6702 no longer recognise this concept. The requirements in this paragraph are formulated such that the content agrees with the requirements from the 2003 Building Decree without use being made of the concept of a main supporting structure during a fire. Also the concept ‘exceeding the extreme boundary situation’ is replaced by: collapse.

Section 2.2.1 New buildings

Article 2.9 Control article

The functional requirement, a structure to be built has a building construction which is such that the structure during a fire can be evacuated and searched within a reasonable time, without there being a danger of collapse, compared with the 2003 Building Decree remains unchanged.

The table of the *second* paragraph indicates regulations for each use which are applicable to that use. Compliance with these regulations ensures compliance with the functional requirement of the first paragraph.

Article 2.10 Duration of collapse

This article contains the requirements with regard to the duration of collapse of building constructions in the case of fire. The assumption for this is that the fire (sub)compartment in which a fire rages may collapse, as long as within a certain amount of time this does not lead to the collapse of building constructions outside this fire (sub)compartment. It concerns the prevention of progressive collapse: a building construction collapses during a fire and as a result of this, other building constructions collapse, for instance, because they are dependent on the load bearing capacity of this building construction. For example, the collapse of glass windows above the burning compartment through heat falls outside this.

The *first* paragraph gives a regulation for a floor, staircase or ramp across which or under which an escape route passes. This regulation is related to the protection of escape routes. During a fire in a fire sub-compartment the escape routes outside this fire sub-compartment may not collapse within 30 minutes. This applies for all escape routes and therefore not only for protected or extra protected escape routes. With this regulation it is intended that escape routes which have not yet become unusable through smoke and/or fire, do not also become unusable as a result of the collapse of a floor, staircase or ramp under or above the escape route. It is assumed thereby that within 30 minutes after the start of the fire everyone can have reached a safe place and that the fire brigade has time to search the structure for any possible persons still remaining therein. An escape route which lies within the fire sub-compartment in which the fire is burning may well become unusable as a result of collapse because this escape route is already unusable through smoke and fire.

From the Table 2.10.1 shown in the *second* paragraph it follows during which time a building construction for residential use may not collapse during a fire. This concerns a fire in a different fire compartment than the one in which the residential function lies and the effects of that fire on the building constructions of that residential function. This means in practice that with a fire in a dwelling, the building construction at the adjacent neighbours may collapse, but not at the neighbours of the neighbours. The collapse during a fire may not lead to a progressive collapse. The second sentence gives an exception in the event that the fire compartment adjacent to where the fire rages is also a residential function. In that case the building construction of a fire sub-compartment or outside space adjacent to that fire compartment does not need to satisfy the time following from the table in which a collapse may not take place. In other words these requirements do not apply for a balcony in a residential building. This does not mean however that the adjacent fire sub-compartments (houses) may immediately collapse. On the basis of Article 2.95 there also applies between houses a requirement on the resistance against fire

penetration and fire spread (wbdbo) of 30 or 60 minutes (wbdbo). This requirement also implies a level of fire resistance with regard to collapse. From Table 2.10.1 it follows that the time until the collapse depends on the height of the floors of a residential function. The application function and the height of the floors of the fire compartment where the fire is assumed are not relevant. The requirement from the second paragraph is reduced on the basis of the *third* paragraph by 30 minutes if the residential function or the residential building in which the residential function lies has a lower permanent fire load density (no more than 500 MJ/m^2). This is especially the case when the building is constructed from materials which cannot or can hardly burn, such as for instance brick. Also the dwelling or the residential building may not have a floor of a residential area which is higher than 7 m above the reference measurement level.

The *fourth* paragraph contains a requirement for non-residential buildings in which a floor of an application area is higher than 5 m above the reference measurement level or lower than 5 m under the reference measurement level. The fire resistance with regard to collapse for these structures must be at least 90 minutes. This is not about the height at which the fire in the structure can occur but about the highest floor of any residential area of the application function to which this regulation is applicable.

The *fifth* paragraph gives requirements for occupancy areas in child care centres with a bed area, the cell function, the health care function with a bed area, and hospitality occupancy. From Table 2.10.2 it follows that the required duration of fire resistance with regard to collapse depends on the height of floors. Here again, it is not about the height at which the fire can occur but about the highest floor of a residential area of the application function for which the regulation applies.

The *sixth* paragraph contains a similar restriction of the requirements for non-residential functions as is regulated in the third paragraph for residential functions. This concerns buildings for which the permanent fire load density of all construction-components together does not or hardly contributes to fire. In practice this means that a less stringent requirement is laid down for buildings of stony material.

The *seventh* paragraph gives an exception to the fifth and sixth paragraphs for hospitality functions not situated in a hospitality building (holiday homes) with a usable surface area of not more than 100 m^2.

The *eighth* paragraph indicates that the fire resistance with regard to collapse of a road tunnel with a tunnel length of more than 250 m must be at least 60 minutes. Insofar as the tunnel lies under open water, this period is 120 minutes. If during a fire a part of a tunnel tube that lies under open water collapses, the danger exists that the complete tunnel tube will be filled with water within a short period of time. Consequently escapees and relief workers, also in parts of the tunnel which are not immediately threatened by the fire, can find themselves in a life-threatening situation. To avoid this, the building construction of the part of the tunnel that lies under open water may not collapse for a longer period of time. ‘Open water’ means a river, water basins, estuaries, canal, lake or thereby connected water, through which an almost unlimited amount of water can flow.

If the tunnel wall should collapse, then it is necessary to repair the damming function before the tunnel can be pumped dry. This is a time-consuming and expensive matter in a tunnel which is full of water. Therefore, a longer period of fire resistance with regard to collapse is here also meaningful.

The *ninth* paragraph is related to structures which are not buildings. This can run from bridges to (covered) grandstands and from transmission masts to distribution boxes for cable television. Depending on the type of structure and its use the fire resistance with regard to collapse must be such that during a fire the structure can be evacuated and searched. This can differ greatly from case to case. For this reason a functional requirement suffices in this case, which the competent authority must quantify for the individual case.
Although the requirements in Article 2.10(1),(2),(4),(5), and (9) are laid down for the building constructions to be protected *outside* the compartment where the fire is, the requirement is implicitly laid down for the building constructions of the burning compartment itself. The building construction to be protected is itself not threatened by fire. In practice therefore the strength during a fire of the building constructions of the burning compartment is calculated. If it is shown that these building constructions do not collapse during the required time span, then it is thereby also shown that building constructions to be protected outside the compartment do not (progressively) collapse.

Article 2.11 Method of definition
The *first* paragraph indicates which extraordinary stress combinations must be applied when determining whether a building construction collapses.
The *second* paragraph indicates which standards are applied when checking the time span for collapse. The so-called TGB's (Technical basis for building constructions – Dutch: *Technische Grondslagen voor Bouwconstructies*) are also replaced by the Eurocodes here. The Eurocode standards stated in sections a. to f. contain calculation methods for various materials. For materials not stated in these European standards and several special combinations of materials. the time span with regard to collapse must still be determined NEN 6069.

Article 2.12 Alteration
Article 2.12 gives a regulation for the partial renovation or alteration or the extension of a structure. Articles 2.10 and 2.11 apply by analogy by which instead of the level of in accordance with requirements indicated in Article 2.10 the legally attained level is assumed and for which, in variance to Article 2.11(1), the extraordinary stress combinations which in accordance with NEN 8700 can occur during a fire are assumed. See for an explanation of the concept of 'legally attained level' the explanatory notes to Article 1.1. The new building ordinances are fully applicable to the entire renovation. Article 1.12 determines that unless agreed to otherwise, the new building ordinances are applicable.

Section 2.2.2 Existing buildings

Articles 2.13 to 2.15
See the explanatory notes to paragraph 2.2.1, New buildings.

Section 2.3 Separation of the floor, staircase, and ramp

General
This section contains the regulations for protective barriers, staircase barriers, and barriers of ramps. This section includes the regulations with regard to barriers from the old sections 2.3 (Protective barrier), 2.5 (Staircase), and 2.6 (Ramp).

The purpose of this section is to prevent people being able to fall from the edge of a floor, a staircase or a ramp.

Section 2.3.1 New buildings

Article 2.16 Control article
The functional requirement of the *first* paragraph, a structure to be built contains provisions whereby falling from a floor, staircase, or a ramp is prevented as far as possible, is based on the old functional requirement for protective barriers, under addition of the staircase and the ramp.
The table of the *second* paragraph indicates regulations for each use which are applicable to that use. Compliance with these regulations ensures compliance with the functional requirement of the first paragraph.

Article 2.17 Presence
The objective of this article is to indicate in which situations provisions are necessary on the edge of floors, stairs or ramps.
The *first* paragraph provides the basic regulations for protective barriers if there is a difference in height between the edge of a floor destined for persons and the adjoining floor, terrain or water. A protective barrier is not necessary if the difference in height is less than 1 m. At a difference of height of less than 1 m, the risk of falling is considered to be limited.
The *second* paragraph provides a similar regulation for protective barriers on the side of stairs. The sides of a staircase must be provided with a protective barrier, just as the edges of a floor. Demanding such a barrier for a small staircase of for instance 4 steps would be too much. Therefore the limit is set at a difference of height of at least 1 m. For staircases higher than 1 m, which must be provided with a protective barrier, the barrier is not necessary for the first metre of the stairs.
The *third* paragraph provides the same for ramps. It is provided that there is a raised edge along the total length of the ramp as prescribed in Article 2.46.
The *fourth* paragraph emphasises that a protective barrier is not necessary where the stairs or ramp connects to the floor.
The *fifth* paragraph indicates in which situations a protective barrier is required to an adjoining floor, terrain or water, irrespective of the difference in height. Examples are a platform and a loading dock.

Article 2.18 Height
The general requirement for the minimum height of a required protective barrier is 1 m in accordance with the *first* paragraph. Pursuant to paragraph two, a protective barrier of least 1.2 m is prescribed when there is a difference of height of more than 13 m between a floor and an adjoining floor, terrain or water.
In contravention to the previous paragraphs, the *third* paragraph contains a lower minimum requirement (0.85 m) for protective barriers for windows. The reason for this is that a window provides some fall protection. Opening windows must always have a protective barrier at a height of at least 0.85 m. This does not apply to a window at ground level, if the difference of height with the adjoining terrain is less than 1 m. (see Article 2.17(1)).
Pursuant to paragraph *four,* a height of 70 cm will suffice, if the height and the width of the protective barrier together are at least 110 cm. This means that the barrier in

this case must have a width of at least 40 cm. The minimum amount of 110 cm for width and height gives sufficient guarantee that someone who falls against the barrier does not fall over it. This regulation offers the possibility at, for instance, theatres and sport halls to restrict any hindrance of the view.
The *fifth* paragraph is related to the height of the barrier alongside a staircase or a ramp and prescribes a minimum height of 0.85 m. For a staircase, the height must be measured starting from the front of the surface area of the step and for a ramp just as for a normal floor, the height above the floor.

Article 2.19 Openings
This article is related to openings in the required barrier itself.
The *first* paragraph gives the basic regulation for the openings which are permitted in a protective barrier. To be able to determine this easily, the acceptable opening is determined based on a sphere with a diameter as given in the table. If this sphere fits through the opening, then the gap is too large.
The *second* paragraph gives a further regulation for the first 0.7 m above the floor. A barrier may not have an opening in that part which is greater than 0.1 m. This further regulation only applies for houses, child care centres, and primary schools. This special requirement is not applicable to a child care centre for children younger than 4 years, because it is already determined for this in the first paragraph that in the entire protective barrier no openings are permitted greater than 0.1 m.
Pursuant to the *third* paragraph a protective barrier may be placed at any distance from the edge of the floor. The gap between the edge of the floor and the barrier is linked to regulations to avoid the risk that people fall through such a gap or get jammed.
The upper rail may be interrupted. The *fourth* paragraph ensures that those openings in the upper rail cannot have such dimensions that people can fall through them.

Article 2.20 Possibility of climbing over
The objective of this regulation is to prevent as far as possible that small children can independently climb over a protective barrier. A barrier may not contain a step between 0.2 m and 0.7 m above the floor. Therefore there may not be for instance a horizontal surface in the protective barrier on which a child's foot will fit.
The regulation focuses on the prevention of possibilities in construction parts to step up and not on furniture or installation components such as a radiator or the pipes of a central heating system. The regulation is only related to traffic spaces (galleries and passageways) and outside spaces (balconies) because with such spaces it is not always possible that the residents themselves can take measures to restrict the danger of climbing over.

Article 2.21 Alteration
Article 2.21 gives a regulation for the complete or partial renovation or alteration or the extension of a structure. Articles 2.17 to 2.20 therefore apply by analogy whereby the legally attained level may be assumed. See for an explanation to the legally attained level the explanatory notes in Article 1.1.

Section 2.3.2 Existing buildings

Articles 2.22 to 2.26
See the explanatory notes to Section 2.3.1, New buildings.

Section 2.4 Bridging differences in height

Section 2.4.1 New buildings

Article 2.26 Control article
This section is related to the safe bridging of differences in height by persons. The functional requirement of the *first* paragraph emphasises that it does not concern the bridging of differences in height by animals or vehicles. The *second* paragraph determines that the functional requirement of the first paragraph is satisfied by application of the regulations of this section. These regulations apply for all application functions.

Article 2.27 Provision for differences in height
In the *first* paragraph of this article it is determined that differences in height which are greater than 0.21 m (this is also the maximum height of a step) must be bridged by a permanent staircase or a permanent ramp. The bridging of greater differences in height without an easily negotiable staircase or ramp gives too large a risk.
The regulation only applies for differences in height between the specifically named spaces for all application functions, therefore also for a mobile home and a construction that is not a building. The regulation does not apply for non-specifically named spaces such as crawl spaces, storage attics and lofts. If in such cases a staircase or a ramp is still made, then this does not need to satisfy the regulations of sections 2.5 and 2.6.
In road tunnels, just as with buildings, differences in height of more than 21 cm must be bridged by a staircase or ramp. In variance to this first paragraph it is determined in the *second* paragraph that on the escape route in the road tunnel, tube differences in height of 30 cm without a staircase or ramp are permitted. This regulation is included to prevent that edges alongside the road from the point of view of road safety must be too low.

Article 2.28 Alteration
Article 2.28 gives a regulation for the complete or partial renovation or alteration or the extension of a structure. Article 2.27 therefore applies by analogy by which the legally attained level may be assumed. See for an explanatory note to the legally attained level the explanation in Article 1.1.

Article 2.29 Temporary structures
Article 2.27 is fully applicable to a temporary structure. This is in variance to the basic rule given in Article 1.14 that the regulations for an existing structure are applicable for temporary structures.

Section 2.4.2 Existing buildings

Articles 2.30 and 2.31
See the explanatory notes to Section 2.4.1, New buildings.

In addition to this it is noted that requirements for the bridging of differences in height for existing buildings only apply from now on for differences in height on an escape route. No requirements for differences in height are laid down for other routes.

Section 2.5 Staircase

General
The requirements for a staircase compared with the Building Decree 2003 have been simplified. In particular the removal of the distinction between staircases A and staircases B has contributed to this.

Section 2.5.1 New buildings

Article 2.32 Control article
The functional requirement of the *first* paragraph, a staircase to be built which bridges a difference in height as referred to in Article 2.27 can be used safely, remains unchanged compared to the 2003 Building Decree. The table of the *second* paragraph indicates regulations for each use which are applicable to that use. Compliance with these regulations ensures compliance with the functional requirement of the first paragraph.

Article 2.33 Staircase dimensions
In the *first* paragraph, reference is made to Table 2.33 for the minimum requirements for the dimensions of a prescribed staircase (a staircase as referred to in Article 2.27). In this table a distinction is made between the normal staircase and the staircase used exclusively for escape. The requirements for a normal staircase are sub-divided in requirements for the residential function and requirements for other application functions. A staircase for a non-residential function may be steeper than a staircase for a residential function.
From the reference to Article 2.27 it follows that these requirements are not applicable to a staircase to floors not intended for persons such as floors of, for instance, a technical room, a crawl space, a storage attic, a loft or a light industrial function.
In a light industrial function there are by definition no residential areas or spaces and thereby also no floors intended for persons.
Because the mobile home develops increasingly more into a normal dwelling and can also comprise of more than one building layer, the regulation is also aimed at the mobile home.
The requirements for the flow capacity of a staircase (Article 2.109) can have an impact on the minimum width of the staircase.
The step of a staircase with the residential function may from now on be at most 0.188 m instead of at most 0.185 m. It appears that with this small difference of 3 mm per step, the number of steps per staircase fits better with a difference in height of 3 m between the floors.
From the *second* paragraph it follows that a single staircase may not bridge a difference in height of more than 4 m. With a larger difference in height, a half-way landing will have to be placed that satisfies the dimension requirements of Article 2.34.

Article 2.34 Staircase platform
This article gives the dimension requirements for a staircase platform. This means that in any case, on the upper side of a prescribed staircase there must be a floor which connects across the full width of the staircase and has a depth (walking distance) of at least 0.8 m. A platform can also be used to split a staircase that is too long into two separate staircases (also see the explanation in Article 2.33).
A staircase platform is a floor as referred to in Article 2.108(8) (layout of escape routes) or Article 4.23(1) (free traffic route) and should have the height above the floor prescribed in those articles.

Article 2.35 Railings
Every prescribed staircase in accordance with Article 2.27 whereby a difference in height of more than 1 m is bridged, if the slope of that staircase is greater than 2:3, must have a railing over the complete length of the staircase. The exception for small staircases, which by the 2003 Building Decree was only applicable to a residential function, now applies for every application function.
No railings need to be installed for a staircase with a slope of less than 2:3.

Article 2.36 Rain resistant
From this article it follows that a common traffic space through which a normal staircase passes must be rain resistant. This avoids that dwellings in a residential building will only be accessible via an outside staircase. This regulation does not apply for a staircase which is only intended for escape (emergency staircase) or if the difference in height to be bridged is less than 1.5 m.

Article 2.37 Alteration
This article gives a regulation for the complete or partial renovation or alteration or the extension of a structure. Articles 2.33 to 2.35 therefore apply by analogy whereby the legally attained level may be assumed. See for an explanation to the legally attained level the explanatory notes in Article 1.1.

Article 2.38 (lapsed)

Section 2.5.2 Existing buildings

Articles 2.39 to 2.42
See the explanatory notes to Section 2.5.1, New buildings.
It is pointed out that the requirements for an existing staircase (Bridging of differences in height, existing buildings) only apply from now on for differences in height on an escape route. No requirements for differences in height are laid down for other routes. See also paragraph 2.4.2, bridging of differences in height, existing buildings.

Section 2.6 Ramps Section

2.6.1 New buildings

Article 2.43 Control article
The functional requirement of the *first* paragraph that a staircase to be built which bridges a difference in height as referred to in Article 2.27 can be used safely remains unchanged.
From the reference to Article 2.27 (part of section 2.4, Bridging of differences in height) it follows that this concerns a ramp for persons, whether or not in a wheelchair, and not a ramp for, for instance, cycles and cars.
The *second* paragraph determines that the functional requirement of the first paragraph is satisfied by application of the regulations of this section. These regulations apply for all application functions.

Article 2.44 Ramp dimensions
This article states requirements for the width, the height, and the slope of a prescribed ramp. The slope is dependent on the difference in height that is bridged with the ramp and varies between 1:12 and 1:20.
Article 2.109 states requirements, from the point of view of fire safety, for the flow capacity of a ramp. This involves the flow capacity per metre of free width of a space, by which the ramp floor is seen as the floor of a space. The stated regulation can have effect on the width of the ramp.
One single ramp may not bridge a difference in height of more than 1 m. With a larger difference in height, a half-way landing will have to be placed that satisfies the dimension requirements of Article 2.45.
A ramp floor is a floor placed at a slope as referred to in Article 2.108(8) (layout of escape routes) or Article 4.23(1) (free traffic route) and should have the height above the floor prescribed in those articles.

Article 2.45 Ramp platform
Article 2.45 gives the dimension requirements for a platform with a prescribed ramp. This means that in any case, on the upper side of the ramp there must be a floor which connects over the full width of the ramp. The floor area of the platform must be at least 1.4 m by 1.4 m. A platform can also be used to split a ramp that is too long into two separate ramps (also see Article 2.44).
A ramp platform is a floor as referred to in Article 2.108(8) (layout of escape routes) or Article 4.23(1) (free traffic route) and should have the height above the floor prescribed in those articles.

Article 2.46 Raised edge
A prescribed ramp must have a continuous raised edge along the edge, with a measured height starting from the floor of the ramp of at least 0.04 m. This is necessary to prevent that a wheel of, for instance, a wheelchair or walker runs off the ramp, whereby the wheelchair or walker can tip over. A raised edge can be part of a barrier of a ramp as referred to in Article 2.17(3).

Article 2.47 Alteration
Article 2.47 gives a regulation for the complete or partial renovation or alteration or the extension of a structure. Articles 2.44 to 2.46 therefore apply by analogy whereby

the legally attained level may be assumed. See for an explanation to the legally attained level the explanatory notes in Article 1.1.

Article 2.48 Temporary structures
Articles 2.44 and 2.46 are fully applicable to a temporary structure. This is in variance to the basic rule given in Article 1.14 that the regulations for an existing structure are applicable for temporary structures.

Section 2.6.2 Existing buildings

Articles 2.49 to 2.51
See the explanatory notes to Section 2.6.1, New buildings.
It is pointed out that the requirements for an existing ramp only apply from now on for differences in height on an escape route. No requirements are laid down for existing ramps on other routes. See also paragraph 2.4.2, bridging of differences in height, existing buildings.

Section 2.7 Movable construction parts

Section 2.7.1 New buildings

Article 2.52 Control article
The functional requirement of the *first* paragraph, a structure to be built has such movable construction parts that these cause no hindrance during the escape by and through the use of an adjacent public space, is adjusted somewhat editorially compared to the old regulation.
The *second* paragraph determines that the functional requirement of the first paragraph is satisfied by application of the regulations of this section. These regulations apply for all application functions.

Article 2.53 Hindrance
It is intended with this article to prevent that movable parts of structures, such as windows, doors, and hatches, bring danger during escape from the structure, or danger for passers-by and passing traffic. These regulations also apply from now on for mobile homes.
The *first* and *second* paragraphs are related to movable construction parts in outer walls of structures which border on a road. In such a wall only inward opening doors or windows, or sliding doors or sliding windows may be present up to the indicated height. The first paragraph, with a height limit of 4.2 m, is related to situations in which a structure directly borders on a road where cars have access including parking lanes, parking bays, hard shoulders, and such like. The second paragraph, with a height limit of 2.2 m, is related to situations in which only cyclists or pedestrians can pass-by the structure.
The regulation of the second paragraph does not apply for a so-called emergency door. An emergency door may open outwards, for instance, across a footpath. An emergency door is only used for escaping from a building. If people must escape from the building through that emergency door, then being able to escape safely weighs heavier than the hindrance which that can bring for any passer-by on the public road not intended for motor vehicles.

The *third* paragraph is related to movable construction parts along which a protected escape route passes. It concerns construction parts in passageways, galleries, and staircases through which a protected escape route passes as referred to in section 2.12 (Escape routes). A brief moment of hindrance as a result of the opening of a door is permitted, provided that the door in a fully opened state causes no hindrance. The construction parts in an opened state must leave a free passage with a width of at least 60 cm and a height of at least 2.2 m. The minimum width is derived from Article 2.118 (Layout of smoke-free escape routes).
The *fourth* paragraph makes an exception to the regulations of this article for the door of a technical room such as, for instance, a meter cupboard or a small boiler room. As a rule such doors form no problem because they will never be opened from within.

Article 2.54 Alteration
Article 2.53(1) is not applicable to the complete or partial renovation or alteration or the extension. The second, third, and fourth paragraphs are applicable during alterations. Since the first paragraph of Article 2.53 is not applicable to alterations, the corresponding regulations for existing buildings apply for that aspect. During alterations, a movable construction part may therefore not impedingly rotate above a public road for motor vehicles, but in contrast to that which applies for new buildings, may rotate above the strip of 0.6 m bordering on that road.

Article 2.55 Temporary structures
Article 2.53(2) to (4) is applicable to the building of a temporary structure and the first paragraph of Article 2.53 is therefore not applicable. On the basis of Article 1.14, Article 2.57 applies for temporary structures instead the first paragraph of Article 2.53.

Section 2.7.2 Existing buildings

Articles 2.56 and 2.57
See the explanatory notes to Section 2.7.1, New buildings.

Section 2.8 Restriction of the occurrence of a flammable situation

General
In this section with regard to the new building regulations, the European methods of definition are assumed for the aspect ‘material behaviour during a fire’ (reactions to fire). These are harmonised in NEN-EN 13501-1. The previously offered possibilities for choice with new buildings between the European and the Dutch standards are removed with the implementation of this decree. For existing buildings it is still possible to choose between the old and the new systematics (see for instance Article 2.65(2)).
Because the regulations in this section apply for all application functions, no table has been included. This does justice to the fact that risks are attached to the use of a boiler room, shaft, boiler or channel irrespective of the type of application function or structure.

Section 2.8.1 New buildings

Article 2.58 Control article

The functional requirement of the *first* paragraph, a structure to be built is such that the occurrence of a flammable situation is sufficiently restricted, remains unchanged compared with the old text. With the removal of the control table, the regulations of this section are applicable to all structures, therefore also to a mobile home and a structure that is not a building (for instance an outside brick hearth).
The *second* paragraph determines that the functional requirement of the first paragraph is satisfied by application of the regulations of this section. These regulations apply for all application functions.

Article 2.59 Boiler room

In this article requirements are laid down about the combustion behaviour of material at the location of and near a boiler room. This prevents that fire occurs near a boiler room. Although the article is related to every boiler room the intensity of the thermal radiation stated in the article and high temperatures in practice will only occur with an open hearth.
Outside the seat of the fire (boiler room) itself, materials may not spontaneously combust as a result of thermal radiation or a high temperature. To prevent such a spontaneous combustion, the materials applied in the vicinity of an unprotected combustion source must satisfy fire class A, in other words be non-flammable. The incombustibility of the upper side of a construction part situated under or near the seat of the fire such as a floor must be tested against fire class $A1_{fl}$.

Article 2.60 Shaft, boiler or channel

A fire which occurs in a shaft, boiler or channel can easily escape the attention of the fire brigade. If such a shaft, boiler or channel passes along another fire compartment, fire could also occur after some time in that other fire compartment. To prevent this, the *first* paragraph prescribes that the combination of materials that is applied to the inside of that shaft or boiler or that channel over a depth of 0.01 m must satisfy fire class A2. Shafts, boilers, and channels with a smaller diameter than 15 mm need not be non-flammable. Fire class A2 permits that the inside of a shaft, boiler or channel can be finished with, for instance, plasterboard or a plastic lining such as during renovation of a bricked chimney.
The requirement is focused on the surrounding shaft, boiler or channel and not on the possible cabling or pipes of, for example, PVC installed therein.
From section 2.11 it follows that fire may not flash over or spread via a shaft from the one fire compartment to the other.
From Article 2.83 it follows that a large shaft, which is enterable for persons, must as a rule lie in a fire compartment. Thereby the wbdbo (resistance against fire penetration and fire spread) referred to in Article 2.85 applies between the fire compartment in which the shaft lies and another fire compartment.
The *second* paragraph makes under (a) an exception to the first paragraph for a shaft, boiler or channel which is only intended for one or more toilets or bathrooms situated above each other. In that situation a shaft, boiler or channel does not need to be non-flammable.
A choice has been made for this exception because the fire hazard in bathrooms and toilets is in general negligible. The second paragraph under (b) makes an exception to

the first paragraph for at most 5 % of the total surface of the inside of the shaft, boiler or channel. Such a small amount of material provides an insignificant contribution to the risk of the development of fire in the shaft, the boiler or channel.
On the basis of part (c) of the second paragraph, the first paragraph is not applicable to installed pipes, channels or pipes in a shaft, boiler or channel. In this way plastic sewage pipes, pipes for electricity, and channels for discharge of smoke and combustion air can be installed.
With the use of inflammable materials in shafts, boilers or channels between two fire compartments, account will incidentally always have to be taken with the requirements for the resistance against fire penetration from sections 2.10 and 2.11.
For a discharge provision installed in a shaft, boiler or channel for flue gas, account will always have to be taken with the regulations which are laid down for a flue gas discharge channel (see among others Article 2.61).

Article 2.61 Flue gas discharge
A discharge provision for flue gas, such as a chimney, may not be the cause of the occurrence of fire. Therefore the first paragraph prescribes that such a provision should be fireproof, determined in accordance with NEN 6062. In this testing method a distinction is made when it concerns channels for permanent or for other (not-permanent) fuels. With that, testing the provision must be exposed to 1) vibration stresses, 2) an air tightness test, 3) a thermal test, and 4) a sweep test. Further the proximity of inflammable materials also plays a role. Naturally with an appeal to equivalence it can also be shown in another manner that the fire safety is guaranteed.

Article 2.62 Storage locations for open combustion units
It is not permitted to have a storage location for an open combustion unit in a toilet or a bathroom or in a storage space for motor vehicles. In small areas with an open combustion unit a dangerous concentration of harmful combustion gases can quickly form and in a storage space for motor vehicles, an open combustion unit can lead to a danger of fire or explosion due to the presence of easily inflammable (combustible) materials.

Article 2.63 Temporary structures
Articles 3.59 to 3.62 are fully applicable to a temporary structure. This is in variance to the basic rule given in Article 1.14 that the regulations for an existing structure are applicable for temporary structures.

Section 2.8.2 Existing buildings

Articles 2.64 to 2.67
See the explanatory notes to paragraph 2.8.1, New buildings.
Supplementary to this it is noted that for existing buildings (Articles 2.65 and 2.66) for the material behaviour during a fire, classes of fire as referred to in NEN-EN 13501-1 are not assumed, but use the old (Dutch) methods of definition.
Furthermore, these articles offer the choice to also make use of the new systems for existing buildings. This possibility for choice is particularly of importance for relatively new buildings.

Section 2.9 Restriction of the development of fire and smoke

General
In this section just as in section 2.8, new buildings, the European methods of definition are assumed for the aspect ‘material behaviour during a fire’ (reaction to fire). These are harmonised in NEN-EN 13501-1. The possibility for choice offered between the European and the Dutch standards for new buildings is thereby removed with the implementation of this decree. For existing buildings a choice can still be made between the old and the new systematics. See Article 2.81.
On the basis of this section specific requirements apply for the residential function for care (homes for the elderly) greater than 500 m^2. This means that for large houses > 500 m^2 which are not intended for care such requirements no longer apply.

Section 2.9.1 New buildings

Article 2.68 Control article
The functional requirement of the *first* paragraph, a structure to be built is such that fire and smoke cannot quickly develop, is composed from the functional requirements of the old sections 2.12 and 2.15.
The table of the *second* paragraph indicates regulations for each use which are applicable to that use. Compliance with these regulations ensures compliance with the functional requirement of the first paragraph.

Article 2.69 Inside surface
The *first* paragraph is related to both the restriction of the development of fire as to the restriction of the development of smoke in a space. These requirements are focused on the prevention that a starting fire quickly spreads itself along the inside surface of construction parts respectively that an excessive smoke density develops. Both aspects play an important role with the safe escape from a structure and the restriction of the development of the magnitude of the fire. If these requirements are not satisfied, there would be insufficient time remaining for users of that structure to leave the structure safely during a fire.
Included in the table is the fire class which must be satisfied for a certain application function. In addition, distinction must be made between an extra protected escape route, a protected escape route and other spaces. The requisite smoke class in all cases is s2.
The regulations apply for those sides of a construction part which border on the inside air therefore not necessarily for the entire construction component. The distinction between hospitality functions larger and smaller than 500 m^2 has been removed. This leads for smaller hospitality functions to a higher requirement for a protected escape route than was applicable to a smoke-free escape route before the implementation of this decree. In practice this will not lead to problems because for smaller hospitality functions there is as a rule no need for a protected escape route because every exit from the fire sub-compartment comes directly out onto adjacent ground. The *second* paragraph gives an exception for the ‘other application function’. In an ‘other application function’ a requirement for the smoke class applies with a protected escape route. Incidentally an extra protected escape route is a special form of a protected escape route, therefore the requirement on the smoke class also applies (also see the explanatory notes to Article 1.1). It is noted thereby that most ‘other

application functions', such as for instance sheds, have no protected escape route, so that for these other application functions no requirement on the smoke class applies.

Article 2.70 Outside surface

Article 2.70 is comparable with Article 2.69 with regard to the restriction of the development of fire. The article lays down however no requirements for the smoke class, because the smoke production on the outside of a building as a rule plays no role with escaping safely.

The regulations of Article 2.70 apply for a side which borders on the open-air. If a construction part does not border with one or more sides on the open-air, then this article is not applicable to it. The *first* paragraph gives the basic regulation which a side of a construction part that borders on the open-air must satisfy. In the table, dependant on the type of space and the application function, it is indicated which fire class in a certain situation must at least be satisfied.

The *second* paragraph determines that a wall insofar that it is higher than 13 m must be composed in such a way that a fire cannot easily spread itself alongside. In these cases the more stringent fire class B always applies. The limit of 13 m is chosen because a fire on the wall to a height of at least 13 m can in general be fought with normal fire-brigade equipment.

The possibility exists that a structure catches fire as a result of arson in the vicinity of that structure. To ensure that an outside surface of a structure intended for persons, such as a wall or the outside of, for instance, a residential building, a theatre, a school building, or an office building, in such a situation is resistant against flame, the *third* paragraph contains a special requirement for this outside surface to a height of 2.5 m. Such an outside surface must also satisfy fire class B.

The *fourth* paragraph indicates that paragraphs 1 to 3 are not applicable on the upper side of a roof. Also see the explanatory notes to Article 2.73.

Because it cannot be required of doors, windows, window frames, and thereby other similar construction parts, such as a ventilation grill, that they satisfy a heavier class of fire spread than fire class D, it is determined in the *fifth* paragraph that for such construction parts fire class D is sufficient.

Article 2.71 Walkable surface

The fire spread on the upper side of a horizontal surface, including slightly sloping surfaces, such as a floor, a ramp, and the upper side of a staircase, varies significantly from that of non-horizontal surfaces. The *first* paragraph gives a regulation for such surfaces which border on the inside air. Therefore for such surfaces in variance to Article 2.69 a smoke class applies of at least $s1_{fl}$ and a fire class indicated in Table 2.68, which varies from the fire class included with Article 2.69 in Table 2.68. These specific fire classes (Cfl and Dfl) are adjusted to the fact that the fire spread on a horizontal surface runs differently than on a vertical surface or a surface on the underside of a floor or of a different construction part.

The *second* paragraph gives a similar regulation for the fire class of the upper side of a floor, staircase or ramp bordering on the open-air.

Article 2.72 Exempted

To be able to fit skirting-boards, electrical sockets, and other small construction parts, such as light fittings, fire and smoke detectors, this article contains an exception to the requirements with regard to fire spread and the development of smoke. Articles

2.69 to 2.71 are not applicable to a small percentage of the surface of the construction parts in question. A concentration of the exempted surface at one location is naturally not the intention.
The *first* paragraph, which is applicable to most application functions, assumes 5 % for each separate space. The *second* paragraph, which only applies for a structure that is not a building, assumes 5 % of the total surface for construction parts of the structure.

Article 2.73 Roof surface area
This article has the purpose to prevent that the roof of a structure bursts into flames through fire spreading by wind from the surroundings. Fire spreading by wind (or showers of sparks) can be caused for instance by an open hearth or a fire in a neighbouring structure.
The *first* paragraph determines that no roof may be inflammable. An exception is made for a structure which has no floor intended for persons which is higher than 5 m (that generally implies for houses a maximum of two building layers). In addition, the roof of that structure may not have any inflammable roofing material insofar this roof lies within 15 m of the plot boundary. When the structure does lie within this 15 m limit, then it may not have an untreated wicker roof.
The regulation does not apply for houses and detached non-residential buildings with at most two floors, which stand at more than 15 m distance from the plot boundary. In such cases the chance of fire as a result of, for instance, the stoking of an open hearth in a neighbouring structure is after all quite low. Furthermore, a building with only one or two floors can be relatively easily escaped from. The *second* paragraph gives a general exception to the first paragraph for structures of limited size (smaller than 50 m^2). A separate shed or garage may therefore have an inflammable roof. A shed or garage which is attached to the dwelling and thereby forms a part of the same structure must on the other hand satisfy the requirements of the first paragraph.

Article 2.73a Insulation material
Further regulations can be laid down by ministerial order to prevent that hazardous fire risk occurs through insulation material in construction parts.

Article 2.74 Alteration
Article 2.74 gives a regulation for the complete or partial renovation or alteration or the extension of a structure. In such cases Articles 2.69, 2.70, with the exception of the third paragraph, 2.71, and 2.73 apply by analogy for which the legally attained level must be assumed. This means that the regulations not stated in this article, namely Article 2.70(3) and Article 2.72 are fully applicable during alterations. Article 1.12 determines that, unless determined otherwise, the new building regulations are applicable. See for an explanation to the legally attained level the explanatory notes in Article 1.1.

Article 2.75 Temporary structures
Articles 2.70(3) and 2.73 are fully applicable to a temporary structure. This is in variance to the basic rule given in Article 1.14 that the regulations for an existing structure are applicable for temporary structures.

Section 2.9.2 Existing buildings

Articles 2.77 to 2.81
See the explanatory notes to paragraph 2.9.1, New buildings.
Supplementary to this it is noted that for existing buildings (Articles 2.77 and 2.81) for the material behaviour during a fire classes of fire and smoke as referred to in NEN-EN 13501-1 are not assumed, but the old (Dutch) methods of definition. This method has been chosen because a majority of the current existing stock has been built with construction parts that have been tested in accordance with the Dutch fire and smoke classes. This situation will be replaced by Euro classes in the future. Article 2.81 offers the possibility to also choose the use of Euro classes with existing buildings. This possibility is especially important for relatively new buildings.

Section 2.10 Limitations to the spread of fire.

General
The probability of fast spread of fire must be sufficiently restricted to be able to control a possible fire inside a building. With the term ‘fast’ it is expressed that the spread of fire must be retarded by means of fire partitions, so that escape to safety is possible.
The most important constructional provision for this is fire compartmentalisation. A fire compartment is a part of a structure or a group of structures intended as the maximum spread area of a fire (see explanation on Article 1.1). For houses when naming fire compartments (and fire sub-compartments, see section 2.11) distinction will no longer be made between houses (residential functions) in residential buildings and other houses. This modification relates only to the structure and not to the level of requirements.

Section 2.10.1 New buildings

Article 2.82 Control article
The functional requirement of the *first* paragraph reads that a structure to be built is such that the probability of the fast spread of fire will be sufficiently restricted compared to the functional requirement of the old section 2.13, where sufficient limitation of the spread of fire was discussed, which is an editorial update. The new text has been better adapted to the combination of resistance and the spread of fire of the building itself and human interference to limit the spread of fire.
The table of the *second* paragraph indicates regulations for each use which are applicable to that use. Compliance with these regulations ensures compliance with the functional requirement of the first paragraph.

Article 2.83 Position
This article indicates whether a room must be in a fire compartment or not. The size of the fire compartment is described in Article 2.84 and the requirements which the fire compartment must satisfy (resistance against fire penetration and fire spread) in Article 2.85.
The *first* paragraph describes basic regulations. Every enclosed space must be within a fire compartment. A fire compartment can also contain several enclosed spaces depending on the actual situation. In general the living room, kitchen, bedrooms, and other spaces in a house are in the same fire compartment. If it is not implicitly or

explicitly stated that these must be in a fire compartment, then it is not required that such a space should be in a fire compartment. If the room is situated within the boundaries of a fire compartment, the room is considered to be part of the fire compartment.
The *second* paragraph is focused on a road tunnel with a tunnel length of more than 250 m.
In addition to the first paragraph it is stated that both an enclosed part and a non-enclosed part of road tunnel tubes must be within a fire compartment. A road tunnel tube after all has an open connection on two sides to the outside world and it is not therefore an enclosed area near the tunnel opening in the meaning of this decree. But a road tunnel tube should not be considered by definition as a non-enclosed space within the meaning of this decree. See also Article 2.108(12).
The *third* paragraph lists a number of enclosed spaces that do not necessarily need to be in a fire compartment, but can be. It can be assumed that the risks for uncontrollable fires are negligible in the mentioned spaces, so it will not be necessary that this space is within a fire compartment. Also a lift shaft (part c) and a technical room (part d) do not necessarily have to be within a fire compartment when the pre-conditions in those parts are satisfied. Spaces that are not properly separated should be considered as one space. This means that the surface areas of all these spaces must be totalled to assess whether they may be outside a fire compartment.
The *fourth* paragraph indicates that a space through which an escape route with extra protection passes may never be within a fire compartment.
Because a lift shaft (that meets the pre-conditions) pursuant to the third paragraph does not have to be within a fire compartment, it is possible to include a lift shaft in a space through which a protected traffic room passes as stated in the fourth paragraph. It is also possible to include a lift shaft within a fire compartment, so the lift can connect directly to an occupancy area. Such a lift does not have to satisfy the conditions stated in the third paragraph, part c, for a fire compartment outside the lift. The fire safety of a lift cage, the attributes in a lift shaft and other parts of a lift are laid down by the European directive on lifts and the Commodities Act on lifts. Of course the furnishing of the lift and in particular of the lift cage must comply with the regulations of Article 7.3.
The *fifth* paragraph regulates for industrial functions and other application functions that the non-enclosed application areas must also be within a fire compartment. This could for instance be a walled-in wood storage that is often situated in a non-enclosed space because of necessary ventilation.
The *sixth* to eighth paragraphs allow a restricted number of exceptions on application functions for the first and fifth paragraphs. The exceptions concerned accurately describe situations from which it may be assumed that the probability of the occurrence of an uncontrollable fire will be rather small. The *sixth* paragraph is applicable to industrial functions and to structures, which are not buildings, with a low fire load.
The *seventh* paragraph lays down that the first and fifth paragraph are not applicable to one or more adjoining structures with a total application area of less than 50 m^2 (with light industrial function and structures not being a building). This prevents that lean-to sheds can be built to the adjacent plot or that an endless number of sheds can be placed adjacent to each other without being within a fire compartment. This also makes clear that a shed in a residential building must be within a fire compartment and that there always must be a fire partition between the sheds and the entrance hall

or escape stairwell. In determining the total scope it concerns all structures (and parts of structures) irrespective of their application function, so that a shed in a residential building can never fall under the exemption of the seventh paragraph. This regulation does not devalue the regulation of Article 2.84(5) that lays down that a shed or other additional function may lie within the same fire compartment as the house in question. On the basis of Articles 2.84(3) it is not necessary to construct a fire partition between the sheds themselves.
The *eighth* paragraph offers an exception to the first and fifth paragraphs for greenhouses with a restricted permanent fire load.

Article 2.84 Size
The purpose of fire compartmentalisation is to limit the unhindered spread of fire to a part of the building. This article sets requirements on the maximum size of a fire compartment, so that a possible fire remains controllable. When a fire remains within the fire compartment, this contributes to the safety of persons in other parts of the building.
A fire compartment should not be too large to fulfil its function of fire limiter in a proper manner. It may also be a good thing to include spaces with a special fire risk in a separate fire compartment.
Under certain circumstances it can be possible to have a larger fire compartment with an appeal on equivalence. See explanation on Article 1.3
The *first* paragraph gives the basic requirement that regulates that the size of a fire compartment must not be larger than the value stated in Table 2.82. From now on it is possible with the industrial function to construct a fire compartment with an application area of 2 500 m^2 instead of 1 000 m^2, that was permitted based on the 2003 Building Decree.
The *second* paragraph states that a maximum of 4 mobile homes with annexes (see for the concept 'additional function' Article 1.1) may be next to each other within a fire compartment, on the condition that the total application area in that fire compartment of mobile homes and annexes is not greater than 500 m^2. The distances to be kept between the mobile homes are not laid down in this decree. The conceptual distance of 5 m in Article 2.85(8) which in practice is sometimes used as the mutual distance is not intended for this. The distance stated in that article is only a calculation value. The actual distance between the mobile homes follows from the zoning scheme. This (second) paragraph gives the competent authority only the possibility to act against a fire unsafe arrangement of mobile homes whether or not as result of an incorrect distance between mobile homes. A cluster size of at most 4 mobile homes offers sufficient fire safety and leaves room to accede to living requirements. The recommendations from the Fire Safety guide for mobile homes and mobile home locations, VROM-inspection, 15 March 2009 are worked into this second paragraph. The *third* paragraph lays down that a fire compartment may not extend over more than one plot. So it is not permitted that a fire compartment extends over more than one plot, for which the indicated plot arrangement of the building request should be assumed. A fire compartment may extend beyond more than one building (a group of buildings) on the condition that the buildings are on the same plot.
The *fourth* paragraph for road tunnels is satisfied when each road tunnel tube has been separated from a different road tunnel tube in a fire-resistant manner. This means that another road tunnel tube must always be in a different fire compartment.

Other spaces, such as a technical room or an aid station may be in the same fire compartment, as far as these are not in a different road tunnel tube. So it cannot be excluded that in the same fire compartment as the tunnel tube there are other spaces.
The *fifth* paragraph lays down that each separate house must be in a separate fire compartment. In that fire compartment additional functions such as a shed or an office in the house are permitted.
The *sixth* paragraph lays down for a house with a common occupancy area, for instance with a common living room and kitchen, that this area must be in a separate fire compartment. So the common spaces should not be in the fire compartment of one of the houses. A common space is a space that serves a number of separate residential functions. So this paragraph of the article does not discuss the spaces within a house that are shared by different occupants of that house, for instance a residential function for rental per room. Such a space is not a common space but a shared space (see Article 1.4).
The *seventh* paragraph must be distinguished from Article 2.83(3)(d). The smaller technical room (no more than 50 m^2) referred to in that paragraph of the article does not have to be within a fire compartment. When such a smaller space is indeed within a fire compartment then this space may be in that fire compartment together with other spaces. The larger technical room (more than 50 m^2) or a technical room for heating equipment with a total nominal load of more than 130 kW as described in this seventh paragraph is always in a separate fire compartment.
The *eighth* paragraph presents an exception to the first paragraph for additional functions of an industrial function. This concerns, for instance, a small canteen or an office space that serves that industrial function. The table shows that the exception applies to a meeting function (canteen or meeting room), an office function, an educational function (classroom), a shop function or another application function. Based on the first paragraph such application functions are not allowed within a fire compartment that is larger than 1 000 m^2. If those application functions are used for the industrial function then those application functions do not have to be within a fire compartment of at most 1 000 m^2, but can be part of the fire compartment of the industrial function, which as stated in the table, can be at most 2 500 m^2. The size of the additional functions in total should not be more than 100 m^2.
The *ninth* paragraph gives a variance of the first paragraph for the cell function. A fire compartment in which a cell is present may not be larger than 500 m^2 and may never be larger than 77 % of the application area of the building. Both regulations must be satisfied simultaneously. From this ninth paragraph it follows that a building with a cell function next to the fire compartment containing the cells must always have an application area situated outside that fire compartment. This application area is necessary to take persons, in the event of fire in the fire compartment with cells, to safety outside that fire compartment.
The *tenth* paragraph makes clear that a fire compartment with a bed area (with one or more beds) should not take up more than 77 % of the application area of a building level. In that way persons can, in the event of fire in the fire compartment, be taken to safety to a space outside that fire compartment but to a space on the same floor, with bed and all, when needed.

Article 2.85 Resistance against fire penetration and fire spread

A fire compartment can only function as a fire compartment when the requirements regarding resistance against fire penetration and fire spread of a fire compartment (in practice also shortened to wbdbo) are satisfied.

Fire spread in this context means the spread of fire via open air, while 'penetration' is the extension of a fire through a construction part. The wbdbo is expressed in minutes.

The *first* paragraph lays down a basic requirement of 60 minutes wbdbo. This requirement applies to the transition from one fire compartment to another fire compartment. This requirement also applies from one fire compartment to three specific spaces that are not situated within a fire compartment. It concerns an enclosed space through which an escape route with extra protection, a lift shaft of a fire service lift and a non enclosed safety escape route passes. From this regulation it follows that with a safety escape route, a wbdbo of 60 minutes applies, irrespective of whether this escape route passes through an enclosed or a non-enclosed space. A safety escape route is after all a special form of an escape route with extra protection (see Article 1.1). It must be noted that a gallery of an apartment building is not in general a safety escape route nor an escape route with extra protection.

The *second* paragraph presents an exception to the first paragraph for the wbdbo between a fire compartment and an enclosed space through which an escape route with extra protection passes. This regulation only refers to the other residential function (so not to a mobile home). This means that a wbdbo of 30 minutes between a house and an enclosed traffic space (corridor or hallway in a residential building) can be sufficient.

The *third* paragraph also only applies to houses. In variance to the first paragraph a wbdbo of 30 minutes will suffice there. Conditions here are that the permanent fire load of the fire compartment (in general the house) is not larger than 500 MJ/m^2 and that in the residential building no floor of an occupancy area is higher than 7 m above the measurement level (see Article 1.1). This condition will be satisfied with houses that consist of materials that are not or hardly combustible, such as brick or concrete.

The *fourth* paragraph presents a variance from the first paragraph for almost all application functions with the exception of a residential function, a cell function, and a health care building with bedding area. A wbdbo of 30 minutes is sufficient when the spaces stated in the first paragraph are in the same plot and when the building has no floors higher than 5 m above the measurement level. Both conditions must be satisfied.

The *fifth* paragraph indicates that the reduction to 30 minutes as stated in the fourth paragraph is not applicable to a fire compartment of an industrial function if the application area of that compartment is larger than 1000 m^2. For such large fire compartments 60 minutes applies.

The *sixth* paragraph. The exceptions of the second to fourth paragraphs do not apply to a space through which a safety escape route passes. A wbdbo of at least 60 minutes always applies for such a space.

The *seventh* paragraph intends not to burden the building party disproportionally because of possible bad quality of adjoining buildings. Therefore the existence of a mirror symmetrical, but further identical building on a neighbouring plot must always be considered during the construction to limit the danger of fire spread. For this concept, in an identical building the point of departure should be an identical front that is at the same distance from the plot boundary as the front of the structure to be

built. This makes it possible to apply for an environmental permit when it is unknown what will be built on the adjacent plot. Incidentally, when there is already a building on the other side of the plot boundary, irrespective of the quality of that building, building a mirror symmetrical structure identical to the other building is assumed. In the event the adjacent parcel has no building plan and it is not intended to become a playground, camping site or storage of flammable substances or the storage of flammable non-environmentally dangerous substances, the mirroring can take place as if the plot is situated near public green. In this event, if needed, an appeal on equivalence may be made as stated in Article 1.3, to the judgement of the competent authority.
Also in the *eighth* paragraph, which refers to the wbdbo for a mobile home, a mirror symmetrical structure is assumed. When determining the wbdbo between mobile homes, the actual distance between mobile homes is not taken but a theoretical distance of 5 m. This makes it possible to determine the wbdbo of a mobile home without knowing its final position. This does not mean the mobile homes must actually be placed at these distances. The final positioning will be determined based on the zoning plan, which must take into account that stated in Article 2.84(2) of this decree.

Article 2.86 Alteration
Article 2.86 gives a regulation for the partial renovation or alteration or the extension of a structure. Articles 2.83 to 2.85 have a similar application. For Articles 2.83 and 2.84 the legally attained level may be assumed. The resistance against fire penetration and fire spread referred to in Article 2.85 must be at least 30 minutes in all cases. See for an explanation of the legally attained level the explanatory notes in Article 1.1.
The new building ordinances are fully applicable to the entire renovation. This follows from Article 1.12.

Article 2.87 Temporary structures
Articles 2.83 and 2.84 are fully applicable to a temporary structure. Article 2.85 applies by analogy, where in all cases a wbdbo of at least 30 minutes will suffice. This is in variance to the basic rule given in Article 1.14 that the regulations for an existing structure are applicable for temporary structures.

Section 2.10.2 Existing buildings

Articles 2.88 to 2.91
See the explanatory notes to paragraph 2.10.1, New buildings.

Section 2.11 Further limitations of the spread of fire and limitations of the spread of smoke

General
Every fire compartment must be divided into one or more fire sub-compartments or in traffic spaces through which a protected escape route passes so that fire and smoke cannot spread unrestricted through the fire compartment. The underlying principle is that all spaces in which a fire could occur are within a fire sub-compartment. In a fire sub-compartment people are protected for some time against a fire that occurred somewhere else in the fire compartment. This is especially important for people who

are sleeping or who cannot escape independently, such as very small children, bedridden patients or prisoners. In such events more time is needed to move everyone to safety.
A fire sub-compartment also offers protection against the fire in the fire sub-compartment from which people have just escaped.
Compared with the 2003 Building Decree the concept ‘fire sub-compartment’ has been given a wider meaning. From now on under a fire sub-compartment the old smoke compartment will also be understood. The concept ‘smoke compartment’ has no independent meaning in this decree. The level of requirements has not been modified by this simplification. For houses when assigning fire compartments (and fire sub-compartments, see section 2.11) no distinction is made anymore between houses (residential functions) in a residential building and other houses. This last modification has no influence on the level of requirements. See also the general part of the explanation.

Section 2.11.1 New buildings

Article 2.92 Control article
A structure to be built is such that the spread of fire will be restricted more than is intended with paragraph 2.10.1. and where a safe escape is possible. This is therefore another text (see comments on the text). This functional requirement (*first* paragraph) emphasises that the regulations of section 2.10 are a step in fire resistant building; a following step will be made with section 2.11. The name of this chapter is ‘further limitations to the spread of fire and limitations to the spread of smoke’. The table of the *second* paragraph indicates regulations for each use which are applicable to that use. Compliance with these regulations ensures compliance with the functional requirement of the first paragraph.

Article 2.93 Position
This article includes the basic requirements. The *first* paragraph states that a fire compartment must be divided into fire sub-compartments or in traffic spaces through which a protected escape route passes. This means that all spaces in a fire compartment, thus every function area and occupancy area with spaces in it also must be within a fire sub-compartment. A space situated outside a fire compartment as stated in Article 2.83(3) does not have to be within a fire sub-compartment. A fire compartment can completely consist of fire sub-compartments or of one or more fire sub-compartments and one or more traffic spaces through which a protected escape route passes. Whether actually protected escape routes must be present follows from section 2.12.
The *second* paragraph emphasises that a protected escape route should not be in a fire sub-compartment, but in a traffic space. So between a fire sub-compartment (in which a fire can occur) and a space through which a protected escape route passes there should always be a fire and smoke resistant partition (this is a requirement to the traffic space) present. In that way a protected escape route is protected in the event of a fire in one of the adjacent function or accommodation areas (fire sub-compartments).
The *third* paragraph offers the possibility to place an occupancy area for monitoring purposes, such as a nurse’s station in a hospital or a reception in an office building, in a corridor or hallway through which a protected escape route passes. Should such an

occupancy area intended for monitoring purposes have to be in a fire sub-compartment, then there must always be a fire resistant separation wall between that occupancy area and the protected escape route, based on Article 2.95. Such a physical partition would hinder the necessary contact with the spaces that rely on the nurse's station or reception. A solution for this could be by not regarding the space as an occupancy area. Because that would mean that safety and health for the guards would be insufficiently guaranteed (for instance no requirements for ventilation) this third paragraph offers an alternative. For the sake of completeness it is noted that a waiting room in that same hospital or office building does not have to be in an occupancy area. So in a space through which a protected escape route passes, a waiting room can be arranged, on the condition that the layout of this waiting room does not hinder escape and does not endanger fire safety (see also chapter 7).

Article 2.94 Size

This article puts requirements on the maximum size of fire sub-compartments for the residential function, the meeting function, the cell function, the health care function, and the lodging function. This article does not put specific requirements to other application functions because the offering of sleeping accommodation rarely occurs. With occasional night use (for instance the staying over of boy scouts in a building for boy scouts) a non-structural solution can be sufficient. See also the general part of the explanation. Only the requirements from Article 2.93 are imposed for the size of other fire sub-compartments than pointed out in this article.

It makes sense to place spaces, where users need an additional protection against fire, in a separate fire sub-compartment of restricted size. People are protected against fire in other parts of the fire compartment for some time in every fire sub-compartment. When the fire occurs in the fire sub-compartment itself, the evacuation can firstly be focused on the evacuation of a relatively restricted number of persons in that fire sub-compartment and thereafter on all other fire sub-compartments in the fire compartment. So a fire sub-compartment should not be too large to be able to fulfil its function of fire and smoke limiter.

With an appeal to the determination of equivalence of Article 1.3 it is possible to realise a larger fire sub-compartment than would be possible pursuant to this section.

The *first* paragraph puts a limit on the size of a fire sub-compartment of a residential function, a cell function, lodging function, and a meeting function for child care with sleeping area.

The regulation limits the size of a fire sub-compartment at a meeting function for the child care of children up to 4 years of age and during 24-hour child care (child care with sleeping area) because in general the children present cannot escape independently. In some cases they will be totally dependent on the assistance of the staff. For other child care (without a sleeping area), such as a child care for children older than 4 years or child care outside school hours, no specific requirements apply for the size of the fire sub-compartment and it may have the same size as the fire compartment itself. The requirements for this are equal to those for an education function, because this type of child care will often be realised in school buildings.

The *second* paragraph provides the possibility to create a common occupancy area (living room) in a residential function, for care with an application area of more than 500 m^2, with a larger size than is permitted for individual residential units. With a residential function for care of not more than 500 m^2, the regulation for the other residential function of the first paragraph applies.

The *third* paragraph stipulates for a meeting function for child care with a sleeping area that a fire sub-compartment should not include spaces of another application function. Spaces of secondary importance (additional functions) may be part of this fire sub-compartment. Paragraph four explicitly indicates that each cell must be a separate fire sub-compartment. This offers the highest possible protection when fire breaks out in another fire sub-compartment near that cell.
The *fifth* paragraph limits the size of a fire sub-compartment in a health care function with a sleeping area up to 500 m^2. A storage area for beds is not a sleeping area. Within the fire sub-compartment with a sleeping area, spaces may also be present that serve those patient rooms, such as a room for supervision by the nursing staff. However such a room may also be outside a fire sub-compartment (see Article 2.93(3)). The fifth paragraph presents a general regulation for the sleeping area. When it concerns bedridden patients then the further regulation of the sixth paragraph is applicable. A bedridden patient is a patient who is confined to the bed and therefore needs help in the event of a fire to be able to make a fast escape. When the fire sub-compartment is destined for bedridden patients, then the maximum size of the fire sub-compartment in the fifth paragraph depends on the level of supervision. With permanent supervision, when sufficiently well trained staff is available 24 hours a day to take bedridden patients to safety in the event of a fire, a fire sub-compartment of 500 m^2 is permitted. If supervision is not available, then the fire sub-compartment should not be larger than 50 m^2. If the level of supervision is adjusted to taking a specific number of bedridden patients in time to safety in the event of a fire, then the size of the fire sub-compartment may be such, that that number of bedridden patients can be accommodated there. This means that on occasions a fire sub-compartment with size between 50 m^2 and 500 m^2 can be permitted. However, the fire sub-compartment, irrespective of the level of the monitoring, may not be larger than 500 m^2.
A lodging function can contain a number of hospitality occupancy areas (see Article 1.1) The *seventh* paragraph states explicitly that each occupancy area must be in a separate fire sub-compartment. This offers the highest possible protection when fire breaks out in another fire sub-compartment near to that occupancy area. It is also allowed in a group accommodation, such as at a farmyard campsite, that the different rooms for a single group of guests are together in one fire sub-compartment. These different rooms together then form one occupancy area.

Article 2.95 Resistance against fire penetration and fire spread
This article includes the requirements for the partition constructions that form a boundary of a fire sub-compartment. These partition constructions are then the boundaries of a spread area of fire and smoke.
The partition constructions must therefore have sufficient resistance against fire penetration and fire spread (wbdbo) and smoke.
In the *first* paragraph it is stated that the resistance against fire penetration of a fire sub-compartment to another room in the fire compartment is at least 20 minutes. This is calculated with the aid of the aspect of flame density. This requirement has replaced the 30 minutes resistance against smoke passage (rasp) that was imposed on smoke compartments in 2003 Building Decree. In accordance with NEN 6075, the wbdbo ratio to the resistance against smoke passage is 2:3. The resistance against smoke passage has now been converted to 20 minutes resistance against penetration for which only the aspect of flame density (E) is considered. This means that with the

fire sub-compartments referred to in this paragraph the criteria radiation (EW) and temperature (EI) are not considered.
The *second* paragraph lays down a heavier requirement of 30 minutes on the wbdbo of a fire sub-compartment to another room in the same fire compartment in which a fire sub-compartment is present as referred to in Article 2.94. This applies to the whole definition method stated in NEN 6068. It can therefore not be the case that for a certain application function in a fire compartment both fire sub-compartments with a wbdbo of at least 20 minutes must be present and fire sub-compartments with a wbdbo of at least 30 minutes. A fire sub-compartment with a bedroom in a child care centre (a child care centre with bedrooms is a 'meeting function for child care with a sleeping area) must have a wbdbo of 30 minutes and this then also applies to other fire sub-compartments within the fire compartment. If these other fire sub-compartments are in a fire compartment in which there is no bedroom, then 20 minutes suffices.
The *third* paragraph gives the possibility to impose further regulations by ministerial order about the smoke passage of a fire sub-compartment to another room.

Article 2.96 Alteration
Article 2.96 gives a regulation for the partial renovation or alteration or the extension of a structure. In such cases Articles 2.93 to 2.95 apply by analogy. The minimum level that must be thereby maintained is however the legally attained level. See for an explanation of the legally attained level the explanatory notes in Article 1.1.
The entire paragraph on new buildings applies for total re-building. Article 1.12 determines that unless agreed to otherwise, the new building ordinances are applicable.

Article 2.97 Temporary structures
This article states that for a still to be built temporary structure the articles in this section remain applicable. This is in variance to the basic rule given in Article 1.14 that the regulations for an existing structure are applicable for temporary structures.

Section 2.11.2 Existing buildings

Article 2.98 to 2.101
See the explanatory notes in paragraph 2.11.1, New buildings.
The limiting values for existing buildings are lower than for new buildings. Furthermore it is noted that for new buildings a 'protected escape route' is assumed and for existing building a 'protected route' is assumed (see also the explanation on Article 1.1). Also for existing buildings in a number of cases the resistance against smoke passage (rasp) is still assumed and when determining whether these requirements are satisfied, the crack under the door is neglected with the cell function and the health care function.

Section 2.12 Escape routes

General
The systematics of the requirements for escape have been considerably simplified. The underlying principle for this is that one escape route that starts at the location where the escape begins and ends at a safe location is sufficient. The 2003 Building Decree assumed at least two escape routes. The single escape route, from the exit of

the fire sub-compartment in which the escape route begins within the fire compartment, is a protected escape route and outside that fire compartment it is an escape route with extra protection or a safety escape route. With the underlying principle of a single escape route it is of course possible to realise a second escape route. In that case certain regulations that apply to a single escape route do not apply from the point that the two escape routes pass through different spaces (see Article 2.107). The requirements for escape have now been combined in one section, while those requirements in the 2003 Building Decree were spread over several sections. In section 2.12 they are no longer called smoke free or fire and smoke free escape routes, but a 'protected escape route' and an 'escape route with extra protection'. Also the term safety stairwell has been replaced by 'safety escape route', which does not only run over a staircase, but can also run horizontally. The new concepts, with respect to content, are not completely the same as the old concepts. See the explanation on the definitions in Article 1.1 and hereinafter. The regulations for the rotational direction of a door in an escape route and its ability to be closed are part of the regulation in chapter 7 of this decree.
In chapter 6 regulations have been given for installations that are necessary for safe escape. Article 6.20(5) prescribes a suitable fire alarm installation for blind alleys in certain situations.

Section 2.12.1 New buildings

Article 2.102 Control article
The functional requirement of the *first* paragraph, a structure that is going to be built has escape routes such that in the event of a fire a safe location can be reached, is focused on a safe escape from a new building. The table of the *second* paragraph indicates regulations for each use which are applicable to that use. Compliance with these regulations ensures compliance with the functional requirement of the first paragraph.

Article 2.103 Escape route
This article states the course of an escape route and the maximum length of that route within a fire sub-compartment.
The *first* paragraph indicates that at each arbitrary point in a structure an escape route starts that passes the adjacent terrain and ends at the public road. So an escape route should not lead to for instance a yard without a passage through to the public road. This will prevent that a person can still be enclosed by the fire. From the term 'floor intended for persons' it follows that this regulation applies to a space in which people can normally be present. In other words, for instance, for a technical room in which a maintenance engineer may occasional be present the regulations for an escape route do not apply. From regulations from the Occupational Health and Safety Act it follows that the maintenance engineer must also be able to leave the room and the building in a safe manner. This can also be accomplished with personal safety measures. The first paragraph applies to all application functions except to the cell function.
On the basis of the *second* paragraph an escape route in a penitentiary may only lead to another fire compartment. It is certainly not the intention that prisoners can escape to freedom unhindered in the event of a calamity. The addition 'whether or not via an outside space' means that this escape route does not have to lead directly to another

fire compartment, but can also pass via an outside space on the terrain of the institution. A penitentiary includes not only cell functions but also additional functions, for instance a sports accommodation or a workshop. In the event of fire the prisoners must also be able to escape from these additional functions to another fire compartment. See the first paragraph for an explanation of the term ‘floor intended for persons’.
The *third* paragraph, at every point of a carriageway an escape route begins that leads to the connecting terrain and from there to the public road, is only applicable to road tunnels with a tunnel length of over 250 m. A road tunnel tube has per definition at least two escape routes, via both ends of the road tunnel tube. See the eighth paragraph for the walking distance to a safe location or route (protected escape route) in the tunnel.
In the *fourth* paragraph one requirement is now laid down on the maximum walking distance of an escape route within an application area in a fire sub-compartment. The corrected walking distance has been determined at 30 m for almost all application functions. This is closely connected with the assumption that people can walk through a space filled with smoke during 30 seconds without breathing and at a speed of 1 m/s.
For a cell function the maximum walking distance is 22.5 m just as before. If the exit from the application area cannot be reached within the prescribed walking distance of 30 m (or 22.5 m for the cell function), then there must be a second exit that may in principle lead to the same escape route as the first exit. The corrected walking distance is the walking distance at which construction parts that are not a part of the building construction, are not considered. See also the definition in Article 1.1. For residential functions the requirement on the total walking distance that has to be travelled in a fire sub-compartment through an occupancy area and a traffic space is new.
The *fifth* paragraph states the same requirement as in the fourth paragraph, but then for an occupancy area for which no further classification is intended, or an occupancy area. With this catch all construction it is avoided that as a result of the presence of non-supporting partition walls, the actual walking distance from an occupancy space becomes unacceptably long. On the other hand it is avoided with this regulation that in an area or part thereof that is already classified or is not intended to be further classified that account must still be taken with a further classification and therefore with longer walk distances. This can for instance be the case with a sports hall.
The *sixth* and *seventh* paragraphs state that in certain application functions a lower occupation of the fire sub-compartment may effect a longer walking distance, because people will be able to reach the exit faster. The maximum walking distance of 45 m and 60 m are the limiting values that were linked to occupancy rate classes B4 and B5. When the permitted walking distance is exceeded, there must be a second exit that in principle may exit to the same escape route as the first one.
In the *eighth* paragraph, limitations are laid down on the maximum walking distance from the carriageway in a road tunnel tube to an exit of that tunnel tube. This walking distance is maximised in two ways.
First an exit must always be reached within 150 m. In addition by laying down that exits must not be further apart than 250 m, it is guaranteed that, when an exit becomes blocked, a following exit can always be found within 250 m. With the value of 150 m, account is taken of the possibility that there may be structural obstacles in the tunnel tube (for instance differences of height larger than 0.3 m, without stairs or

ramps), so that walking to the entrance from every point on the carriageway floor in a straight line is not possible. It should be clear that with 'the distance between two exits' the distance between two consecutive exits is meant. In general these maximum walking distances mean that people can leave the road tunnel tube on foot within five minutes. In assessing the request for a building permit every exit from the road tunnel tube (including the tunnel mouths) must be considered. In the level of requirements account is taken of the possibility that an exit, as a result of an accident, can become blocked off. So this possible risk may not lead to further (read: higher) requirements in granting the permit.
The *ninth* paragraph regulates the maximum difference in height to be bridged between a floor and the exit of a fire sub-compartment. In practice this means that an escape route in the fire sub-compartment cannot pass over more than two floors (or one flight of stairs).
The *tenth* paragraph states that a room or fire sub-compartment destined for more than 150 persons must have at least two exits that in principle can lead to the same escape route. The exits must be at least 5 m apart, because two directly adjacent doors function as one door viewed from the point of fire safety. The regulation has not been designated for the residential function, child care with a sleeping area, the health care function with a sleeping area and a structure not being a building, because normally no more than 150 persons will be present there in one fire sub-compartment. The limiting value of 150 persons is derived from the earlier occupancy rate classes.
The *eleventh* paragraph states a functional requirement for the safe escape from a structure not being a building. The reason to include a functional requirement here is due to the very diverse natures of these kinds of structures, such as grandstands, scaffolds and bridges. With this requirement the local authority gets some room to apply judgement.

Article 2,104 Protected escape route
This article indicates when a single escape route must be protected and which conditions apply. A protected escape route lies between the exit of a fire sub-compartment and the exit of a fire compartment.
The *first* paragraph applies to the residential function, the cell function, the child care and health care function both with a sleeping area, lodging function, and the road tunnel with a tunnel length of more than 250 m. This regulation is applicable irrespective of the number of inhabitants or occupants that use the escape route. If the adjoining terrain at the exit of the fire sub-compartment is not reached, then in the event of the use of a single escape route, escape via a protected escape route to the exit of the fire compartment is necessary. This requirement with regard to the residential function concerns non-independent residential spaces in a fire sub-compartment, for instance a home for the elderly. This requirement is not applicable to regular residential buildings, because the apartments therein are separate fire compartments and therefore the common traffic space outside those fire compartments must be an escape route with extra protection (see Article 2.105).
The *second* paragraph applies to the single escape route in non-residential buildings as far as the first paragraph is not applicable. If at the exit of the fire sub-compartment the exit of the fire compartment or the adjoining terrain has not yet been reached, then escape must be possible in the direction of the exit of the fire compartment via a protected escape route. No more than 37 people may be

designated to that route. This limiting value is calculated based on the old regulations related to occupancy rate classes.
The *third* paragraph states the requirement for the maximum walking distance in (the horizontal part of) a protected escape route that passes through an enclosed space. The length of the escape route is restricted in this situation for the unlikely event that smoke would penetrate into the enclosed route. Inside a stairwell no maximum distance has been laid down for the walking distance. Because the protected escape route is within the relatively restricted size of a fire compartment, the total length of a protected escape route does not have to be limited. This means that a protected escape route may consist of several parts of maximal 30 m in length, on the condition that they are separated by smoke resistant doors.

Article 2.105 Escape route with extra protection
This article indicates when a single escape route must have extra protection. An escape route with extra protection is per definition not in a fire compartment. The purpose of an escape route with extra protection is to be able to safely escape outside a fire compartment. Of course this goal could also be reached by detection, warning, an automatic extinguishing system, and/or a further limitation on the number of persons within the scope of an appeal on equivalence (Article 1.3). The *first* paragraph applies to the single escape route in a residential building with independent residential spaces (apartments), a cell function, a child care and health care function both with a sleeping area, and a lodging function. People therefore leave at the exit of an apartment not only the fire sub-compartment but at the same time also the fire compartment of that dwelling. If when leaving this apartment the adjacent terrain is not immediately reached, the common traffic space from the exit of that apartment must be an escape route with extra protection. This requirement is applicable irrespective of the number of inhabitants that use the escape route.
The *second* paragraph restricts the risk at a dwelling where escape can only occur via a single route, that this escape route becomes unusable because a door or a window remains open. Because front doors of houses do not have to be self closing, there is the probability that an escaping person leaves open the front door of a burning apartment, which possibly causes the escape route for other persons to be blocked by smoke or fire. Corridor or walkway dwellings with one escape route/stairwell are therefore only possible when the escape route does not pass along a front door or an open window of another apartment. The second sentence states that an exception applies to two opposite doors at the beginning of an escape route with extra protection.
The *third* paragraph regulates that an escape route as intended in the first paragraph may not pass via a stairwell. Exceptions to these rules are stated in the fourth paragraph of this article and in Article 2.107(1) (two escape routes) and (4) (safety escape route). The *fourth* paragraph regulates that under certain conditions with porch dwellings it is permitted to escape along a moveable construction part of another apartment. For further information about the developments of the fire safety regulations for an entrance hall or porch, reference is made to the survey report Fire safety of porch dwellings, Adviesbureau Nieman, June 2010.
The *fifth* paragraph determines for non-residential buildings, as far as the first paragraph is not applicable, that when between 38 and 150 persons are present in the fire sub-compartment and the adjacent terrain at the exit of the fire sub-compartment has not yet been reached, the single escape route must be an escape route with extra

protection. This means that when leaving the fire sub-compartment, the fire compartment is also left at the same time. Between 38 and 150 persons may be assigned to an escape route with extra protection. These limiting values follow from the transfer of the old regulations based on the occupancy rate classes.
The *sixth* paragraph states the requirement for the maximum (whether horizontal or not) walking distance in an enclosed space through which an escape route with extra protection passes. This walking distance is not longer than the value stated in the table (for most application functions 30 m). When the escape route in the enclosed space passes through a stairwell, then in determining the total walking distance, the walking distance over the stairwell must be included. This follows from the term 'walking distance', see the explanation in Article 1.1. As soon as the maximum permitted walking distance over the escape route with extra protection has been covered, an exit must have been passed and further escape can be performed via a safety escape route, two independent escape routes or to the adjacent terrain.
The *seventh* paragraph indicates that in a lodging building, an escape route that runs through a stairwell must always be an escape route with extra protection. When the difference in height to be bridged is greater than 12.5 m and the stairwell is an enclosed stairwell, then the stairwell must be a safety stairwell as referred to in Article 2.106(2).
The *eighth* paragraph determines that an escape route that passes through a stairwell must be an escape route with extra protection when a difference in height of more than 8 m must be bridged. This is to prevent that the stairway could otherwise function as a chimney and thereby fan any possible fire.

Article 2.106 Safety escape route
The *first* paragraph indicates that when more than 150 persons are designated to a single escape route, the escape route outside the fire sub-compartment must pass through a safety escape route. When there is an exit of the fire sub-compartment, then that exit is the exit of the fire compartment at the same time, because the safety escape route is per definition not in a fire compartment. The number of persons designated to a safety escape route does not have to be limited, because such a route offers sufficient protection.
The *second* paragraph determines that an escape route that passes through a stairwell of a lodging building with a difference in height to be bridged of more than 12.5 m, must be an escape route with extra protection. This is to prevent that the stairway could otherwise function as a chimney and thereby fan any possible fire.

Article 2.107 Second escape route
The purpose of a second escape route is to be able to safely escape when one of the two routes becomes unusable in the event of a fire. This purpose could also be achieved with an appeal on equivalence (Article 1.3) by detection, warning, an automatic extinguishing system, and/or a further limitation of the number persons. When that second escape route is present, an appeal on equivalence is not necessary and less heavy requirements than when only one single escape route is present will suffice.
The *first* paragraph states the regulations for the situation when there is a second independent escape route outside the fire sub-compartment in which the escape route begins. From the point that one of the escape routes passes a door to another space outside the fire sub-compartment and the escape routes further passes through

different spaces, then there are two independent escape routes. From that point the requirements for a protected route, a route with extra protection, or a safety escape route on that escape route are no longer applicable. Then from that point the limitation on the number of persons that may use the escape route also lapses. The two escape routes must remain separated from each other up to the adjacent terrain (so no walking through the same space) unless there is a safety escape route via that joined part (see the fourth paragraph). An exception requirement for an escape route with extra protection that is no longer applicable is the situation that in the escape route a difference in height of more than 8 m must be bridged. Also when there are two escape routes, the eighth paragraph of Article 2.105 remains applicable.
The *second* paragraph states that the two escape routes outside the fire compartment where the escape routes begin may not pass through the same fire compartment.
The *third* paragraph offers in practice the possibility to use two independent escape routes with a fire sub-compartment with one exit. The escape routes may run directly from the exit of the fire sub-compartment through the same space (part a) before they run further as totally independent escape routes. This is permitted on the condition that the two escape routes run in different directions to the two exits (part d). This requirement avoids that escape in only one direction is possible, because to one side of the space there are only two adjacent exits and on the other side a blind alley. Further this space must be a protected escape route when the space is within a fire compartment and an escape route with extra protection outside the fire compartment (part b). For an enclosed area, the walking distance in that space is restricted to no more than 30 m for each escape route (part c). The limitation of the number of persons on this part of the escape routes is not applicable. To have two different directions there must be a minimum angle (for instance 90°) or the routes must for instance be screened off from each other by a wall. It must not be the case that if one escape route is unusable through fire, the other escape route becomes immediately or just after that also unusable.
The *fourth* paragraph makes it possible that two escape routes pass through the same space as far as the escape route is a safety escape route, because once on the safety escape route, a safe location has been reached, along which the adjacent terrain can be reached in a safe way.
The *fifth* paragraph limits the possibility for a safety escape route in a residential building to a safety stairwell.

Article 2.108 Layout of an escape route
This article states the further requirements for the layout of an escape route.
The *first* paragraph regulates the compartmenting (smoke resistant doors) in the protected route or escape route with extra protection by prescribing fire and smoke partitions between adjoining traffic spaces in the escape direction. The wbdbo will have to be realised with each (virtual or material) spatial partition between those spaces. For a partition between fire compartments on the escape route, the requirement of 30 or 60 minutes that applies between fire compartments (see Article 2.85) is indicative. The *second* paragraph is intended to guarantee that two escape routes running next to each other remain sufficiently separated from each other that they do not become unusable at the same time through fire or smoke. The *third* paragraph offers the possibility to impose requirements by ministerial order on the smoke passage of the fire resistant partition constructions intended in the first and second paragraphs.

The *fourth* paragraph applies to a stairwell in a residential building through which a protected route or escape route with extra protection passes, but which is not a safety escape route. This space must contain as few combustible materials as possible. This means in practice that the floors and walls of this space must be of stone like material, the stairs of incombustible material (steel or stone like) and the doors and window casings may only contain a limited amount of wood. The limit is at a fire load of no more than 3500 MJ per building level.
The upper building level of the stairwell will be expected to be the building level with the highest fire load. The combustible roof covering can contribute to the fire. Because the roof construction is high in the stairwell, the fire load of the roof covering is a smaller danger than the fire load of other construction parts and therefore can have a reduction of 50 % applied to it.
The *fifth* paragraph applies for each safety escape route. It is prescribed in this paragraph that the space through which a safety escape route passes must contain as few combustible materials as possible. This means in practice that when doors, window casings, handrails, and skirting-boards are made of wood, the floors and walls of that room must be of stone like material. The limit is at a permanent fire load of 3500 MJ. On a safety escape route, to guarantee the intended extra safety, it is not permitted, contrary to a protected or escape route with extra protection in a residential building, to apply a reduction of 50 % in determining the fire load of the roof.
The *sixth* paragraph includes a regulation for higher buildings. Between the horizontal part of the escape route and a stairwell at buildings in which a difference in height of more than 20 m must be bridged, there must be a separate traffic space with a protected escape route or an open space (smoke lock) of at least 2 m in length. This space or smoke lock must prevent premature penetration of smoke in the stairwell. For that reason doors that exit to the stairwell must be self closing (see Article 6.26). The difference in height in the 2003 Building Decree of at least 50 m is from now on 20 m. The choice has been made to apply this regulation from now on to a difference in height of more than 20 m to prevent that the stairwell could function as a chimney and would hinder escape and assistance. The *seventh* paragraph is an addition to the sixth paragraph and exclusively applicable to residential buildings with a stairwell in which a difference in height of more than 20 m is bridged. The regulation states that the exit of an apartment should not exit directly to the space or smoke lock stated in the sixth paragraph. The reason for this regulation is to prevent that an apartment that does not have to have a self closing front door, can be filled with smoke immediately because of the open door and will be unusable within a short time.
Paragraph *eight* states that an escape route must be sufficiently wide and high. It concerns both height and width of spaces through which an escape route passes as well as the height and width of doorways (passageways). For mobile homes, lodging functions not being in a lodging building, other application functions, and tunnels, a different limiting value applies for the height.
The *ninth* paragraph of this article applies for road tunnels with a tunnel length of more than 250 m, and indicates that the free passage of an escape route, as far as this does not pass via a step or through a passageway such as an exit or doorway, must be at least 1.2 m wide. This requirement refers to the free passage of all spaces through which the escape route passes (from every point in a road tunnel tube to the adjoining terrain).

The *tenth* paragraph states that a step in a residential building on which at least 600 m^2 of occupancy area is designated must have a width of at least 1.2 m. This is important because there are no requirements set on the residential function to the handling and flow capacity of the escape route.
The *eleventh* paragraph is intended for the health care function and applies to the total escape route. Bedridden patients must be quickly transferred with bed and accessories horizontally to another fire compartment. The entrances must be wide enough for this. The block mentioned in the regulation with a length of 2.3 m, a height of 1.2 m, and a width of 1.1 m (lxhxw) represents a standard hospital bed.
The *twelfth* paragraph determines that a non-enclosed space through which an escape route passes has such capacity for the discharge of heat and smoke, and the supply of fresh air, that this space can be used to escape and for carrying out rescue and extinguishing activities. In a non-enclosed space there is no need to provide a number of fire safety provisions that are necessary in an enclosed space. To be able to give up these fire safety provisions, the space must remain safe for a longer time (in general 30 to 60 minutes will be sufficient) to escape from the rest of the building and for the deployment of assistance services. Because non-enclosed spaces through which an escape route passes such as a gallery or an atrium can be designed in countless ways, the capacity of the required heat and smoke discharge (whether or not mechanical) from these spaces cannot be determined with an unambiguous performance requirement. The limiting values, at which remaining in that space is just still possible, can be applied as safe values in accordance with the TNO Building report 1997-CVB-R0883:

- the radiation flux is not larger than 1 kW/m^3;
- the temperature is not higher than 45 °C, and
- the length of vision is not shorter than 100 m.

It is acceptable when in the direct vicinity of a seat of a fire or smoke layer not (all) these safe values are met when the escape route through this room is possible in two different directions. Escaping persons can then escape in a direction that does not pass along a seat of a fire or a smoke plume. This also applies when the escape route passes through a wide space (for instance an atrium that is not designated as a non-enclosed space) so people can escape along a seat of a fire or a smoke plume at sufficient distance.
For (traditional) galleries with a level ceiling, non-closable openings in the longitudinal facade and a gallery depth of no more than 1.8 m, the required capacity of the supply of fresh air and the discharge of smoke can be determined with the aid of part 5.3 of NEN 1087. To not be indicated as a non-enclosed area, this capacity must be at least 100 dm^3/s per m^3 net contents of this space, while along the ceiling of the gallery there should be no protruding edges or other obstructions present. An obstruction can lead to stagnation of the smoke discharge or accumulation of hot smoke under the ceiling of the gallery. Gallery depth is understood to be the largest distance between the openings(s) in the longitudinal facade and the trailing partition wall, measured perpendicular to the longitudinal facade.

Article 2.109 Capacity of an escape route
The first paragraph regulates the number of persons that, dependent on the width, are designated to an escape route. This is the flow capacity expressed in persons per metre. Based on the second paragraph, a time criterion can be added for instance (number of persons, per metre, per minute). In determining this number the ‘Study on

flow capacity through doors' TU Delft, 28 April 2009 has been used. In this first paragraph, five different criteria have been incorporated depending on the type of flow opening. A flow capacity of 90 persons per metre of free width of a passageway mostly occurs. This means that a door opening with a free width of 0.85 m has a flow capacity of 0.85 m x 90 persons/m = 76 persons. The first paragraph, part c, focuses on door openings with a door that cannot be totally opened. When the door cannot be opened further than an angle of 135 degrees, the starting point must be the same flow capacity as with a space (part b). An open door can influence the flow comparably with the walls of a space. This is also the case with a double door from which one or two parts offer a restricted opening angle. For the flow capacity of a staircase, a non-walkable part of it (for instance with a spiral stair case) does not play a role. Therefore in determining the flow capacity, a part of the stair from which the step is smaller than 0.17 m must not be considered (part a). The second paragraph states a possibility by ministerial order from to deviate from the regulations of the first paragraph in determining the flow capacity of the part of an escape route that is outside the fire sub-compartment in which the escape route begins. Also the addition of a time criterion can be considered as a deviation from the first paragraph that sets a requirement to the capacity itself, but not to the time. The *third* paragraph states a functional requirement for a structure not being a building. Each part of an escape route must have such a flow capacity, that the persons relying designated to that part can escape safely.

Article 2.110 Alteration
Article 2.110 gives a regulation for the partial renovation or alteration or the extension of a structure. In such cases Articles 2.103 to 2.1095 apply by analogy. The minimum level that must be thereby maintained is however the legally attained level. See for an explanation of the legally attained level the explanatory notes in Article 1.1.
Further it follows from Article 1.12 that the complete new building paragraph is applicable for complete re-building. That article states that, unless otherwise prescribed, the regulations on new buildings apply.

Article 2.111 Temporary structures
This article states that for a new yet to be built temporary building, Articles 2.103 to 2.107 and 2.109 of this section are fully applicable. This is in variance to the basic rule given in Article 1.14 that the regulations for an existing structure are applicable for temporary structures.

Section 2.12.2 Existing buildings

Article 2.112 to Article 2.119
See the explanatory notes to Articles of paragraph 2.12.1 New development.
The new systematics also apply here. The differences with the regulations for new buildings are related to the protected route, resistance against smoke passage (rasp), walking distances, two escape routes, and handling and flow capacity. See also the general part of the explanation.
The limiting values and layout requirements of the escape routes are largely equal to the old requirements for existing buildings. New are the regulations for the handling and flow capacity. When an existing building cannot comply with these regulations,

then application technical solutions can be considered. When this is not possible, an application limitation can be applied.

Section 2.13 Assistance in the event of fire

Section 2.13.1 New buildings

General
This section deals with the period of time from the arrival of the assistance at the building. In principle everybody should already have reached a safe location. However, it may be that the assistance has to search the building for persons left behind and has to assist in the evacuation. The fire brigade must also be able to reach the location with their equipment.

Article 2.120 Control article
The functional requirement of the *first* paragraph, a structure to be built is such that the assistance can rescue people and fight the fire within reasonable time, makes clear that the building must be such that assistance must be able to carry out their work at all times. The table of the *second* paragraph indicates regulations for each use which are applicable to that use. Compliance with these regulations ensures compliance with the functional requirement of the first paragraph.

Article 2.121 Fire brigade lift
Article 6.40 demands the presence of a fire brigade lift at a floor of an occupancy area that is higher than 20 m above the measurement level (see for the term ‘fire brigade lift’ Article 1.1). Article 2.121 states requirements on the structure to enable the fire brigade to reach the higher floors of the building in the event of fire via a safe route. On the basis of the *first* paragraph each floor must have a so called ‘fire resistant lobby’ for the fire brigade lift.
Via the escape route with extra protection, which functions as a fire resistant lobby at the location of the lift, the fire brigade can reach a fire in a safe way on the floor above to search for persons left behind and start fighting a beginning fire with the equipment that has been transported via the lift. This regulation applies only to floor levels, not to the ground floor.
The *second* paragraph states that the front door of a dwelling may not border on the front door of a fire brigade lift.

Article 2.122 Walking distance
The purpose of this article is to avoid that the fire brigade must bridge excessive distances to reach a safe location with rescued people or to fight a beginning fire with the usual equipment. The walking distance to the entrance of a stairwell is not greater than 75 m (*first* paragraph). The walking distance to a fire brigade lift is not greater than 120 m (*second* paragraph).

Article 2.123 Aid station
With this regulation it is determined how many aid stations are needed in a tunnel tube. The walking distance from each point in the tunnel to an aid station may not be greater than 75 m (*first* paragraph). The distance between two aid stations may be 100 m. An aid station is a space for, among others, warning, communication (Article 6.43), portable fire extinguishing equipment (Article 6.31), and a connection to a

powder extinguishing tube (Article 6.29). An aid station is not intended for the immediate protection of road users against the results of fire.

Article 2,124 Alteration
This article states a regulation for the part renewal or alteration or enlargement of a building. In such cases Articles 2.121 to 2.122 apply by analogy. The minimum level that must be maintained however is the legally attained level. See Article 1.1 for an explanation to the term 'legally attained level'.
From Article 1.12 it follows that Article 2.123 in the event of alteration of a road tunnel with a tunnel length of more than 250 m is fully applicable and that on total renewal, the complete paragraph on new buildings applies. Article 1.12 determines that unless agreed to otherwise the new building ordinances are applicable.

Article 2,125 Temporary structures
On a temporary structure the Articles 2.121 and 2.122 are fully applicable. This is in variance to the basic rule given in Article 1.14 that the regulations for an existing structure are applicable for temporary structures.

Section 2.13.2 Existing buildings

Articles 2.126 and 2.127
See the explanatory notes to paragraph 2.13.1. New buildings.
The regulations in this paragraph apply exclusively to road tunnels with a tunnel length of more than 250 m.

Section 2.14 High and subterranean buildings, new buildings

General
Although in the other sections of chapter 2 no prohibition is included on the application of these regulations on a structure in which a floor of an application area is higher than 70 m above or lower than 8 m under the measurement level, not all these regulations are fully suitable for such high or subterranean structures. For that reason it has been laid down in this section that such structures must always have at least the same safety level as was intended with these regulations. In this section no regulations have been included for alterations or temporary buildings. To determine the fire safety level during alterations and during temporary building, the relevant articles from the paragraphs mentioned in Article 1.135 must be consulted.

Article 2.134 Control article
The functional requirement of the *first* paragraph, a structure to be built in which a floor of an application area is higher than 70 m above or lower than 8 m under the measurement level has been defined in such a way that the structure is fireproof, is focused on guaranteeing the safety of high and subterranean structures.
The *second* paragraph determines that the functional requirement of the first paragraph is satisfied by application of the regulations of this section. These regulations apply for all application functions.

Article 2.135 Layout
The *first* paragraph states that buildings with a floor higher than 70 m must have the same degree of fire safety as intended with the paragraphs 2.2.1, 2.8.1, 2.9.1, 2.10.1

2.11.1, 2.12.1, and 2.13.1. As far as the material performances included in the stated paragraphs are not suitable for higher buildings, it must be demonstrated in the request for a building permit how the intended fire safety level will be achieved.
The *second* paragraph states a similar regulation as the first paragraph, but then for structures with a floor that is lower than 8 m under the measurement level.

Section 2.15 Burglary resistance, new buildings

Article 2.136 Control article
The functional requirement of the *first* paragraph, a residential function to be built, not being a mobile home, that offers resistance against burglary, is unaltered compared to the 2003 Building Decree.
The *second* paragraph determines that the functional requirement of the first paragraph is satisfied by application of the regulations of this section. These regulations apply for all residential functions with the exception of the mobile home.

Article 2.137 Scope
Doors, windows, window casings, and comparable construction parts of dwellings must, when they are accessible to burglars, be burglary-proof in accordance with resistance class 2, determined in accordance with NEN 5096. This guarantees that new to be built dwellings are fitted with proper locks and handles and with proper window casings to which locks and handles are attached. High quality locks and handles act in a preventive manner against burglars and contribute to social safety.
The requirements also apply to construction parts in a partition wall between a dwelling and a space of an adjoining application function or adjoining common space. Examples of such adjoining application functions that are connected to the dwelling are practice or office spaces and garages. At a dwelling in a residential building one can think of the partition between a dwelling and an adjoining common space such as an entrance hall.
At resistance class 2, determined in accordance with NEN 5096, an occasional burglar needs, with the usual tools, in general at least 3 minutes to enter a house.

Article 2.138 Alteration
Article 2.138 states a regulation for burglary resistance during part renewal or alteration or enlargement of a building. With this regulation it is avoided that the existing extent of burglary resistance of a dwelling will be undermined during alterations.
In such cases Article 2.137 applies by analogy by which the legally attained level must be assumed. See for an explanation of the legally attained level the explanatory notes in Article 1.1. The new building ordinances are fully applicable to the entire renovation. Article 1.12 determines that unless agreed to otherwise the new building ordinances are applicable. In reference to this see the explanatory notes to Article 1.12.

Section 2.16 Security zone and area of attention in the event of a pool fire, new buildings

General
This section makes it possible to impose requirements by ministerial order in so-called safety zones and areas of attention for pool fires with a view to being able

to escape safely during a fire, an explosion or a pressure wave in such a zone or area. With the inclusion of this section a wish of the Tweede Kamer (Dutch Parliament) has been carried out (Kamerstukken (official parliamentary documents) II, 2008/2009, 30 373, No 35).
For an explanation on the terms ‘safety zone’ and ‘area of attention in the event of a pool fire’ reference is made to the explanation in Article 1.1.

Article 2.139 Control article
The *first* paragraph of this article states as functional requirement that a building to be built in a safety zone or area of attention in the event of a pool fire or above the full width of a base network route when the safety zone is only a part of the width of the base network route must be such that the resulting risk for the users of the building is restricted. This means that in the event of a calamity people in such an area in the structure are protected in such a way that they can safely escape from the structure.
The *second* paragraph determines that the functional requirement of the first paragraph is satisfied by application of the regulations of this section. These regulations apply for all application functions.

Article 2.140 Safety zone and area of attention in the event of a pool fire
With regard to the prevention or limitation of the consequences of a fire coming from outside of the building, explosion or shock wave regulations can be issued by ministerial order about building in a safety zone or area of attention in the event of a pool fire. From the heading of section 2.17 and the first paragraph of Article 2.139 it appears that those regulations (only) concern new structures still to be built.

Section 2.17 Additional regulations on tunnel safety

Section 2.17.1 New buildings

Article 2.141 Control article
The functional requirement of the *first* paragraph, a road tunnel to be built with a tunnel length of more than 250 m is such that the safety for the road traffic is guaranteed, is, regarding the intent, equivalent to the functional requirement from the 2003 Building Decree.
The *second* paragraph determines that the functional requirement of the first paragraph is satisfied by application of the regulations of this section. These regulations apply for all road tunnels with a tunnel length of more than 250 m.

Article 2.142 Traffic safety
The *first* paragraph fits with the application technical requirements of Article 6.46(2) to (4).
In the *second* paragraph it does not concern a ramp for persons but a ramp for motor vehicles. This is another kind of ramp than in section 2.4 (bridging of differences in height). In that section it only concerns the bridging of a difference in height by persons who are not seated in a motorised vehicle (so walking or for instance in a pram or a wheel chair).
In the event of an incident in a road tunnel, it is necessary that assistant services can pass a truck with an assistance vehicle. The minimum size of a road tunnel tube laid down in the *third* paragraph guarantees that there is sufficient space for it.

Section 2.17.2 Existing buildings

Articles 2.143 and 2.144
See the explanatory notes to paragraph 2.14.1. New buildings.

Chapter 3 Technical building regulations in terms of health

General
The amendments in comparison with the former Chapter 3 are largely the result of coordination with the Noise Abatement Act and the Aviation Act and of the amendments to BS 5077. They are the regulations regarding external noise, aviation noise, impact noise, and airborne noise within a construction. The former value dB(A) was replaced with the value dB where possible, the former value L_{aeq} was replaced by a L_{den} value (expressed in dB) at civil airports, while the former value will still remain applicable at military airports. For the calculation of sound propagation through airborne noise, the new term 'characteristic airborne noise level difference' shall be assumed henceforth, and 'impact noise level' shall be assumed for sound propagation of impact noise.
It is important that, henceforth, requirements shall apply to prevent noise pollution of own facilities from houses, childcare, and educational buildings. By contrast, requirements for noise protection in living areas within the same use function (the former Section 3.3) will no longer be stipulated.
Also, simplifications were made such as combining the regulations of some sections. This results in the new sections Resistance to moisture (Section 3.5), Ventilation (Section 3.6), and Supply of combustion air and discharge of flue gas (Section 3.8).
A major substantive change is that, henceforth, requirements will only be stipulated for the usable floor area (and for the new bed area) and no longer for the level of living area. This change has an advantage when being able to divide a construction in living areas (free manoeuvrability). Furthermore, requirements for office functions in this section will no longer be stipulated. Users of an office function, unlike users of hospitals and schools, will not be considered 'vulnerable'. Offices are also not included in the 'noise sensitive constructions' category of the Noise Abatement Act. Regarding the possible influence of external noise on working conditions, refer to the so-called arbocatalogue based on the Working Conditions Act.
In the section on protection against rats and mice (Section 3.10), a requirement was inserted that will allow to realise a nest or a permanent bed ground or shelter for animal species protected by or under the Flora and Fauna Act.
The former sections with the requirements for drinking water supply and hot water supply were combined and moved to Chapter 6. The sections for the discharge of wastewater and faeces and drainage of rainwater were combined in Chapter 6 as well.

Section 3.1 Protection against external noise, development (building of new houses)

General
In the regulations in this section, the term 'external partition structure of a usable floor area' will be used. In many cases this will be the exterior wall or the roof. However, this is not necessarily so. Referring to the definition of outer partition structure in Article 1.1(1) it should be noted that when the usable floor area is not adjacent to the front wall, the soundproof effect of intermediate areas and construction components must be taken into account when applying the regulation. After all, it concerns the noise reduction that will be realised in the usable floor area or the living area. It should be noted that Articles 3.2, 3.3, and 3.4 may apply

simultaneously. In such cases, the heaviest regulation shall apply. It is also possible that different paragraphs of an article simultaneously will apply. In such cases, the heaviest regulation shall apply as well.

Article 3.1 Guidance article

The *first* paragraph provides the functional requirement that a building to be constructed shall provide protection from external noise in a usable floor area. The table of the second paragraph indicates regulations for each use function that shall apply to those use functions. By complying with these regulations, the functional requirement of the first paragraph will be met. For the other meeting function, the cell function, the industrial function, the office function, the accommodation function, the sports function, the shopping function, the 'other use function', and the 'construction other than a building', the table of the second paragraph does not indicate any regulations.

The *third* paragraph stipulates that the functional requirement shall not apply to these use functions either.

Article 3.2 External noise

Article 3.2 includes the basic regulation that an external partition structure of a usable floor area shall have a characteristic noise protection of at least 20 dB. This basic regulation shall always apply to the residential function, the meeting function for childcare, the healthcare function and the educational function. Under this basic regulation, protection against normal background noise will be provided in the usable floor area. The other articles of this section can then show that a higher characteristic sound protection is necessary because of special circumstances.

Article 3.3 Industry, road or railway noise

A characteristic noise protection of 20 dB is not enough for industry, road and railway noise. Municipalities define a so-called high-value decision on the basis of the Noise Abatement Act, including the areas where a higher noise load is permitted ('maximum permissible noise load') and which are included in the development plan. Construction may only take place in such areas if the characteristic noise protection to be realised by the applicant for an environmental permit is higher than the value given in Article 3.2. If such areas were not defined, only Article 3.2 shall apply. If in such a case the actual noise load upon the front wall is still greater than 20 dB +35 dB (A), respectively, 20 dB +33 dB, the problem's solution does not involve the applicant for an environmental permit, but the party causing the noise.

For usable floor areas in general (except bed area), the *first* paragraph indicates how to act in those cases in which a maximum permissible noise load was indicated for industrial, road, and railway noise. When calculating the characteristic sound protection, dB(A) or dB must be assumed depending on the type of noise. This difference is because the Noise Abatement Act is still based on the former dB(A)-oriented determination method, while a European harmonised determination method based on dB is used for road or railway noise. In practice, it is a difference of about 2 dB.

The *second* paragraph provides a further requirement for an area which is used for sleeping. For such areas, the characteristic sound protection must be 5 dB heavier than under the first paragraph. This exception is a result from the Noise Abatement Act. The *third* paragraph states that the first two paragraphs are applicable mutatis

mutandis to an internal partition structure that is not the partition of a usable floor area of an adjacent use function to which these two paragraphs apply. This means that if a usable floor area is adjacent to an area on one side where no sound protection requirements apply, such a partition structure, including the soundproof effect of intermediate areas and structural components, must be soundproof in such a way that no noise pollution from outside occurs in the usable floor area.
The *fourth* paragraph ensures that an acceptable noise level occurs in every separate living area.

Article 3.4 Aircraft noise

Article 3.4 sets out how to deal with a use function in a restriction area as referred to in the Aviation Act. Spatial restrictions to ensure safety and prevent noise pollution shall apply in a restriction area in connection with the proximity of an airport. Whether there is a so-called restriction area will be determined by the development plan. A municipality near an airport is required to incorporate the contours defined for the restriction area in the development plan. Regulations on military and civil airports (other than Schiphol airport) in the Aviation Act were amended by the Civil and Military Airports Regulations Act. For military airports, a Ke noise contour is still determined within which an isolation requirement exists under the Soundproofing Provisions Regulation 1997 (*Regeling geluidwerende voorzieningen, RGV* 1997). For civil airports, the Ke zone is directly incorporated into the RGV 1997. For Schiphol, these contours were already included in the RGV 1997. For the remaining civil airports (Rotterdam Airport, Groningen Airport Eelde, Maastricht Aachen Airport, and Lelystad Airport), for which in the past the Ke noise contours were defined under the Aviation Act, it will still be done.
The *first* paragraph focuses on military airports. The noise load on the external partition structure (external wall) included in the zoning has been expressed in Ke at military airports. These Ke values will no longer be used in civil aviation.
In a restriction area, the external partition structure of a usable floor area must have a characteristic noise protection of at least the characteristic sound protection shown in Table 3.4. The prescribed characteristic noise protection in dB can be read in the table on the basis of the Ke value indicated in the development plan. The *second* paragraph only relates to civil aviation. In a civil airport, the outer partition structure must be so that the noise load in a usable floor area will not be exceeding 33 dB. It should be noted that L_{den} or the 35 Ke noise contour shall be assumed for civil aviation. Using L_{den} results from the European directive on assessment and management of environmental noise, dated 25 June 2002 (Directive 2002/49/EC).
The *third* paragraph refers to structurally conducted night flights. In case of structurally conducted night flights, additional noise protection measures are necessary to ensure peace by night for persons in a bed area (bedroom or hospital room). The noise load in the area concerned must not exceed 28 dB. Structural night flights are only allowed at Schiphol.
The *fourth* paragraph refers to the internal partition structure (internal wall) between a usable floor area and an enclosed area of, for example, a garage adjacent to a house or an outside storage. Such an internal wall must have a similar degree of noise protection as if it concerns a front wall of that usable floor area. The positive effect on the noise protection by the presence of the garage or outside storage can be included.

The *fifth* paragraph ensures that an acceptable noise level occurs in every separate living area.

Article 3.5 Renovation
Article 3.5 provides a regulation for partially renovating or modifying or enlarging a building. The characteristic noise protection of the external partition structure will not have to be better than the level obtained legally. The development regulations shall apply in full to total renovation. For Article 1.12 stipulates that, unless otherwise provided, the development regulations shall apply. See the explanatory note to Regulation 1.12 regarding this.

Article 3.6 Temporary construction
Article 3.6 stipulates in the *first* paragraph that Articles 3.2 to 3.4 shall apply accordingly to temporary constructions. A characteristic noise protection that is lower than 10 dB or dB(A) can be assumed. Therefore, the required level is 10 dB or dB(A) lower than for a regular development.
The *second* paragraph provides that a characteristic noise level of up to 30 dB instead of 28 dB must be assumed when applying Article 3.4(3). The required level in a bed area is therefore 2 dB lower for temporary construction than for a regular development.

Section 3.2 Protection against noise from facilities

General
In the Building Act 2003, regulations to prevent building facilities from causing noise pollution in adjoining buildings were the only ones included in this section. Henceforth, regulations to prevent noise pollution from one's own building facilities are also included for the residential function, the meeting function for childcare, and the educational function, This is particularly important because dependence on facilities will be increasing for the purpose of energy efficiency and indoor environmental quality. Noise pollution from such facilities may be harmful to health, whether because of the noise itself, or because the facility is turned off to limit the noise pollution.

Article 3.7 Guidance article
The functional requirement that a building to be constructed shall offer protection against noise from facilities was unaltered compared to the Building Act 2003.

Article 3.8 Adjacent plot
This article aims to reduce noise pollution for neighbours. This could include inconvenience when flushing a toilet or using a lift. This regulation shall apply to both non-common (individual) as well as common facilities. These regulations are needed because people are more affected by noise from outside their own home, hotel room, office, and the like, than from sounds from inside their own home and the like. In addition, one can hardly or not at all influence noise produced by others. The characteristic facility noise level shall be determined in accordance with NEN 5077 and must not exceed 30 dB. This value was expressed in dB(A) under the Building Act 2003.

Article 3.9 Same plot

This article regulates the restriction of noise pollution by facilities for use functions located on the same plot. The *first* paragraph is focused on preventing noise pollution within a house (non-common living area of a residential function). It concerns noise pollution caused by a facility of an adjoining house or by another use function located on the same plot.

The same also shall apply to a common facility (e.g., an elevator). A common facility shall not be allowed to cause noise pollution in any house.

The *second* paragraph refers to prevention of noise pollution by the own building facilities. This regulation shall only apply to the residential function, the meeting function for childcare, and the educational function. The permissible characteristic facility noise level can be read in Table 3.7.

The reason for including this regulation is regular complaints about noise pollution caused by mechanical ventilation systems, especially in houses, schools, and day-nurseries.

Such systems (with or without heat recovery) are increasingly used to be able to meet the energy performance requirement (see Section 5.1). In order to prevent that a facility necessary for a healthy indoor environment is shut off because of noise pollution, a maximum has been set to the noise production of facilities for heat generation, heat recovery, and ventilation. The characteristic facility noise level determined in accordance with NEN 5077 in a usable floor area shall be at most 30 or 35 dB for the above-mentioned facilities combined (see table). This shall apply whether it concerns a combined system or individual devices.

It should be noted that when calculating the characteristic facility noise level, the level shall be assumed that occurs in the highest position of the prescribed control range of that facility (this is the prescribed ventilation capacity as referred to in Article 3.38).

Article 3.10 Renovation

When renovating, modifying or enlarging partially or wholly, Articles 3.8 and 3.9 shall apply accordingly. The level of requirements is 10 dB lower, which means that the maximum permissible facility noise level in a usable floor area will be 10 dB higher, or in other words, the system may produce more noise.

This means that when replacing a facility, the new facility must also conform to the regulations of this section, however, the noise production may be 10 dB higher. More specifically: the facility noise level as referred to in Articles 3.8 and 3.9(1) may be at most (30 dB + 10 dB =) 40 dB. When applying Article 3.9(2), 10 must be added each time to the value included in the table. Depending on the use function, this represents a value of 40 dB at most or 45 dB at most.

Article 3.11 Temporary construction

Articles 3.8 and 3.9 shall apply accordingly to a temporary construction, with the level of requirements being 10 dB lower. This means that the facility noise level may be 10 dB higher than what has been indicated as the highest value in those articles, or in other words, the facility may produce even more noise.

This means that when building a temporary construction, the facility must comply with the requirements of this section, however, the noise load may be 10 dB higher.

Section 3.3 Limitation of reverberation

General
The purpose of this section is to limit the noise pollution in apartments due to reverberation in adjacent hallways, stairwells, or enclosed galleries (corridors). Practice shows that if no sound-absorbing measures are taken, the reverberation effect will be an invitation to make extra noise.

Article 3.12 Guidance article
The functional requirement that a building to be constructed shall have such a sound absorption in a common circulation area that noise pollution because of reverberation will be limited, was largely unaltered compared to the Building Act 2003. Henceforth, the scope shall be restricted to the common circulation area. Practically speaking, this is no alteration, because the performance requirement of Article 3.13 only concerns common circulation areas, as before.

Article 3.13 Sound absorption
Regulation 3.13 provides that the sound absorption of an enclosed common circulation area must be calculated using NEN EN 12354-6. This standard has replaced NEN 5078. Code of Practice NPR 5071, 1981 edition, as supplemented in 1991, shall also remain useful after the introduction of this Decision.
'Sound absorption' of a space means the sum of the sound absorption of the various structural components of that space. The sound absorption of such a structural component is defined as the ratio of the sound power absorbed, i.e. not reflected, by the component to the sound power incident on that part.

Article 3.14 Renovation
Article 3.14 provides a regulation for partially renovating or modifying or enlarging a building. In such cases, the total sound absorption of the enclosed common circulation area adjacent to a residential function must comply with the level obtained legally. For an explanation of the level obtained legally, refer to the explanatory note to Article 1.1.
The development regulations shall apply in full to total renovation. For Article 1.12 stipulates that, unless otherwise provided, the development regulations shall apply.

Section 3.4 Noise protection between areas of different use functions, development (building of new houses)

General
This section concerns the prevention of noise pollution between separate use units. The amendments to Articles 3.16 (other plot) and 3.17 (same plot) in relation to the Building Act 2003 (Articles 3.18, respectively, 3.19) are the result from the alignment of NEN 5077 to European standards. In the revised NEN 5077, the terms 'insulation index for airborne noise' and 'insulation index for impact noise' were replaced by: airborne noise level difference, respectively, impact noise level difference.
Together with the introduction of these new concepts, the calculation methodology and the limits were also adjusted. However, these new regulations have not led to a different level of requirements. Henceforth, the requirements shall be expressed in characteristic airborne noise level difference and weighted impact noise, while

previously they were expressed in characteristic insulation index for airborne noise, respectively, insulation index for impact noise.

Article 3.15 Guidance article
The functional requirement that a building to be constructed shall offer protection against noise pollution between use functions was practically unaltered compared to the former Article 3.17.

Article 3.16 Other plot
Article 3.16 includes the regulations for noise protection between use functions on different plots.
The regulations of this article seek to limit potential noise pollution by the party causing the noise (the transmitter) in a use function located on an adjacent plot (the receiver) to a minimum.
Distinction between airborne noise and impact noise is made in this article. The first and second paragraphs are focused on airborne noise. The requirements are expressed in a characteristic airborne noise level difference. In the *first* paragraph, the reception area is a usable floor area, regardless of the user function, located on another plot. Therefore, this regulation shall not apply to a use function without a usable floor area (light industrial function or other use function). In the *second* paragraph, the reception area is an enclosed area of a residential function not located in a usable floor area, such as a shower, a toilet or a circulation area. Non-usable floor areas will therefore not have to be protected in case of other use functions (non-residential functions).
The *third* and *fourth* paragraphs are focused on impact noise. As with airborne noise, the requirements for impact noise in usable floor areas shall apply to each adjacent use function, while the impact noise requirements for a space not located in a usable floor area shall only apply to an adjacent residential function.
The table shows that Article 3.16 shall not apply to causing noise in mobile homes, light industrial functions, and constructions other than buildings.

Article 3.17 Same plot
Article 3.17 is in structure similar to Article 3.16, but covers the situation where the transmitting and reception area are on the same plot. The difference is further that all the regulations only relate to the situation where the reception area is a residential function. So there shall be no requirements between, for example, two shops in a mall, but there shall be requirements between a shop and a home located on top of that mall.
The *fifth* paragraph determines that the first to fourth paragraphs shall not apply to the sound propagation of a secondary function. This means that a secondary function such as a storage room, a barn, a home office or a garage will not need to be separated in a soundproof way from the corresponding home. In such a case, it may be assumed that any noise in the secondary function is created or can be influenced by the residents themselves.
The *sixth* paragraph states that the first to fourth paragraphs shall not apply to the sound propagation of a common area to an adjacent common area. This means that the regulations shall not apply to, for example, common hallways (such as corridors and galleries), sitting rooms, and bathroom areas located on the same plot.

The *seventh* paragraph provides an exception for the sound propagation of an enclosed area into a common circulation area, and for the sound propagation of a common circulation area into an enclosed area not located in a usable floor area. The second and fourth paragraphs shall not apply here. This means that a front door of a dwelling in a residential building will not have to meet the noise requirements in accordance with the second and fourth paragraphs. For even with a good front door it appears impossible to meet both paragraphs simultaneously. Therefore, this new regulation is a reflection of current practice for dwellings located in a residential building. Naturally, the noise protection towards a usable floor area located behind must comply with the noise requirements.

Article 3.18 Renovation
Article 3.18 provides a regulation for partially renovating or modifying or enlarging a building. In such cases, the level obtained legally shall apply. For an explanation of the level obtained legally, refer to the explanatory note to Article 1.1. The development regulations shall apply in full to total renovation. For Article 1.12 stipulates that, unless otherwise provided, the development regulations shall apply. See the explanatory note to Regulation 1.12 regarding this.

Article 3.19 Temporary construction
Articles 3.16 and 3.17 shall apply accordingly to a temporary construction. The characteristic airborne noise level difference may, however, be 10 dB lower, and the maximum permitted impact noise level may be 10 dB higher. This means that in both cases the level of requirements for temporary construction is 10 dB lower than for a regular development.

Section 3.5 Resistance to moisture

General
This section relates to the prevention of water pollution in usable floor areas, toilet areas, and bathroom areas due to moisture penetration from outside and inside. Moisture from outside means rain and groundwater. Moisture from inside is the moisture released during the use of the building. In a humid environment, substances, and organisms can be developed with a health-damaging effect, the so-called allergens.
In this section, the former Sections 3.6 (resistance to moisture from outside), and 3.7 (resistance to moisture from inside), were combined. This has not led to substantive changes. It should be noted that where previously distinction was made between usable floor areas for accommodation of people and other usable floor areas, this distinction shall not be made anymore. See also the explanation of the term ‘usable floor area’ (Article 1.1(1)).

Section 3.5.1 Developments

Article 3.20 Guidance article
The functional requirement that a building to be constructed shall have such partition structures that formation of allergens caused by moisture in usable floor areas, toilet areas, and bathroom areas will be sufficiently limited, has been composed from the functional requirements of the former Sections 3.6 and 3.7.

Article 3.21 Resistance to moisture from outside

The purpose of Article 3.21 is to prevent that water pollution caused by rain, snow or hail will occur in buildings. Therefore, this article sets requirements to the waterproofing of external and sometimes also internal partition structures of usable floor areas, toilet areas, and bathroom areas. The *first* paragraph states that external partition structures of a usable floor area, a toilet area, and a bathroom area shall be watertight. This means that the roof and front walls must be able to resist rain, snow, and hail, and that a floor 'based on steel' must be able to resist groundwater. Furthermore, in accordance with the *second* paragraph, the floor adjacent to a crawl space must be able to prevent penetration of moisture from that crawl space.

The table shows that not all use functions need to be waterproof. The first and second paragraphs shall not apply to an industry function, an other function, or a construction other than a building (e.g., a factory, a shed or a carport). In such a use function, water pollution can therefore occur in an adjacent construction. The *third* paragraph therefore shows that, for example, the partition wall between a shed and an adjacent construction, to which the first and second paragraphs do apply, must be waterproof. When determining the waterproofing of the partition wall, the positive effects of the roof and front walls of such a shed may be taken into account. This follows from the definition of the term 'internal partition structure'.

The *fourth* paragraph sets a limit to the volume air flow (air permeability) from a crawl space into an upstairs residential usable floor area, toilet area or bathroom area. The purpose of this requirement is to prevent the relative humidity in the areas mentioned from getting to a level that is too high because of the penetration of moist air from the crawl space.

Article 3.22 Temperature factor

The purpose of this article is to prevent that fluid accumulation due to condensation occurs caused by cold surfaces or cold bridges in buildings. Thus, a favourable environment for moulds and house dust mites will be prevented. To achieve this, the *first* paragraph sets a requirement for the 'inner surface temperature factor' (f-factor) of partition structures to which a thermal resistance applies as referred to in Article 5.3. The f-factor indicates a ratio between two variables. On the one hand, it is the difference between the temperature on the inner surface of a structural component and the outside temperature, and on the other hand, the difference between the inside and the outside temperature. In order to achieve the required f-factor, and thus to prevent a cold bridge, it may be necessary to (additionally) insulate structural components or parts thereof.

The *second* paragraph provides an exception to the first paragraph for windows, doors, and frames, and equivalent structural components such as air vents.

Article 3.23 Water absorption

When due to excessive use of water, too much moisture penetrates into the walls or floor of a bathroom or toilet area, mildew, decay or leakage can occur. This applies both in the area itself and in an adjacent area. As a result, the health of the building's users may be adversely affected in the long run. Pursuant to the *first* paragraph, the walls to a height of 1.2 m and the entire floor in a bathroom and toilet area must be water repellent. This can be achieved by applying tiles, for example. These requirements also ensure that the walls and floor can be cleaned effectively. The *second* paragraph states that the wall at the location of the bath or shower must be

waterproof over a length of at least 3 m and to a height of 2.1 m. It should be noted that this article also covers non-prescribed toilet and bathroom areas.

Article 3.24 Renovation
Article 3.24 provides a regulation for partially renovating or modifying or enlarging a building. In such cases, Articles 3.21 and 3.22 shall apply accordingly. The minimum level to be maintained, however, shall be the level obtained legally. For an explanation of the level obtained legally, refer to Article 1.1.
Article 1.12 shows that the developments paragraph shall apply in full to total renovation. For Article 1.12 stipulates that, unless otherwise provided, the development regulations shall apply.

Section 3.5.2 Existing buildings

Articles 3.25 to 3.27
Refer to the explanatory note to paragraph 3.5.1, Developments.
In addition to this, it should be noted that Article 3.26 requires virtually the same level of moisture resistance for existing buildings as for developments. The difference is that for existing buildings, no requirement has been imposed on air penetration (as was the case for developments in Article 3.21(4)) from the crawl space. Setting such a requirement would have meant that wooden floors will no longer be permitted in the existing stock.

Section 3.6 Ventilation

General
Section 3.6 Ventilation includes the regulations of the former Sections 3.10 Ventilation of a usable floor area, living area, toilet area, and bathroom area, and 3.12 Ventilation of other areas. The main change is that, henceforth, ventilation capacity shall be calculated on the basis of the number of people present in a room or an area. For an explanation of this people approach, refer to the general part of the explanation and the explanatory note to Article 1.2.
Furthermore, the level of the regulations for existing buildings has been tightened. Henceforth, it will be almost equal to the level for developments in many cases. In addition, the former approach for existing buildings was only based on the floor area. The occupancy rate class played no role. As the people approach is being implemented for existing buildings as well, it will be possible to intervene on the basis of this Decision if an area is intended for or actually used by more people than is justified on account of the ventilation capacity. This way, the actual use will be taken into account better for existing buildings as well.

Section 3.6.1 Developments

Article 3.28 Guidance article
The functional requirement that a building to be constructed shall have such a provision for ventilation that the emergence of a health-damaging indoor air quality will be sufficiently limited has been based on the functional requirements of the former Sections 3.10 and 3.12. This new functional requirement got a more general meaning when compared to the Building Act 2003.

Article 3.29 Ventilation of usable floor area, living area, toilet area, and bathroom area

Article 3.29 requires the presence of a provision for ventilation (aeration possibility) that will allow a usable floor area, a living area, a toilet area, and a bathroom area to be ventilated naturally or mechanically. In this way, it will be ensured that the necessary oxygen can be supplied and that carbon dioxide, water vapour, unpleasant odours and dust particles can be removed. Ventilation also plays a role in the discharge of any harmful substances present in indoor air due to, for example, formaldehyde emission and radon radiation.

The regulations are tailored to the advice of the Health Council on ventilation (The indoor climate, in particular a ventilation minimum, in Dutch dwellings, Health Council, 1984), which recommends a minimum ventilation per person of 25 m^3/h ($=7 \cdot 10^{-3}$ m^3/s).

For the residential function, the required amount of ventilation of a usable floor area or living area shall be determined on the basis of the floor area; for the utility functions, the required amount of ventilation shall be determined on the basis of the number of people for whom the area is intended (people approach).

In the *first* paragraph, a prescribed capacity of 0.9 dm^3/s per m^2 of floor space shall be assumed for a usable floor area of a residential function.

The *second* paragraph shall include a similar regulation as the first paragraph, but in this case for a living area of a residential function. Here, the capacity must be 0.7 dm^3/s per m^2 of floor space of that area. In order to ensure that sufficient ventilation will still be present for at least one person in the smallest possible usable floor area or the smallest possible living area of 5 m^2, as referred to in the abovementioned advice of the Health Council, a minimum ventilation capacity of $7 \cdot 10^{-3}$ m^3/s shall apply in the first and second paragraphs.

It should be noted that when applying for a permit to build, both the requirements for a usable floor area and the requirements for a living area must be complied with. This means that in case of a divided usable floor area, only complying with the ventilation requirements for the living areas located in that zone will not be sufficient.

The *third* paragraph shall only relate to utility functions. This paragraph provides a minimum regulation for ventilation in a usable floor area and a living area based on the people approach. When making the conversion to the people approach, the middle value of the occupancy rate class of the Building Act 2003 was assumed for the ventilation capacity requirement.

The intention is that the applicant of a permit shall state the number of people per building, use function, usable floor area, and living area; this must be based on the number of people for whom the usable floor area or the living area is intended.

The aim of the regulation of the *fourth* paragraph for a usable floor area or living area with a space for a stove is to ensure that odours, fumes released during normal combustion, and excessive water vapour production which can arise in these areas can be removed in a short time, and that combustion air can be supplied. It should be noted that a similar requirement for a usable floor area or living area with only a space for a water heater was deleted from the Building Act 2003.

The premise of the *fifth* paragraph is that not every area in a house will be used simultaneously. However, the total capacity of a central ventilation system shall not be less than 70 % of the sum of the prescribed ventilation capacities of all the usable floor areas connected to the central ventilation system. The total required ventilation capacity shall therefore not need to be a sum of the capacity required in the various

usable floor areas. Naturally, any usable floor area must be able to have at disposal the required capacity meant in the first, third, and fourth paragraphs at any time. It may be necessary to install a control system for the distribution of ventilation capacity across several usable floor areas.
The capacity prescribed in the *sixth* paragraph for a toilet area shall be such that contaminated air can be discharged in a short time. The capacity prescribed for a bathroom area shall be tailored to the removal of excess water vapour within such a period of time that mildew will be prevented.

Article 3.30 Thermal comfort
Practice shows that many people have a tendency to close vent holes in case of draught (too much circulation of cold air), as a result of which a situation detrimental to health can occur. In order to prevent such action, this article sets a maximum to the airspeed of fresh (cold) ventilation air in the 'occupied zone', so that no draught pollution will be experienced when using the ventilation system. The term 'occupied zone' was defined in Article 1.1(1).

Article 3.31 Controllability
The regulation on controllability of the ventilation system is intended to provide users of a building with an appropriate control ability for the ventilation system. This shall apply to both natural and mechanical ventilation systems.

Article 3.32 Ventilation of other areas
Ventilation is not just necessary for usable floor areas, living areas, toilet areas, and bathroom areas, but also for a number of other areas in a use function. Admittedly, these other areas are not intended for long-term accommodation of people, but can cause an increased risk of danger to the users' health by the nature of their use without adequate ventilation. This article regulates the presence of a provision that will allow these other areas in a use function to be ventilated naturally or mechanically.
The *first* paragraph stipulates that a ventilation system must be present in common circulation areas (galleries, corridors, stairwells, and doorways). Polluted air can accumulate in these areas, and unpleasant odours from the neighbouring houses can remain floating around.
The *second* paragraph stipulates that an area with a space for a gas meter must be ventilated to prevent that an explosive gas mixture can occur in that area because of a possible gas leak. The ventilation system can also ensure that the odours associated with the odour of gas will quickly spread through the building, and hence, a leak somewhere in the building will be quickly noted.
For an elevator shaft of a passenger elevator, it shall apply that the ventilation system must be guaranteed People stuck in an elevator often have to rely on fresh air supplied via the elevator shaft. Therefore, the *third* paragraph sets a minimum ventilation requirement to the elevator shaft. For the requirements to the elevator cage itself, so also to the ventilation in the elevator cage, refer to the Elevator Act.
The *fourth* paragraph provides a ventilation requirement for a storage area for household waste, if this area has a floor area exceeding 1.5 m^2. Ventilation is needed here to reduce the likelihood that odour pollution occurs because of storage of large amounts of waste. It should be noted that the storage area for household waste will no longer be required, but that the regulation shall apply to any storage area voluntarily

made. The storage area in this paragraph should not be confused with the collection, storage or processing area for (former household) waste in a waste disposal company. The *fifth* paragraph refers to a storage area for motor vehicles with a usable area of 50 m^2 at most. Larger storage areas are covered by the Environmental Protection Act. The *sixth* paragraph concerns the safety of tunnels or tunnel-shaped constructions. The sixth paragraph is a functional requirement that shall apply to each tunnel and each tunnel-shaped construction. Depending on the type of tunnel and the tunnel length, sufficient ventilation must always be present to be able to ensure the users' health. Emission of pollutants must be taken into account for normal circulation, during circulation peaks or when stopped because of an accident. Control of heat and smoke from fire must be taken into account as well.
For shorter tunnels, natural ventilation through the tunnel openings may sometimes be sufficient. In such cases, a side flow in the tunnel duct will be generated by driving traffic that in most cases will be sufficient for renewal of the air. Clean air will be supplied through the entrance of the road tunnel duct and contaminated air will be removed through the exit. In some cases, the air movement by wind or draught may even be sufficient. In other cases, additional ventilation provisions will be necessary to ensure adequate ventilation capacity. These provisions can be mechanical, but not necessarily.
In Chapter 12 of the Security Directive Part C (VRC), published by Directorate General for Public Works, Centre for Tunnel Safety, January 2004, it can be read for road tunnels which ventilation capacity will be sufficient in a particular case. Natural ventilation cannot be relied upon for long road tunnel ducts. The seventh paragraph therefore provides that the ventilation system in a road tunnel duct with a tunnel duct length exceeding 500 m, as referred to in the sixth paragraph, must always be mechanical.

Article 3.33 Place of opening
It must be prevented that smoke discharged by the building itself will be sucked undiluted into the building again. For this reason, Article 3.33 sets requirements in the *first* paragraph to limit concentrations of polluted air and combustion gases at an inlet opening for fresh air. This means that any flue gases and polluted air must be so diluted that, should they be sucked back inside again, no health-damaging effects can occur. NEN 1087 shows what the minimum distance must be between an outflow and inflow opening in a specific case, in order to meet the dilution factors included in Table 3.33. The *second* paragraph stipulates that both the inflow and outflow openings must be at least 2 m from the plot boundary, measured perpendicular to the external partition structure. In case of an outflow opening in, for example, the rear wall, it concerns the distance perpendicular to that rear wall; the distance of that outflow opening in the rear wall in relation to the side wall is irrelevant. The purpose of this provision is to ensure that adjacencies will not hinder the operation of the facility. Whether an adjacency will be affected by emissions from an outflow opening as referred to in this article is another matter. In some cases, the legislation on neighbourhood will result in being able to impose restrictions on the actual use of a removal that does comply with this article. The second paragraph shall not apply to an inflow or outflow opening situated in a roof.

Article 3.34 Air quality

The main regulation laid down in the *first* paragraph is that all fresh air for a usable floor area must be supplied directly from outside. The aim is that the air cannot be used in another area first. Direct supply can also occur through a duct system. In the *second* paragraph, an exception was given for the residential function and for the accommodation function. Regarding these functions, up to 50 % of the capacity referred to in Article 3.29 may be supplied through another area. This area must belong to the same use function though and cannot be a common area.

The *third* paragraph indicates that in a common circulation area of a residential function, supply and removal of ventilation air to a common circulation area must always occur directly from and to the outside. Ventilation air may therefore not be conducted through a different area. The fourth member stipulates for all use functions that in an elevator shaft of a (passenger) elevator, supply and removal of ventilation air shall occur directly to and from the outside or through the elevator machine area. For the latter, the elevator machine area must be in direct contact with the outside air (whether or not through a duct system). If the passenger elevator is a fire department elevator (for an explanation of the terms 'elevator' and 'fire department elevator', refer to Article 1.1), this regulation will limit the probability that the fire department elevator will become unusable in case of fire due to the infiltration of smoke from another area.

The *fifth* paragraph provides a similar regulation as the third and fourth paragraphs for a storage area for household waste. The supply and removal of ventilation air shall not occur through another area in the building. In storage areas for waste, the nature of their use will imply that the indoor air will be contaminated. An open connection to other areas could lead to spreading this contamination throughout the entire building.

The *sixth* paragraph stipulates that supply of fresh air must occur directly from outside, and removal of inside air from the road tunnel duct must occur directly to the outside. Directly from and to the outside means that the ventilation air must not be supplied and removed through a different area than the road tunnel duct itself. This means that direct supply and removal through the tunnel duct mouth or a duct system that runs through other areas may be used.

The *seventh* to *ninth* paragraphs relate to situations where requirements shall only be set to removal of ventilation air. Removal must occur directly to the outside; no special requirements shall be set to supply.

However, the requirement of the *seventh* paragraph does not relate to all removed indoor air from the area, but to at least 21 dm^3/s. This is generally the amount of air removed through an extraction hood. The capacity going beyond this may be removed through a different area. It should be noted that in that case it cannot be an area where all the ventilation air must be supplied directly from outside. Also refer to the explanatory note to the second paragraph.

Article 3.35 Renovation

Article 3.35 provides a regulation for partially renovating or modifying or enlarging a building. In such cases, Articles 3.29 to 3.34 shall apply accordingly. The minimum level to be maintained, however, shall be the level obtained legally. For the level obtained legally, refer to the explanatory note to Article 1.1.

The development regulations shall apply to total renovation. For Article 1.12 stipulates that, unless otherwise provided, the development regulations shall apply.

Article 3.36 Temporary construction
Article 3.36 provides that the use functions mentioned in the table regarding the ventilation system, the development regulations shall apply in full to temporary constructions. This will also allow a healthy indoor environment in temporary houses, childcare and school buildings.
This way, Article 1.14 has specified which states that, unless otherwise indicated, the regulations for existing buildings shall apply to a temporary construction.

Section 3.6.2 Existing buildings

Articles 3.37 to 3.40
Refer to the explanatory note to paragraph 3.5.1, Developments.
In addition to this, it should be noted that Article 3.38 requires virtually the same level of ventilation capacity for existing buildings as for developments. The differences in approach between developments and existing buildings included in the Building Act 2003 were largely removed as well. Apart from that, it is still allowed in existing buildings to have a classic unvented gas water-heater if ventilation regulations were met (Article 3.38(3)).

Section 3.7 Drainage facility

General
The principle of the drainage facility is that windows, shutters, and doors in a building can be opened against each other in such a way that a large air flow or circulation will occur through the area. In addition to opening the windows, shutters or doors in the front wall or roof, it can sometimes be necessary to open interior doors between individual areas as well. The benefit of draining ventilation (complementary to the regular ventilation system as included in Section 3.6) is that it always works, so also during a power outage, and that it has tangible contact with the outside air.
The regulations of this section shall only apply to the residential function, the meeting function for childcare, and the educational function for primary education.

Section 3.7.1 Developments

Article 3.41 Guidance article
The functional requirement that a building to be constructed shall have a facility for quick removal of strongly polluted indoor air, if necessary, was unaltered compared to the former text.

Article 3.42 Capacity
In a building, situations can sometimes occur in which a very large degree of ventilation (drainage) must be allowed to take place. This could include, for instance, airing the bedroom in the morning, opening the kitchen window after cooking a meal, and opening a window in the classroom for a while. Normal ventilation (see Section 3.6) is not adapted to this temporarily elevated ventilation necessity. In view of such situations, regulations were stipulated saying that sufficient movable windows, shutters, and doors must be present in the front wall or roof of a house, a classroom or a mobile home. Provided that in every living area at least one window shall be present that can actually be opened.

In the *first* paragraph, a regulation was included for usable floor areas. Each usable floor area must have a total of movable windows, doors, and shutters large enough to ensure the required drainage capacity of at least 6 dm^3 per m^2 of floor space of the relevant usable floor area.
The *second* paragraph gives a similar prescription for living areas, however, with a required drainage capacity of at least 3 dm^3 per m^2 of floor space of the relevant living area. In order to prevent that the draining ventilation in a living area can occur only through a door, every living area shall have at least one openable window. This window may also be a sliding door. In addition, a part of the draining ventilation capacity can also occur through a shutter or a door. The connection between the first and second paragraphs makes clear that when dividing a usable floor area in other areas, no living areas with no or inadequate draining ventilation shall be constructed. In a separate living area, a lower drainage capacity may suffice than in the usable floor area. This must, however, be compensated in the rest of the usable floor area (in another living area or, for example, a hallway located in such a usable floor area).
The *third* paragraph states that in a meeting function for childcare, the drainage capacity may also be achieved with the regular (often mechanical) ventilation system. In case of childcare, openable windows will not always be used due to the risk of little children falling out the window.

Article 3.43 Place of opening
Article 3.43 sets out how great the distance between the door, window or shutter serving as a drainage facility and the plot boundary at least must be. The aim is to prevent any inconvenience to adjoining plots. Moreover, it can be assumed that at that distance the hindrances located on the adjacent plot will have no large effect on the airflow through the drainage facility. Movable structural components closer to the plot boundary or the centre line of an adjoining public road, public water or public park shall not be included when determining the drainage capacity.

Article 3.44 Renovation
Article 3.44 provides a regulation for partially renovating or modifying or enlarging a building. In such cases, Articles 3.42 and 3.43 shall apply accordingly. The minimum level to be maintained, however, shall be the level obtained legally. For the term ‘level obtained legally’, refer to the explanatory note to Article 1.1.
The development regulations shall apply to total renovation. For Article 1.12 stipulates that, unless otherwise provided, the development regulations shall apply.

Article 3.45 Temporary construction
Article 3.45 states that as regards the drainage facility, the development regulations shall apply in full to temporary constructions. This amendment to the Building Act 2003 responds to the need to pay more attention to a healthy indoor environment for temporary houses, childcare and school buildings for primary education as well.

Section 3.7.2 Existing buildings

Articles 3.46 and 3.47
Refer to the explanatory note to paragraph 3.7.1, Developments.

Section 3.8 Supply of combustion air and removal of flue gas

General
This section includes regulations for combustion air supply and flue gas removal at a space for a combustion device. In this section, the former sections 3.13 (Supply of combustion air), and 3.14 (Removal of smoke), were combined.

Section 3.8.1 Developments

General
The regulations of this section shall apply to a space for a combustion device. Article 7.7a sets requirements to the use of a combustion device.

Article 3.48 Guidance article
The *first* paragraph provides the functional requirement that a building to be constructed with a space for a combustion device shall have such facilities for combustion air supply and flue gas removal that a health-damaging indoor air quality will be prevented. The point is that no incomplete combustion due to insufficient combustion air supply shall take place, and that vapours, gases, and fine particles released can be removed to the outside when using a combustion device.

Article 3.49 Presence
This article regulates the presence of facilities for combustion air supply and flue gas removal at spaces for gas, oil or fixed fuel fired combustion devices. These are facilities such as air vents, ventilation ducts, and flue gas exhaust ducts or chimneys. Low-powered cooking devices (no more than 15 kW) shall not be exempt from this requirement. For such a cooking device, the ventilation system shall provide an adequate supply and drainage. Also refer to Article 3.29(4). This article has therefore no bearing on a regular stove in the kitchen (living area with a space for a stove). Article 3.29(4) already prescribes sufficient ventilation capacity for this, in order to ensure combustion air supply and flue gas removal through the ventilation system. Apart from that, Article 7.7.a prohibits the use of a combustion device in an area where supply of combustion air or removal of smoke is insufficiently guaranteed. It should be noted that this Decision does not provide any exceptions anymore for water heaters such as a gas water heater. A gas water heater must therefore always have a specific facility for supply of combustion air and removal of flue gas.

Article 3.49a Capacity
A combustion air supply facility shall ensure sufficient supply of air. How much air is needed depends on the load of the combustion devices to be installed and the fuel to be used.
The *first* paragraph provides a functional requirement for the capacity of the combustion air supply facility and the flue gas removal facility at a space for a combustion device with a total capacity of more than 130 kW. The capacity shall in any case be such that an efficient combustion is possible within the combustion device to be installed. For such large combustion devices, the required capacity is generally specified in the device specifications. Apart from that, these capacities must also be mentioned in the documents submitted with an application for an environmental permit to build.

The *second* paragraph stipulates that the required capacity for combustion air supply at spaces for combustion devices with a total capacity of up to 130 kW must be calculated based on Table 3.49.1.
This calculation should be based on the nominal load of the combustion unit for which those spaces are intended. This nominal load must also be mentioned in the documents submitted with an application for an environmental permit to build.
The *third* paragraph concerns flue gas removal at a space for a combustion device with a nominal load of up to 130 kW. This flue gas exhaust facility must have sufficient capacity to be able to remove vapours, gases, and fine particles released during combustion. Just as with the combustion air supply facility, calculation of the capacity must be based on the nominal load of the combustion device for which the space is intended. Based on formula 3.49a, the normal volumetric flow of flue gas can then be determined; this is a measure of the minimum necessary capacity of the flue gas exhaust facility.
The 'flue gas dilution factor calculation value' to be read from Table 3.49.2 must be used here. The calculation value depends on the type of combustion equipment and

fuel. Further distinction in the calculation values was made between a flue gas

removal with a fan (mechanical removal) and without a fan (natural removal).
The *third* paragraph is limited to combustion devices without a (device) fan. The fourth paragraph indicates that the determination of the capacity of a flue gas exhaust facility for an open combustion device with fan must be based on the volumetric flow generated by the device fan.
The *fifth* paragraph sets requirements to the capacity of an exhaust facility that is intended both for indoor air removal and flue gas removal.

Article 3.50 Place of opening
Article 3.50 must determine where the supply and exhaust facilities can be installed in the outer partition structure.
It must be prevented that smoke discharged by the building itself will be sucked undiluted into the building again. For this reason, Article 3.50 sets requirements in the *first* paragraph to limit concentrations of polluted air and combustion gases at an inlet opening for combustion air. This means that any flue gases and polluted air must be so diluted that, should they be sucked back inside again, no health-damaging effects can occur. NEN 1087 shows what the minimum distance must be between an outflow and inflow opening in a specific case, in order to meet the dilution factors included in Table 3.33.
The *second* paragraph stipulates that, except in a roof, both the inflow and outflow openings must be at least 2 m from the plot boundary, measured perpendicular to the external partition structure. In case of an outflow opening in, for example, the rear wall, it concerns the distance perpendicular to that rear wall; the distance in relation to the side wall is irrelevant. The purpose of this provision is to ensure that adjacencies will not hinder the operation of the facility. Whether an adjacency will be affected by emissions from an outflow opening as referred to in this article is another matter. In some cases, the legislation on neighbourhood will result in being able to impose restrictions on the actual use of a removal that does comply with this article.

Although the first and second paragraphs of Article 3.50 are practically identical to the first and second paragraphs of Article 3.33, both articles are necessary next to each other. This ensures that both when installing a ventilation system and when installing a facility for supply of combustion air and/or removal of flue gas, the presence of the facilities mentioned in the other articles must be taken into account.
The *third* paragraph of Article 3.50 is aimed at preventing that supply of combustion air and/or removal of flue gas will be obstructed due to accumulation of, for example, leaves or snow. An inflow opening and an outlet must therefore be at least 0.3 m higher than the area, roof, floor or similar surface located beneath that opening or outlet.

Article 3.51 Thermal comfort
Practice shows that many people tend to close the opening for the combustion air supply in case of draught (too much circulation of cold air), as a result of which a situation detrimental to health can occur. To prevent such action, this article sets a maximum to the air velocity of combustion air in the 'occupied zone'. The term 'occupied zone' was defined in Article 1.1(1).

Article 3.52 Smoke permeability
The requirement imposed in Article 3.52 on smoke permeability of the flue gas exhaust facility aims to prevent that the flue duct leaks in such a way that vapours, gases or fine particles can still spread within the building during evacuation to the outside. The smoke permeability determined in accordance with NEN 2757 must not be higher than indicated in the table. The table includes a value for a high-pressure facility and a value for a low-pressure facility. In case of a high-pressure facility, requirements will be stricter because the risk of flue gases escaping is greater due to the high pressure.

Article 3.53 Flow direction
The *first* paragraph of this article is intended to prevent the supply facility from discharging air instead of supplying air.
The *second* paragraph is intended to ensure that flue gases from the combustion device will flow toward the outlet of the flue gas exhaust facility (chimney). It is necessary to prevent vapours, gases or fine particles from flowing back and still penetrating the building through the combustion device or the fire damper.
When determining the flow direction in the first and second paragraphs, buildings and similar obstacles on another plot will not have to be taken into account.

Article 3.54 Renovation
Articles 3.50 to 3.52 shall apply to partially renovating or modifying or enlarging a construction, provided that it is based on the level obtained legally. For an explanation of the term 'level obtained legally', refer to the explanatory note to Article 1.1.
The development regulations shall apply in full to total renovation. This follows from Article 1.12.

Article 3.55 Temporary construction
Articles 3.49 to 3.53 shall apply in full to a temporary construction. This is a departure from the main regulation provided in Article 1.14 that the regulations for an existing building shall apply to temporary constructions.

Section 3.8.2 Existing buildings

Articles 3.56 to 3.59
Refer to the explanatory note to paragraph 3.8.1, Developments.

Section 3.9 Limitation of the presence of harmful substances and ionising radiation

General
The purpose of this section is to prevent a health-damaging indoor environment. In this section, the former sections 3.15 Limitations on the use of harmful materials, and 3.16 Limitation to penetration of harmful substances or radiation emanating from the ground, were combined.

Section 3.9.1 Developments

Article 3.60 Guidance article
The functional requirement that a building to be constructed is such that emergence of a health-damaging indoor air quality by the presence of health-damaging substances and ionising radiation shall be limited, was formulated in such a way that requirements to the materials to be used, as well as to the separation structures facing the ground and the crawlspace, can be set based on it.

Article 3.61 Ministerial order
Under the *first* paragraph of this article, regulations can be provided by ministerial order concerning the application of materials. In the order, it can be defined, for example, that a certain concentration of the hazardous substance or radiation must not be exceeded in the indoor environment. It does not concern so much a ban on the use of certain construction materials, but it does concern the impact of those materials on the indoor environment. However, the regulations to be included in the order can eventually restrict the use of certain materials (such as asbestos, formaldehyde).
The *second* paragraph of this article provides a similar regulation aimed at restricting the penetration of pollutants or radiation emanating from the ground. This could include, for example, setting architectural requirements in the order, including regulations imposed on the partition structure facing the ground and the crawl space.

Article 3.62 Renovation
Article 3.62 provides a regulation for partially renovating or modifying or enlarging a building. Article 3.61 shall apply accordingly to such renovation activities, for which the level obtained legally may suffice. For an explanation of the term ‘level obtained legally’, refer to the explanatory note to Article 1.1.
Article 3.61 shall apply in full to total renovation. This follows from Article 1.12.

Article 3.63 Temporary construction
Article 3.61 shall apply in full to a temporary building. This is a departure from the main regulation provided in Article 1.14 that the regulations for an existing building shall apply to temporary constructions.

Section 3.9.2 Existing buildings

Articles 3.64 and 3.65
Refer to the explanatory note to paragraph 3.9.1, Developments.

Section 3.10 Protection against rats and mice

General
The aim of this section is to limit as much as possible pollution from rats and mice.

Section 3.10.1 Developments

Article 3.66 Guidance article
The functional requirement that a building to be constructed shall be such that ingress of rats and mice will be prevented was unaltered compared to the former Article 3.114.

Article 3.67 Opening
The *first* paragraph of Article 3.67 indicates that there may be no openings in the shell that are wider than 0.01 m. Exceptions are closable openings (windows, doors, and shutters) and the outlet of the ventilation exhaust facility, the outlet for a smoke removal facility, and the outlet of a de-airing and airing of the inner sewer. This means that other openings, such as a ventilation supply facility, must either be closable or must have a grid with openings no wider than 10 mm.
The *second* paragraph provides a specific provision for openings for a nest or bed ground or shelter for a protected animal species. The Flora and Fauna Act indicates which animal species are protected. A possible opening for, for example, a bird's nest or nest box that is part of the building shall not be subject to size requirements under this second paragraph.
The *third* paragraph stipulates that the first paragraph shall apply accordingly to an internal partition structure that constitutes a partition to a use function to which the first paragraph shall not apply. It follows that in the wall between, for example, a house and an indoor storage area (other use function), there may be no openings larger than 10 mm.

Article 3.68 Screen
The rat screen prescribed in the *first* paragraph, to be installed at least 60 cm into the ground, shall serve to minimise that rats or mice get access to a building from below.
The *second* paragraph refers to an inside wall (internal partition construction) that constitutes a partition between a use position to which the first paragraph shall not apply and a use function to which it shall apply. In such cases, e.g. a garage attached to the house, a rat screen must be installed under this inside wall. This requirement stipulates that vermin cannot get under the house via the garage. In the *third* paragraph, the user is offered the opportunity to omit the screen in a technical area, such as a meter room or a space for a heating device. This makes it possible, for

example, to house such a room or space in an attached garage. In that case, it will be really necessary to have a rat screen under the inside wall between that garage with a meter room or space for a heating device and the adjacent house.

Article 3.69 Renovation
Article 3.69 provides a regulation for partially renovating or modifying or enlarging a building. Article 3.68 shall apply accordingly, with the level obtained legally being the basis. For an explanation of the level obtained legally, refer to the explanatory note to Article 1.1.
Article 1.12 shows that Article 3.67 shall apply in full to renovation *and* that the entire developments paragraph shall be applicable to total renovation. For Article 1.12 stipulates that, unless otherwise provided, the development regulations shall apply.

Section 3.10.2 Existing buildings

Articles 3.70 and 3.71
Refer to the explanatory note to paragraph 3.10.1, Developments.

Section 3.11 Daylight

General
It should be noted that for use functions for which no requirements are set in this section, requirements may apply under the working conditions regulations.

Section 3.11.1 Developments

Article 3.72 Guidance article
The functional requirement that a building to be constructed shall be such that there will be sufficient daylight was unaltered compared to the former Article 3114.

Article 3.73 Daylight area
The aim of this article is to achieve that in terms of health, sufficient daylight can enter a usable floor area or living area. This article does therefore not aim to ensure any view from these areas. This aspect will be left to the market. It was indicated in NEN 2057 how the required daylight area must be determined. The equivalent daylight area means the daylight opening insofar as it is higher than 60 cm above the floor, multiplied with the reduction factors specified in that standard. Certain constraints shall be taken into account, such as eaves and overhanging balconies which can limit the entry of daylight. The requirement of the *first* paragraph relates to usable floor areas. To ensure that enough daylight can enter into each separate living area as well, the *second* paragraph includes a minimum requirement for the daylight opening of a living area.
The required daylight area can be achieved through openings in both external and internal partition structures. For example, if there is a conservatory to the outside of the use function, the entry of daylight through that conservatory may be included for an adjacent usable floor area or adjacent living area. Under the *third* paragraph, only buildings on the same plot have to be considered when determining the entry of daylight (part a). In this way, it can be determined for a use function whether it complies with the daylight requirements, independent of the surroundings. Daylight

openings in an external partition structure that are at less than 2 m from the plot boundary measured perpendicularly to the projection area of these openings shall be excluded (part b). The distance of 2 m was derived from the Civil Code. However, a standardised obstacle of at least 25° must be taken into account, independent of the surroundings (objects located outside the plot) (part c).
The *fourth* paragraph states that the daylight requirements shall not apply to buildings that play a role in national defence or the protection of the population such as shelters.
The *fifth* paragraph states that a separate sleeping area in a day-nursery shall not need to have entry of daylight. However, in an area that, besides sleeping, is meant for game activities, entry of daylight shall be prescribed.
By means of the *sixth* paragraph, the daylight requirements were tailored to the requirements as referred to in the Police Cell Complex Regulations.
As entry of daylight in, for example, examination and surgical rooms in a healthcare function is often unnecessary or even undesirable, the *seventh* paragraph states that entry of daylight shall only be necessary in a bed area in a healthcare function.
The *eighth* paragraph provides the possibility to create, for example, an auditorium or large educational room for university education without daylight openings.

Article 3.74 Renovation
Article 3.74 provides a regulation for partially renovating or modifying or enlarging a building. In such cases, Article 3.73 shall apply accordingly, with the level obtained legally being the basis. For an explanation of the level obtained legally, refer to the explanatory note to Article 1.1.

Section 3.11.2 Existing buildings

Articles 3.75 and 3.76
Refer to the explanatory note to paragraph 3.11.1, Developments.

Chapter 4 Technical building regulations in terms of usability

General

The requirements in this chapter relate to the usability of buildings. The structure of this chapter was altered considerably compared to Chapter 4 of the Building Act 2003. Some sections have been combined, some sections were deleted, and the order has changed. Furthermore, the regulations were greatly simplified. Where possible, the performance requirements are less detailed. This has a positive effect on the free manoeuvrability. Henceforth, the applicant of a building plan will have more possibilities to make their own choices when dividing a building in separate areas. The first section in this chapter relates to usability of usable floor areas and living areas. Chapter 4 (usability) focuses on the requirements for the usable floor area and the need for some basic facilities such as the presence of a toilet area and the accessibility and scope. In this chapter, requirements for living areas have been limited to the requirement that a living area must be in a usable floor area, and a requirement for the minimum dimensions of the largest living area in a house. In Chapters 2 (Safety) and 3 (Health), however, substantive requirements shall be made to living areas in order to be able to act against unsafe or unhealthy situations because of an unfortunate division of usable floor areas. The sections in Chapter 4 further relate to, sequentially, toilet area, bathroom area, scope and accessibility, outdoor storage area, outdoor area, and installation spaces. A major change is that the former Section 4.2 Accessibility area, has been combined into a new Section 4.4 Scope and accessibility, with the regulations of the former Sections 4.3 Clear passage, 4.4 Accessibility, and the relevant presence requirements of the other sections of the former Chapter 4. Although in this chapter, overall, the same topics have been regulated as before, the presence requirements in particular for an elevator shaft and an elevator machine area, and for spaces for a heating system and a water heater, have been deleted. The design requirements set to such installation spaces in terms of safety and health can be found in Chapters 2 and 3, just like before. It is needless to ensure that the elevator system safety has been regulated by the Lifts Commodities Act Decree. The requirements for bicycle storage areas in non-residential buildings (utility functions) were deleted from this chapter. However, refer to the transitional law relating to bicycle storage areas (Article 9.2(3)). Insofar as no regulations on bicycle storage areas in a new building to be constructed were included in the development plan, the requirements of Section 4.11 of the Building Act 2003 shall remain applicable until 1 January 2017. Besides, this storage area for bicycles should not be confused with the newly prescribed outdoor storage area for houses. Incidentally, it should be noted that, beside for usability, the regulations of this chapter will also be important to determine the scope of the regulations from the other chapters (requirements in terms of safety, health, and energy efficiency).

Section 4.1 Usable floor area and living area

General

The content of Section 4.1 comes from the former Sections 4.5 Usable floor area, and 4.6 Living area. In the new structure, emphasis as regards usability shall be on the requirements for the usable floor area. Henceforth, the requirements for existing buildings shall also be set on the level of the usable floor area. It is in almost all cases

the decision of the applicant for an environmental permit, the owner of the building or the user to divide further a usable floor area into living areas (or other areas). In the occasional case that requirements will still be set to a living area, this will be a safety net so to speak, in order to be able to act, if necessary, against a division that will harm the safety, health, and 'energy efficiency and environment' aimed at with this decision. It follows from the definition of living area that a living area cannot lie wholly or partly outside a usable floor area. It is therefore not allowed to designate an area as a living area in a part of the use function which was not classified as a usable floor area.

Section 4.1.1 Developments

Article 4.1 Guidance article

The functional requirement of Article 4.1(1) states that a building to be constructed must have one or more usable floor areas where the characteristic activities can take place in living areas. This means that a building intended for accommodation of people must have at least one usable floor area that will be suitable for the activities characteristic to that use function. This usable floor area can be divided in living areas and other areas by the person submitting the construction application. If there is no division into separate areas, the usable floor area as a whole shall be considered a living area. One difference with the former functional requirements of Articles 4.20 (Usable floor area) and 4.25 (Living area) is that, henceforth, it will no longer be necessary that the 'final' division in living areas is known when applying for an environmental permit. Naturally, the final division must also comply with this Decision. In addition, the size requirements arising from the working conditions regulations shall have to be taken into account in some cases.

Article 4.2 Presence

The *first* paragraph sets the requirement for the residential function that there must be a minimum floor area of 18 m^2 of non-common usable floor area. Besides these 18 m^2, there may also be common usable floor area. However, there will no longer be any specific regulations for this area. The requirement from the Building Act 2003 that there must be a total of 24 m^2 of usable floor area (common and non-common together) was deleted. In order to be able to perform the activities characteristic to a use function, it is necessary that sufficient usable area is present in a use function. For this reason, the *second* paragraph prescribes that at least 55 % of the usable area of a use function shall be usable floor area. This percentage, which also applied before, ensures both design freedom and the possibility to set architectural requirements aimed at the use function. The table shows that this requirement shall not apply to the industrial function, the other use function, and the construction other than a building. In these use functions, accommodation of people is of minor importance, or the characteristic activities for these functions do not take place in a usable floor area, but in a so-called functional area. Also refer to the general part of the explanation.

Article 4.3 Dimensions of usable floor area and living area

In this article, requirements shall be set to dimensions of usable floor areas and living areas. The *first* paragraph (surface area), the *second* paragraph (width), and the sixth paragraph (height) show that a usable floor area must comply with the level of requirements specified in Table 4.1 under limits. Only then the floor area can be

included for the percentage of usable floor area of a use function prescribed in Article 4.2(2). Insofar as a usable floor area only partly meets the requirements mentioned in the second and third paragraphs, only that part can be included as usable floor area. Apart from that, the usable floor areas of the residential function can be divided further or not within the constraints of the third *paragraph*. The third paragraph states that all living areas of a residential function must have a width of 1.8 m, so that enough room for a door beside a single bed will remain. Insofar as an area is smaller than 1.8 m, this area cannot be included as living area. In the *fourth* paragraph, a further requirement for the residential function is provided. Every residential function must have at least one usable floor area with a living area with a floor area of no less than 11 m^2 and a width of at least 3 m. In such an area, a dining table and four chairs can be placed.
The applicable height requirement follows from the sixth paragraph. In the fifth *paragraph*, a deviating requirement shall be set to a usable floor area in an accessibility area of an accommodation function. This requirement will therefore primarily play a role in a hotel or a big accommodation such as a camp farm (also refer to Section 4.4). In each usable floor area located in an accessibility area, at least one living area must be located with such dimensions that it will be sufficiently usable as a bedroom for a wheelchair user. Additional living areas in such a usable floor area shall be exempt from these special size requirements. The height regulation of the *sixth* paragraph shall apply both to a usable floor area and to a living area.

Article 4.4 Renovation
Article 4.4 provides a regulation for wholly or partially renovating or modifying or enlarging a building. Articles 4.2 and 4.3 shall apply accordingly, with the level obtained legally being the basis for the width and the floor area. In this section, the level obtained legally shall therefore also apply to total renovation of a building. This allows that rebuilding with the original dimensions will be possible within an existing development plan and connecting to the adjacent buildings. Regardless the level obtained legally, a height above the floor of at least 2.1 m may be assumed. With this relatively low height, there are no limits to making intermediate floors in high areas, for example. This height regulation allows existing buildings to be given a new destination more easily, or a dormer window to be installed for an additional bedroom in an existing house, despite a low height of the attic.

Section 4.1.2. Existing buildings

Articles 4.5 to 4.7
Refer to the explanatory notes to the Articles of paragraph 4.1.1. Developments. In addition, it should be noted that, henceforth, the requirements for existing buildings have also been set to the level of usable floor area as much as possible. Because of this, the freedom to divide an existing building to your own preferences has been extended, just as for developments.

Section 4.2 Toilet area

Section 4.2.1. Developments.

General

In the new very simplified structure of the Toilet area section, the system of occupancy rate classes was replaced by a people approach. For an explanation of the people approach, refer to the general part of the explanation. The regulations of the former Article 4.36 (Integral accessibility to a toilet area) will henceforth be part of Section 4.4 Scope and accessibility. Requirements will no longer be imposed on the ability for a toilet area to be closed (door). It goes without saying that a toilet area must have a door. This door is necessary, among others, to have the ventilation facility of the toilet area prescribed in this Decision function properly.

Article 4.8 Guidance article

The functional requirement of Article 4.8 that a building to be constructed shall have sufficient toilet areas was unaltered compared to the former text.

Article 4.9 Presence

Compared to the Building Act 2003, Article 4.9 results in a mitigation of the requirement for the number of toilet areas. For example, it will no longer be required that a house with a usable area of more than 125 m^2 shall have a second toilet area. It should be noted that in some cases more toilet areas can be necessary under the working conditions regulations than results from this article. The *first* paragraph provides a basic regulation regarding the number of toilets required per use function. This Decision will no longer include a regulation that a toilet area can be a common area. The premise is that any area and facility, so including a toilet area, can be a common area, unless this is prohibited by the relevant regulation. Also refer to the explanatory note to Article 1.4. The second *paragraph* indicates the number of houses that may depend on a toilet area. Although it occurs increasingly less in practice, this regulation provides the possibility to share a toilet area with a number of other houses. This paragraph shall also apply to a toilet area which, besides the residential function, also depends on another use function, such as an office function. In this case, however, this other use function must be a secondary function to the residential function. This is the case, for example, with an office for someone who works from home. The user of the secondary function must also be user (resident) of the main function.

The *third* paragraph states that no more than thirty people may depend on a single toilet. In a few cases, this people approach will lead to a reduction to the requirement compared to the former occupancy rate class. The number of people to be included shall be the number of people indicated in the construction application (also refer to Article 1.2). If no more than 15 persons depend on a toilet area, the *fourth* paragraph states that only one toilet area shall suffice, contrary to the first paragraph. Again, in some cases it applies that more toilet areas may be necessary on account of the working conditions regulations.

The *fifth* paragraph provides a regulation for the number of lodgings that may depend on a joint or common toilet area.

Article 4.10 Accessibility
Article 4.10 states that a toilet area of a meeting function other than a meeting function for childcare shall not directly be accessible from a living area. This applies to all, so including non-prescribed toilet areas. In other words, it is not allowed in a meeting function to be able to see directly into the toilet area from the venue, restaurant or cafe area. There must always be a different area (vestibule or hallway) between such a living area and the toilet area. If the usable floor area is not divided into separate areas, the entire area shall be considered a living area in an assessment of a construction plan. Except for the requirements for integrally accessible toilet areas (refer to Section 4.4 Scope and accessibility), the other requirements imposed on accessibility of toilet areas in the Building Act 2003 were deleted.

Article 4.11 Dimensions
This article only relates to prescribed toilet areas. An extra toilet area, such as a second toilet room in a house under a staircase or sloping roof, shall not have to meet these size requirements. The *first* paragraph sets a basic requirement of at least 0.9 m by 1.2 m of floor space. Henceforth, this requirement shall also apply to mobile homes. The *second* paragraph indicates the floor dimensions of a fully accessible toilet area (at least 1.65 m by 2.2 m). This paragraph says 'contrary to the first paragraph', because in situations where only one toilet area is enough, only one integrally accessible toilet area can suffice. Whether a fully accessible toilet area is needed, follows from Article 4.25. The height regulation in the *third* paragraph shall apply above the entire floor space as referred to in the first and second paragraphs. It should be noted that this height above the floor indicated in the table shall be 2.3 m everywhere, excluding mobile homes and accommodation functions not situated in an accommodation building (e.g., a vacation home), where 2.1 m will suffice. Any additional floor space shall not have to meet these height requirements.
The *fourth* paragraph makes an exception to the first paragraph for a toilet area in a cell. Therefore, a toilet area in a cell shall be exempt from the size requirements of the first paragraph. However, the toilet area must be functional.

Article 4.12 Renovation
Articles 4.9 to 4.11 shall apply accordingly to wholly or partially renovating or modifying or enlarging a construction, with the level obtained legally being the basis for the width and the floor area. In this section, the level obtained legally and the height of 2 m shall therefore also apply to total renovation of a building. This allows that rebuilding with the original dimensions will be possible within an existing development plan and connecting to the adjacent buildings. This means that the development requirements of this section shall not apply to renovation. When renovating, however, the requirements for existing buildings in this section must at least be complied with on account of the Housing Act.

Section 4.2.2. Existing buildings

Articles 4.13 to 4.16
Refer to the explanatory notes to the articles of paragraph 4.2.1. Developments.

Section 4.3 Bathroom area, developments

General
The Bathroom area section has been greatly simplified. This is mainly due to the reduction in the number of variations in presence requirements and size requirements for bathroom areas. Also, the accessibility requirements were largely deleted. Henceforth, the regulations regarding the presence and location of a fully accessible bathroom area have been included in Section 4.4 Scope and accessibility. A requirement on the ability to close (the door of) a bathroom area will no longer be included. It goes without saying that a bathroom area must have a door. This is necessary, among others, for the water balance and to have the bathroom ventilation system function properly. Henceforth, requirements for existing bathroom areas in this section will no longer be stipulated. It should be noted, however, that regulations from other sections shall apply to existing bathroom areas. Examples include requirements for the ventilation system and for the 'resistance to indoor moisture'.

Article 4.17 Guidance article
The functional requirement of Article 4.17 that a building to be constructed shall have sufficient bathroom areas was unaltered compared to the former text. However, the number of aimed use functions in the table is limited.

Article 4.18 Presence
Henceforth, only at least one bathroom area shall be prescribed for the residential function, the cell function, the healthcare function with bed area, and the accommodation function. Depending on the specific use function, the submitting party shall have to determine themselves how many bathrooms will be necessary.

Article 4.19 Dimensions
This article only relates to prescribed bathroom areas. Additional bathroom areas or bathroom areas in use functions for which no bathroom area was prescribed shall not have to meet these size requirements. It should be noted that for certain use functions, it will be deduced how many fully accessible bathroom areas are obligatory on the basis of one mandatory bathroom area increased by the number of bathroom areas to be realised voluntarily (refer to Section 4.4 Scope and accessibility for this). The *first* paragraph sets a basic requirement of at least 1.6 m^2 of floor area by a width of at least 0.8 m. This requirement shall apply to a bathroom of a residential function and of a cell function. For an exception to the cell function, also refer to the sixth paragraph. The *second* paragraph provides a minimum requirement for a bathroom area combined with a toilet area. This requirement shall be at least 2.2 m^2 of floor area by a width of at least 0.9 m. This requirement shall also apply only to the residential function and the cell function. Also refer to the sixth paragraph. The *third* paragraph sets a basic requirement to the floor area of a fully accessible bathroom with a width of at least 1.6 m and a length of at least 1.8 m. The difference to the requirement in the first paragraph is that the floor area is much larger and that a minimum requirement has been set to both the width and the length of the bathroom. The fourth paragraph is similar in structure to the third paragraph and provides a minimum requirement for a bathroom that was combined with a toilet area. The height regulation in the *fifth* paragraph shall apply above the entire floor space as referred to in the first to fourth paragraphs. It should be noted that this height shall be

2.3 m everywhere, excluding mobile homes and accommodation functions not situated in an accommodation building (e.g., a vacation home), where 2.1 m will suffice. Any additional floor space shall not have to meet the height requirements included in the table. The *sixth* paragraph provides an exception for the cell function for a bathroom area (or sanitary unit) that is located in the cell. Therefore, a bathroom area in a cell shall be exempt from the size requirements of the first and second paragraphs. However, the bathroom must be functional.

Article 4.20 Renovation
Article 4.20 provides a regulation for partially renovating or modifying or enlarging a building. Articles 4.18 and 4.19 shall apply accordingly, with the level obtained legally being the basis for the width and the floor area, and the height being 2 m. For an explanation of the term 'level obtained legally', refer to the explanatory note to Article 1.1.
The complete developments paragraph shall apply to total renovation. For Article 1.12 stipulates that, unless otherwise provided, the development regulations shall apply.

Section 4.4 Scope and accessibility, developments.

General
In this section, the relevant regulations of the former Sections 4.2 Accessibility area, 4.3 Clear passage, and 4.4 Accessibility, have been included. The relevant presence regulations from the former Sections 4.5 (Residential area), 4.7 (toilet area), and 4.8 (Bathroom area) were also included. The substantive changes in Section 4.4 are limited. The new structure allows a better insight into which requirements shall apply to a specific use function or situation in terms of scope and accessibility. Besides the regulations for accessibility for wheelchair users and tall people, this section includes the requirements in terms of 'adaptable construction' and the regulations for scope and accessibility in general. As before, the 'Accessibility Handbook, 3rd edition 1998' by the Dutch Federation Council of Disabled People (now the 'National Disability Council of the Netherlands', or CG Council [*Chronisch zieken en Gehandicapten Raad Nederland*]) was taken into account. Requirements for an elevator space will no longer be set. In practice, this regulation, which was intended to reserve space for installing an elevator later in the scope of adaptable construction, proved not to work. Installing an elevator later outside a residential building generally is much more efficient.

Article 4.21 Guidance article
The functional requirement that a building to be constructed shall have sufficiently reachable and accessible areas indicates that emphasis is no longer on wheelchair users. A building must have sufficiently reachable and accessible areas for all types of users, including wheelchair users. For completeness' sake, it should be noted that in the scope of escape capacity (refer to Section 2.12), higher requirements can apply in some cases than on account of this section.

Article 4.22 Clear passage
The *first* paragraph sets requirements for clear width (at least 0.85 m) and clear height (2.3 m or 2.1 m, refer to Table 4.21) of a number of especially mentioned

passages. Previously, reference was made to area entrances with a clear passage with a width and height. Henceforth, reference shall be made to a passage with a clear width and a clear height. The meaning is unaltered though. One difference, however, is that the requirements shall henceforth only apply to the prescribed toilet area, bathroom areas, storage area, and outdoor area. So if such areas are voluntarily installed, these requirements shall not apply. Requirements shall no longer be set to the doorway of a storage area for household waste. The first paragraph only relates to passages into the areas mentioned. A passage on a route that is only intended to leave the area will therefore not have to comply with this first paragraph. Regulations were included in Section 2.12 for such passages. Clear height is the height in accordance with NEN 2580 (refer to Article 1.1). Clear width must be determined in a similar way. Simply put, it concerns the horizontal (clear width) and vertical (clear height) doorway opening measured in case the door is open. The above shall not only apply to the areas mentioned in the paragraph, but also to a passage on a circulation route from the adjacent plot to one of those areas. The second sentence is necessary to ensure that the relevant area can be reached via a sufficiently spacious route, but also to prevent that requirements will be unintentionally set to a door that does not play any role for accessibility of the area, such as the door of a meter cupboard. The first paragraph, under e, oversees a passage between a use function and an outside storage area as defined in Article 4.31 (a passage between, for example, an indoor outside storage area and a house or a residential building). The fact that this regulation was not aimed at as an 'other use function' (refer to Table 4.21), it follows that this regulation shall not apply to a detached outside storage.
As before, the *second* paragraph provides a deviating method for determining the height of a passage of an elevator shaft. It does not concern clear height determined in accordance with NEN 2580, but a height measured between the components of the building structure. For an explanation of the term 'building structure', refer to the explanatory note to Article 1.1 paragraph(1). For the areas mentioned in the first paragraph, a clear passage must actually be realised with the height indicated in the table. For the elevator shaft passage for reaching an elevator car mentioned in the second paragraph, creating the architectural conditions may suffice though. This means that it is allowed to install an elevator with a lower entrance height than 2.3 m. Naturally, the elevator must comply with the Lift Directive No 95/16/EC of 29 June 1995 (OJ L 213) and the ensuing Lifts Commodities Act Decree. It should always remain possible, without making changes to the architectural support structure, to install an elevator with an entrance height of 2.3 m at any time. For completeness' sake, it should be noted that the regulation for clear width shall apply in full to an elevator entrance. An elevator in this article is a passenger elevator (refer to the term definition for elevator in Article 1.1(1)).

Article 4.23 Clear passage of circulation routes

The purpose of Article 4.23 is to ensure that areas through which circulation routes run, have such dimensions that these routes can in principle be passed by everyone, so also by wheelchair users. The also important aspect of bridging height differences for wheelchair users has been regulated in Articles 4.26 and 4.27. The *first* paragraph sets a requirement for clear width and height of an area through which a circulation route runs. The *second* paragraph is a specification of the first paragraph for a common circulation area, such as a gallery in a residential building and a corridor in a detention centre. In these cases, clear width shall not be at least 0.85 m but not less

than 1.2 m. The width of 0.85 m mentioned in the first paragraph which also applies to a passage (refer to Article 4.22), will basically be enough for a wheelchair user to be able to move independently (hand-operated). The extra 0.35 m will give a wheelchair user the ability to pass other people. Both for the first and the second paragraph, an exception shall be made if the circulation route runs across a staircase. Only the width regulations for the stairs (0.8 metres) shall apply to such a part. From this regulation follows that a width of 0.85 m will suffice for each passage. For a passage is not a part of the area itself. The purpose of the requirements of the *third* and *fourth* paragraphs is that a wheelchair can turn 360° behind the entrance door of a residential building or in front of a passenger elevator in that building. The prescribed area is intended to offer wheelchair users the possibility to open the door or to operate, enter, and leave the elevator independently. As a wheelchair user cannot reverse for a long period of time, it should be possible to be able to turn or return to the initial situation via a detour. The *fifth* paragraph creates criteria for this. The regulation is especially important for those cases that a wheelchair does not succeed accessing the house located within the residential building and will have to return with nothing achieved. Insofar as the route mentioned in the first paragraph runs through an accessibility area, the area must have a width of at least 1.2 m under the sixth paragraph. This extra width is intended to make passing easier. As already indicated in the second paragraph, a width of 0.85 m for each passage will suffice. The sixth paragraph makes no exception for a staircase, because there can be no stairs in an accessibility area.

Article 4.24 Presence of accessibility areas

This article describes when a building must have an accessibility area. An accessibility area is an independently usable and accessible part of a building for people with a disability. For the term 'accessibility area', refer to the explanatory note to Article 1.1(1). Article 4.24 should be read in conjunction with Article 4.25, which discusses the presence of fully accessible sanitary areas. The *first* paragraph requires the presence of an accessibility area in high or large residential buildings. These are residential buildings with a floor of a usable floor area at a height exceeding 12.5 m, and residential buildings with a total usable area of more than 3 500 m^2 that is higher than 1.5 m above the measurement level. On account of this first paragraph, a residential building with four or more floors must always have a passenger elevator (as defined in Article 1.1(1)). For each accessibility area, it is necessary that height differences greater than 2 cm will be bridged by a passenger elevator or ramp (also refer to Article 4.27). The *second* paragraph states that a residential function for care that is larger than 500 m^2 (usable area) must have at least one usable floor area in an accessibility area. It follows that there must always be an area that is accessible to people with disabilities (accessibility area). One difference is that previously it was assumed that a residential function with a usable area of more than 500 m^2 would always be intended for less self-reliant people, which does not have to be true. Henceforth, reference shall be made to a residential function for care. In this way, regulations will be specifically aimed at the target group and unintended side effects will be removed. The *third* paragraph indicates when a utility building must have an accessibility area and how big it should be. If the total usable area of all use functions located in a building, to which this paragraph applies, amounts to more than 400 m^2, there should be an accessibility area. Next, it will be calculated, using the percentage indicated in Table 4.21, which proportion of the usable floor area's

floor space must be within the accessibility area. So if a shopping centre has over 400 m^2 of retail functions, every individual retail function must have an accessibility area. In other words, each store must be 40 % wheelchair accessible. For the educational function, 100 % of the total floor space for the usable floor area must be within an accessibility area. By having to designate an educational function fully as an accessibility area, it will be prevented that a portion of the school would not be accessible to wheelchair users. Henceforth, when determining whether the 400 m^2 limit was exceeded, not only use functions of the same type will be considered, but all functions to which the regulation shall apply. For example, a canteen (meeting function) located in an office building must also be included to assess whether an accessibility area should be present. Therefore, a commitment to realise such an area will be more likely. The *fourth* paragraph indicates a specific regulation for the meeting function for the use of alcohol (for example, a bar). A bar with a usable area of more than 150 m^2 should always have an accessibility area. For a smaller bar, the third paragraph must be examined to determine whether, in conjunction with other functions in the building, an accessibility area will be needed. On account of Article 4.25(2), bars must have an integrally accessible toilet area in an accessibility area.

Article 4.25 Integrally accessible toilet and bathroom area

This article describes when a use function must have an integrally accessible toilet or bathroom area. Each fully accessible toilet and/or bathroom area must be in an accessibility area. This follows from the term definitions in Article 1.1:
a fully accessible toilet area is a toilet area in an accessibility area. A similar definition applies to the fully accessible bathroom.
The *first* paragraph states that a use function with a prescribed accessibility area must have at least one integrally accessible toilet area (disabled toilet) or more.
A disabled toilet can be included when calculating the number of toilet areas as referred to in Article 4.9.
In the *second* paragraph, it was indicated for the residential function care, the cell function, the healthcare function, the office function, and the educational function that at least one in ten (refer to table) prescribed toilet areas (toilet areas as referred to in Article 4.9) in a prescribed accessibility area must be a disabled toilet and must therefore lie in the accessibility area.
One exception is the educational function, for which at least one in 35 (refer to table) prescribed toilet areas must be a disabled toilet. The result of this calculation shall be rounded up. This means that there must always be at least one disabled toilet area; and for example in an office with 12 prescribed regular toilet areas, two of these must be disabled toilets.
Under the *third* paragraph, a healthcare function with a bed area must have sufficient wheelchair accessible bathroom areas. For every 500 m^2 of floor space for bed area, at least one fully accessible bathroom shall be needed. The result of this calculation shall be rounded up. This means that in a bed area of 800 m^2, at least two fully accessible bathroom areas shall be required.
The *fourth* paragraph states that in every building with a prescribed accessibility area where a bathroom is installed, at least one of the bathroom areas must be a fully accessible bathroom area. This bathroom area must be in the accessibility area. If more than one bathroom area is installed, at least one in twenty bathroom areas must be a fully accessible bathroom area.

Combining a fully accessible bathroom area with a fully accessible toilet area shall be allowed under the *fifth* paragraph. For their size requirements, refer to Article 4.19(4).

Article 4.26 Accessibility of a reachable area

The *first* paragraph provides that an area in an accessibility area must be directly reachable from the adjacent plot or along a circulation route that only runs through an accessibility area. In this way, such an area will be independently accessible to wheelchair users from the adjacent plot.

The *second* paragraph prescribes for the residential function that a circulation route as referred to in the first paragraph may not run through non-common areas of another use function. This is because areas of another house are normally not freely accessible to residents of other houses.

The *third* paragraph stipulates that in an apartment building with an accessibility area, it should be possible to reach every home independently by wheelchair users. This means that the common circulation area located in front of the home must be designated as an accessibility area.

Article 4.27 Height differences

Henceforth, houses may also be accessed via a ramp. Previously, this possibility only applied to utility buildings. Advantage of this extension is that a house can be somewhat higher than the adjacent plot, thus preventing water pollution in the home. Moreover, design flexibility will increase as a result. The height difference of 2 cm mentioned in this article must be measured from the finished floor. This means that if the application for a permit to build indicates a flooring, parquet or other floor covering (possibly to be installed later by the user), the thickness of this floor covering can be included. So the height difference from the structural floor can be slightly greater than 2 cm in such cases.

The *first* paragraph ensures that a wheelchair user can independently reach the adjacent plot from any point in an accessibility area. This shall apply to all use functions with an accessibility area. In order to comply with the first paragraph, it is necessary that there will be at least one route that does not have any height differences (thresholds) of more than 2 cm. Height differences that are greater must be bridged by an elevator or a ramp. In addition, the total height difference for that one route between the adjacent plot and the entrance of the accessibility area (the building entrance) cannot be greater than 1 m, regardless whether an elevator or a ramp is used. Additional routes from the accessibility area shall be exempt from these regulations.

This means that there can be an alternative route which runs across a staircase.

The *second* paragraph provides a similar regulation as the first paragraph, but in this case for residential buildings without an accessibility area. For such residential buildings it shall also apply that everyone must in principle be able to go inside without any help from others. Again, a height difference of more than 2 cm between the floor, located behind the front door of a residential building, of the common circulation area and the adjacent plot shall not be permitted here either, unless this height difference was bridged by a ramp. The total height difference must not exceed 1 m. A difference between the first and second paragraphs is that in the first paragraph the entire route to the house has been regulated, while the second paragraph only regulates the access to the first common circulation area. In the latter

case, the building can be entered, and it is possible to wait for help in the building, if necessary, to be able to arrive at the house.
The *third* paragraph relates to all residential areas and means that for at least one entrance of the house (usually the front door), in the transition from inside the house to outside the house, any height difference exceeding 2 cm shall not be allowed. A greater height difference must be bridged by a ramp. The total height difference for such an entrance must also not exceed 1 m.
Only the third paragraph shall apply to family housings.
The *fourth* paragraph provides that between a common outdoor area as referred to in Article 4.35(2) and a home designated to it, there can be no height difference exceeding 2 cm without the height difference being bridged by an elevator or ramp. This regulation is aimed at a common outdoor area, because individual residents of a residential building do not have or have only limited possibilities to take provisions afterwards in order to bridge greater height differences.
The purpose of the *fifth* paragraph is to reserve space in residential buildings to be able to install a wheelchair accessible elevator afterwards. This space can be located inside or outside the use function. The installation space must be such that the elevator can be installed without ensuing conflicts with regard to the development regulations. The installation space cannot be located in such a way, for example, that by installing the elevator, there will be too little or no daylight in a living area. The actual installation of an elevator shall only be required in the situations mentioned in Article 4.24.

Article 4.28 Elevator car dimensions
This article solely focuses on passenger elevators (refer to the term ‘elevator’ in Article 1.1) in buildings with an accessibility area. Elevators in buildings without an accessibility area shall therefore not have to be compliant with these requirements.
The *first* paragraph provides a general regulation for the surface area of any elevator car in an accessibility area. Dimensions of at least 1.05 m by 1.35 m shall ensure wheelchair accessibility of passenger elevators.
The *second* paragraph provides an additional requirement for residential buildings with an accessibility area *and* more than six homes. Such a residential building shall have at least one elevator with a floor area of 1.05 by 2.05 m (stretcher elevator) or larger. Any additional elevators shall only have to comply with the surface area requirement of the first paragraph.
Henceforth, it will be possible to have only a smaller elevator in case of an elevator for up to six homes. In case of several elevators, one stretcher elevator shall suffice.
The *third* paragraph sets requirements to the walking distance to an elevator. This should never be more than 90 m. If there is more than one elevator, at least one passenger elevator must be located within that distance, measured from each home. If there should also be a stretcher elevator, at least one stretcher elevator must be located within 90 m, measured from each home. The route across which the walking distance will be measured shall only be in an accessibility area.

Article 4.29 Renovation
Article 4.29 provides a regulation for partially renovating or modifying or enlarging a building. In such cases, Articles 4.22 to 4.28 shall apply accordingly, with the level obtained legally being the basis. For an explanation of the term ‘level obtained legally’, refer to the explanatory note to Article 1.1. The development regulations

shall apply in full to total renovation. This is because Article 1.12 stipulates that, unless otherwise provided, the development regulations shall apply. Also refer to the general part of the explanation and the explanatory note to Article 1.12.

Section 4.5 Outside storage area, developments

General
An outdoor storage area in a home is especially important for easy and secure bicycle storage and ultimately to encourage bicycle use. Furthermore, in many cases an outside storage area might be difficult to fit in afterwards. When introducing this Decision, it was therefore decided to prescribe again a storage area for developments (new buildings).

Article 4.30 Guidance article
Article 4.30 includes in the first paragraph the functional requirement that a storage area must be appropriate to be able to store bicycles protected from bad weather.

Article 4.31 Presence, accessibility and dimensions
Article 4.31 sets out requirements for the outside storage area's dimensions. In the past when outdoor storage areas were also required, the surface area measure was related to the usable area of the house, which caused that an unnecessarily large storage area was required for large houses. Now, a minimal surface area measure per house has been chosen for, enough to store at least some bikes and some other objects.
The *first* paragraph states that a residential function must have a non-common lockable storage area as a secondary function, with a floor area of at least 5 m^2 by a width of at least 1.8 m and a height above the floor of at least 2.3 m. Secondary function means that the storage area is not part of the residential function, but an 'other use function' serving the house. This is important because less stringent requirements shall be set to storage areas as an other use function than to storage areas designated as a residential function.
Storage areas may be indoor, but not necessarily. Non-common and lockable indicates that each house must have its own separate storage area with a lockable door.
The dimensions included in this paragraph will guarantee an effective space for one or more bicycles, despite the fact that the door can be opened inward. It is possible to choose between a long narrow (more objects) or a compact wide (more bikes) storage space. It should be noted that the height requirement shall only apply to the prescribed minimum size. In other words, the height requirement shall not have to be met for a large storage area or shed.
The *second* paragraph provides an exception to the rule that every home should have its own storage area. A storage area may be common if the usable floor area's floor space of the residential function is not more than 40 m^2 and if there is a common storage area with a floor area of 1.5 m^2 per home depending on such a storage area. In case of student flats, for example, a common bicycle storage may suffice. It should be noted that this Decision shall not impose any demands on the area's inventory. So there may also be used multilayer bicycle racks, making the 1.5 m^2 even more than sufficient.

The *third* paragraph requires that a storage area can be reached from a public road whether or not through the own garden or a storage hallway or a common circulation area, without having to pass through a house.
A storage area in the attic or, for example, on the second floor of a porch flat without an elevator shall not be able to meet this requirement. However, the requirement shall have been met if the storage area is reachable, for example, through a staircase that is not too long and that has a bike chute.

Article 4.32 Rainproof
This article sets a requirement to rain resistance of a prescribed storage area. The external partition structure shall be rainproof in such a way that items stored in storage areas will be protected from bad weather. In other words, walls, roofs, and doors must be reliable. This shall be tested to NEN 2778.
A result from this requirement is that storage areas can be made burglar-proof with relatively simple measures. However, this is not compulsory.

Article 4.33 Renovation
Article 4.33 provides a regulation for partially renovating or modifying or enlarging a building. Articles 4.31 and 4.32 shall apply accordingly, with the level obtained legally being the basis. For an explanation of the term 'level obtained legally', refer to the explanatory note to Article 1.1. Articles 4.31 and 4.32 shall apply in full to total renovation. This follows from Article 1.12. This means that when a house is demolished and replaced with a new building, such a house must have at least one storage area.

Section 4.6 Outdoor area, developments

General
An outdoor area of a house provides the basic human need for contact with the environment.
It was therefore decided to make the outdoor area, which was not prescribed anymore in the Building Act 2003, mandatory again.
As common parlance indicates, an outdoor area is a space where light and fresh air can freely flow in and out. Such a space shall therefore be outside the thermal envelope. Examples of outdoor spaces are a garden, a balcony, a loggia or a roof terrace.

Article 4.34 Guidance article
Article 4.34 includes the functional requirement that a building (house or residential building) shall have an outdoor area that can be reached directly from that building.

Article 4.35 Presence, dimensions, and accessibility
Article 4.35 indicates in the *first* paragraph that each house must have a non-common outdoor area directly reachable from the house, with a floor area of not less than 4 m^2 and a width of at least 1.5 m. A surplus of outdoor space may be common though, but also in this case at least 4 m^2 of non-common outdoor space with a width of at least 1.5 m must be available for each residence. A non-common outdoor area cannot simultaneously be a common circulation area. A gallery should therefore not be included in the prescribed area of an outdoor area. An outdoor area may be adjacent to a gallery though.

It is not necessary to physically separate outdoor areas from each other (with fences, and the like).
The *second* paragraph provides an exception for houses with a usable floor area's floor space of less than 40 m^2. In such houses, the outdoor area may be common and the area of a common outdoor area shall only have to amount to 1 m^2 per home. The joint outdoor area, however, must be at least 4 m^2 by a width of at least 1.3 m, even if fewer than four homes depend on the outdoor area. For example, if six homes depend on that area, the total floor area shall have to amount to at least 6 m^2. An outdoor area must be reachable directly from the home or through common areas. So it may be accessible either through one or more common circulation areas or through common living areas. Due to this second paragraph, small homes such as student flats, for example, can be built with a balcony adjacent to the common kitchen or living room. It should be noted that a balcony must always be reachable without any height differences greater than 0.02 m (refer to Article 4.27), and that access to a balcony shall have sufficient clear height and width (refer to Article 4.22), so accessibility of the outdoor area from and to the home shall be guaranteed for wheelchair users. Apart from that, Section 2.3 sets requirements to a balcony fence or any other partition at the edge of a floor, in order to prevent people from falling off balconies or any other architectural floors.

Article 4.36 Renovation
Article 4.36 provides a regulation for partially renovating or modifying or enlarging a building. Article 4.35 shall apply accordingly, with the level obtained legally being the basis. For an explanation of the term 'level obtained legally', refer to the explanatory note to Article 1.1. Article 4.35 shall apply in full to total renovation. This follows from Article 1.12. This means that when a house is demolished and replaced with a new building, such a house must have an outdoor area.

Section 4.7 Installation spaces

General
Section 4.7 Installation spaces, is based on the former Sections 4.15 Installation space for a sink and installation space for a stove, 4.16 Installation space for a heating device, and 4.17 Installation space for a water heater. The regulations were greatly simplified though.
Besides the requirements that this section sets to the presence of installation spaces, regulations shall apply in terms of safety and health (Chapters 2 and 3).

Section 4.7.1. Developments.

Article 4.37 Guidance article
The functional requirement states that a building to be constructed must have installation spaces for a sink, a stove, a heater, and a water heater.

Article 4.38 Presence
The *first* paragraph determines for the residential function that both a space for a sink and a space for a stove must be present in at least one usable floor area. As this is not impossible, these spaces may also be located in a common area (refer to Article 1.4). Henceforth, requirements shall no longer be imposed on the specific location of an installation space for a sink and a stove within the usable floor area (in relation to the

so-called mat). Furthermore, both spaces can be located in different areas (whether or not living areas) as long as they are within the same usable floor area. This emphasises the free manoeuvrability of the usable floor area.
The *second* paragraph includes the presence requirement for an installation space for a heating device such as a hearth, a boiler or other heating device. It concerns therefore a device in which heat is generated or converted, and so not, for example, the radiators of a heating system. Installation space dimensions must be adjusted to the heating device to be installed. It goes without saying that the space necessary for maintenance activities must be taken into account when considering these dimensions. A device may be used jointly with other use functions. A heating device may also be combined with a water heater (boiler). The requirements of the second paragraph shall not apply where the use function has been connected to a public facility for heating (e.g., district heating). For the third paragraph relating to an installation space for a water heater, the same considerations shall apply as for a space for a heating device.
The *fourth* paragraph determines for the meeting function for the use of alcohol that an installation space for a sink must be located in at least one usable floor area. The purpose of this is that dishes can be washed hygienically in hotels, restaurants, and cafés.

Article 4.39 Dimensions
The *first* paragraph provides a floor area of at least 1.4 x 0.6 m as a measure for a common or non-common installation space for a sink as referred to in Article 4.38(1). Therefore, no specific size requirements shall apply to a space for a kitchen sink as referred to in Article 4.38(4). The installation space must, however, be such that it will be functional, naturally.
The *second* paragraph provides a floor area of at least 0.6 x 0.6 m as a measure for a common or non-common installation space for a stove as referred to in Article 4.38(1).

Article 4.40 Renovation
Articles 4.38 and 4.39 shall apply accordingly to partially renovating or modifying or enlarging a building, with the level obtained legally being the basis. For an explanation of the term ‘level obtained legally’, refer to the explanatory note to Article 1.1.
The development regulations shall apply in full to total renovation. For Article 1.12 stipulates that, unless otherwise provided, the development regulations shall apply. Also refer to the general part of the explanation and the explanatory note to Article 1.12.

Section 4.7.2. Existing buildings

Articles 4.41 to 4.43
Refer to the explanatory notes to the articles of paragraph 4.8.1 Developments.
In addition to these, it should be noted that an installation space for a sink and an installation space for a stove shall no longer have to be located in the same area, both in existing buildings and in new buildings. The only requirement for existing buildings shall be that installation places must be located in enclosed areas, so these can be different areas.

Chapter 5 Technical building regulations in terms of energy efficiency and environment, developments

General

In Chapter 5, the former Chapters 5, Energy efficiency, and 6, Environment, were merged. Although there is as yet no independent specification for the environmental aspect, this combination does justice to the relationship between energy efficiency, environment, and sustainability.

The chapter Technical building regulations in terms of energy efficiency and environment plays an important role in achieving the relevant objectives concerning climate and energy policy. After all, no more energy inefficient buildings may be added to stock. Also, it should be noted that the regulations of this chapter (and previously, the former Chapter 5) largely meet the requirements of the Energy Performance of Buildings Directive (Directive 2002/91/EC of the European Parliament and the Council of 16 December 2002, on the energy performance of buildings) and the reorganisation of that Directive (2010/31/EU).

Given the connection between the three sections of the former Chapter 5, the approach was that these regulations will be included jointly in a Section 5.1. The requirement for the energy performance coefficient (EPC) that was included in the former Section 5.3 will henceforth be the basic requirement. Since 1995, an EPC requirement was set, because more energy can be saved in the various use functions than just with requirements for thermal insulation and air permeability. The regulations in the field of thermal insulation and air permeability shall be in addition to the EPC requirement. In some cases, meeting the EPC requirement means meeting the requirements for thermal insulation and air permeability at the same time. In other cases, it might be possible to already meet the EPC requirement with a lower performance of the thermal envelope in the field of thermal insulation and/or air permeability than prescribed in this chapter. This shall not be allowed. For in this case the possibilities with regard to energy efficiency will not be fully used. The requirements for thermal insulation and air permeability ensure that also in a highly energy efficient system, the energy gain will not be surrendered again due to an inferior thermal insulation or air-tightness. Having regulations in the field of thermal insulation and air permeability is also important for those cases where no EPC shall be applicable. This could particularly include renovation activities and temporary construction to which the EPC requirement shall not apply. As before, this chapter only includes regulations for new buildings.

Section 5.1 Energy efficiency, developments

Article 5.1 Guidance article

The functional requirement of Article 5.1 that a building to be constructed shall be energy efficient has been formulated in more general terms compared to the functional requirements from Chapter 5 of the Building Act 2003. Moreover, one shall no longer speak of ‘sufficiently energy efficient’ but of ‘energy efficient’. This approach was taken to express the hard necessity of energy efficiency.

Article 5.2 Energy performance coefficient

The EPC requirement has been expressed in a limit value for the energy performance coefficient and indicates the degree of energy efficiency of a building. The EPC

achieved in a certain use function is the result of a calculation in which various statistical indicators for the specific use function and a permissible energy consumption specifically determined for that use function play a role. The result will value the important energetic properties of a use function, including the building facilities contained therein.
This determination method gives a lot of design flexibility and an incentive for integrated design of the structure and facilities and for devising energy-efficient building concepts. It follows from Article 5.5 that it shall not apply to use functions which are not intended to be heated for use by people. Limit values for of the EPCs vary for each utilitarian function. The *first* paragraph refers to Table 5.1 regarding this. The calculated EPC must be less than the limit value included in the table. It should be noted that since 1 January 2011, an energy performance coefficient shall also apply to mobile homes (1.3). At the same time, the EPC for the 'other residential function' was tightened to 0.6. The *second* paragraph indicates how the energy performance coefficient must be calculated for a building with multiple use functions. For many buildings include a combination of use functions, such as an office with a canteen (meeting function) and company kitchen (industrial function). Insofar as these use functions are located on the same plot, no requirement shall apply to the separate use functions on account of this second paragraph, but an EPC that is based on the EPCs of all use functions that are part of that building. A requirement for the total allowable annual energy consumption of the building shall apply. Next, this will be compared to the characteristic energy consumption. The characteristic energy consumption and the allowable energy consumption must also be calculated in accordance with NEN 7120 for a residential function in a building with use functions of another type (so this is not a purely residential building). Use functions to which no EPC requirement shall apply, such as the industrial function, shall remain excluded from the calculation.
The *third* paragraph provides for the possibility of using, at discretion, a fixed value indicated in NEN 7120 (reference efficiency) or a value to be calculated in accordance with NVN 7125 for the efficiencies for heating, domestic hot water, and cooling in case of so-called area-based measures.
If it is decided to use NVN 7125 in the context of area-based measures, the value of the energy performance coefficient may be up to 1.33 times the value included in Table 5.1 without this pre-standard having been used. This means that when using the NVN 7125, the calculation must always be carried out twice, once without NVN 7125 and once applying NVN 7125. It will be determined only on the basis of the calculation without NVN 7125 whether the area-based measures are such that the NVN can be applied. If the result of this calculation is up to 1.33 times the value shown in Table 5.1, the energy performance coefficient can then be determined based on the actual value to be calculated using the pre-standard. Application of NVN 7125 thus makes it possible to assume a more favourable efficiency of area-based measures than the reference efficiency included in NEN 7120. It should be noted that area-based measures that have not yet been included in NVN 7125 can be applied on a basis of equivalence (refer to Article 1.3).

Article 5.3 Thermal insulation

The requirement ensures that the front wall, roof, and ground floor of a use function shall be insulated in such a way that heat cannot leak out unlimitedly. It follows from Article 5.5 that it shall not apply to use functions not intended to be heated.

On account of the *first* paragraph, the external partition structure of a usable floor area, a toilet area or bathroom area must have an Rc value of at least the value indicated in the table. This minimum Rc value shall always be 3.5 m^2 K/W. The exception is the mobile home for which an Rc value shall apply of 2 m^2 K/W. It should be noted that the Rc value has been increased from 2.5 to 3.5 with the entry into force of this Decision, because this value is generally cost neutral and it properly connects to the EPC requirement. Moreover, this will prevent that when meeting the EPC requirement, the focus will be too unilateral on energy efficient facilities. On account of the *second* paragraph, the requirement from the first paragraph shall also apply to the ground floor above a crawl space. The *third* paragraph states that the same requirement shall also apply to an inner wall between a usable floor area, toilet or bathroom area and an unheated area; not heated for people at any rate (function area, refer to term definitions in Article 1.1), such as a conservatory or a greenhouse. When establishing an inner wall, adjacent construction components as well as positive effects of the adjacent (unheated) area shall be taken into account. This explanation stems from the term 'internal partition structure' which means, among others, that adjacent construction parts are considered to be part of the internal partition structure, insofar as they influence on compliance with the requirement (refer to Article 1.1).
Thermal resistance of windows and doors generally falls short of complying with the requirement set in the first to *third* paragraph. This is also true for, for example, frame parapets (panels) or the side panels of a dormer. On account of the *fourth* paragraph, a lower insulation value expressed in the heat transfer coefficient with a value of up to 2.2 $W/m^2.K$ can therefore suffice for this type of construction components. This involves the assembly of a frame and glass or panels that must comply with this requirement. Therefore, it is not so that the frame must meet this requirement separately. In practical terms, this means that windows and doors must be fitted with HR++ glass (heat transfer coefficient with a value of about 1.1 $W/m^2.K$).
Practically, it shall not be necessary that portions of the external partition structure are insulated. After all, it must be possible to install an air vent, for example. For this reason, the *fifth* paragraph states that a very limited part of the external partition structure shall not have to meet this requirement. It concerns an area not greater than 2 % of the usable area (refer to term definitions in Article 1.1) of the use function.

Article 5.4 Volumetric air flow

The enclosing structure of a use function shall naturally allow a certain amount of air. The purpose of this article is to ensure that this air permeability shall be limited in such a way that even in strong winds only a limited amount of heat loss due to draught will occur. The requirement to limit the air permeability is, just like the requirement for thermal insulation (Article 5.3), a safety net requirement for use functions for which an EPC requirement shall apply. Whatever the outcome of the EPC calculation, in which air permeability also plays a role, the air permeability may not be greater than the value specified in this article. Concerning the industrial function, however, requirements shall be set to the reduction of air permeability and thermal insulation, but not to the EPC (refer to Article 5.5). The *first* paragraph includes a requirement for the volumetric air flow through partition structures of a use function. It involves heat loss from usable floor areas, toilet areas, and bathroom areas. Particular attention shall have to be given to those places in the front wall, roof,

and ground floor where excessive air permeability may occur. This could include attachments of frames to walls and attachments of pitched roofs to the front wall. The *second* paragraph provides an exception to the first paragraph for reduction of air permeability of a building with multiple use functions. This could be, for example, a residential building but also an office building with a canteen and a staff residence. The regulation shall apply to the extent that the use functions are located on the same plot. When applying the second paragraph, air permeability must be jointly determined for all use functions to which an air permeability requirement shall apply. The air permeability of common toilet and bathroom areas of a residential function shall not be taken into account though.

Article 5.5 Unheated use function
Article 5.5 provides an exception to Articles 5.2 to 5.4 for use functions not intended to be heated. This may be a building for seasonal use only during the summer season, but also an unheated gym or an unheated industrial function, for example. If a heating system for space heating is present, it means that the building is intended to be heated even when never being fired. In such a case, the exemption mentioned in this article may not be used.

Article 5.6 Renovation
When partially renovating or altering or enlarging a building, the energy performance requirement (Article 5.2) shall not apply, and the level obtained legally shall apply to thermal insulation (Article 5.3) and volumetric air flow (Article 5.4). If the level obtained legally for thermal resistance is less than 1.3 m^2·K/W, a thermal resistance of at least 1.3 m^2·K/W must be held when partially renovating or altering or enlarging the building. For an explanation of the level obtained legally, refer to Article 1.1. The development regulations shall apply in full to total renovation. This follows from Article 1.12.

Article 5.7 Temporary construction
Article 5.7 states that Article 5.3 shall apply to building a heated temporary construction. A thermal resistance of at least 1.3 m^2·K/W instead of at least 2.5 m^2·K/W, and a heat transfer coefficient of at most 4.2 W/m^2·K instead of at most 2.2 W/m^2·K must be assumed for this.

Section 5.2 Environment, developments

General
This section involves improving the sustainability level of the homes, residential buildings, and office buildings to be constructed. It therefore concerns reducing the environmental impact of materials used in the construction of such buildings. The sustainability level of a building must be determined in a performance-oriented way, allowing design flexibility and a level playing field for parties to arise. In its approach, the regulation follows the determining method and tools that have been used for some time now in the construction industry to calculate the level of sustainability of buildings and constructions. The life cycle analysis is the basis for calculating the material-related environmental effects of building, management, and demolition of buildings and constructions. The actors in the construction industry have already gained experience in recent years with these calculation tools when

formulating the environmental aspirations of a project, agreeing on the achievable environmental performance of a building or construction, and demonstrating the actual environmental performance.

Article 5.8 Guidance article

The guidance article that a building to be constructed shall be such that the load on the environment by the materials to be used in the building will be limited, aims at limiting the harmful effects of buildings by controlling the level of sustainability of homes, residential buildings, and office buildings to be constructed.

Article 5.9 Sustainable construction

Furthermore, a nationally harmonised system has been achieved through this regulation, as a result of which there will no longer be an immediate need to express material preferences in relation to building performance, nor will there be a need to express a preference on substantive grounds regarding different (calculation) systems.

The *first* paragraph indicates that a residential function must have such a composition of construction parts that greenhouse gas emissions and depletion of resources can be mapped in a uniform way. This allows the builder and client to deliberately choose which materials to use with the least environmental impact possible. This mapping (quantification) must be carried out in accordance with the Determining Method for Sustainability Performance of Building and Civil Engineering Projects (*Bepalingsmethode Milieuprestatie Gebouwen en GWW-werken*) of the Foundation for Building Quality SBK (*Stichting Bouwkwaliteit SBK*) of 31 March 2010.

The *second* paragraph provides the same regulation as the first paragraph for an office building with a usable area of more than 100 m^2. An office building means a building with only one or more office functions or their secondary functions. This means that when determining the usable area, the usable areas of other use functions that serve such an office function must be included. This involves, for example, a canteen or meeting areas (meeting function). The second paragraph shall therefore not apply to a building that has, besides the office function, one or more use functions of another nature which are not a secondary function of the office function, such as in a combination building with offices and shops underneath.

Pursuant to the first and second paragraphs, the applicant for a permit to build shall have to indicate in a calculation what will be the sustainability level of the construction to be realised. If the applicant for an environmental permit submits a calculation determined in accordance with determining method for ‘Material-related environmental performance of building and civil engineering projects’, and thus indicates that the environmental load has been considered, the requirement imposed in this article will have been met. The competent authority cannot refuse the permit if they deem a higher level of sustainability for the construction desirable, for example. Naturally, the competent authority will be free in such a case to enter into a conversation with the applicant for the environmental permit, in order to convince him/her of the desirability of a higher level of sustainability.

Chapter 6 Instructions regarding installations

General

This chapter contains instructions regarding installations.
These instructions concern the presence, quality, location, scope, use, checking, and maintenance of installations. Also devices and other facilities than those architectural facilities mentioned in chapters 2 up to and including 5 are included under installations. The use of the construction itself is regulated in chapter 7.
Chapter 6 has been subdivided into 12 sections.
Sections 6.1 up to and including 6.4 concern facilities which are connected to a public distribution network, like for instance, electricity, gas, water, and sewer.
Sections 6.5 up to and including 6.8 contain instructions concerning non-architectural facilities in the area of fire safety. The architectural fire protection facilities are included in chapter 2.
Supplemental instructions are included in section 6.9 regarding the safety of road tunnels with a tunnel length of more than 250 m.
Section 6.10 concerns the accessibility of buildings for disabled persons from the public road. Section 6.11 contains requirements for residential buildings to prevent often occurring common crimes.
Section 6.12 offers a hook to require facilities to safely do maintenance on a construction.
The system of chapter 6 is different than those of chapters 2 up to and including 5. A distinction has been applied between the requirements for new construction and existing construction and these requirements have been placed in separate paragraphs in chapters 2 up to and including 5.
On the other hand, in chapter 6, the sections are not subdivided into separate paragraphs for new construction and existing construction. This is also expressed in the title of the sections with the addition ‘new construction and existing construction’. These requirements in these sections apply in principle to both new construction as well as existing construction’.
It is only different when it is explicitly indicated that a certain requirement only applies to a newly to be built construction or only to an existing construction. The exception to the above mentioned is section 6.12. This has also been expressed in the title of the section because the safety provisions only apply to the maintenance of buildings that are newly to be built constructions.

Section 6.1 Lighting, new construction, and existing construction

Article 6.1 Direction article

Paragraph 1 of this article provides as a functional requirement that a construction must have such a lighting installation that the construction can be used and exited safely. This functional requirement does not concern social safety, working conditions, and usability. Such requirements of the lighting installation follow for instance from specific schedules of specifications or by virtue of the so-called health and safety-catalogue of the Working Conditions Act, which can change from case to case.

Article 6.2 Illumination

This article regulates the presence of an illumination installation and the required illuminance.

Generally, an illuminance of 2 x lux measured on the floor (a floor or a floor ramp intended for persons) or the surface of a step (the top of a stair step) is sufficient from the point of view of use safety (safe escape).The abovementioned basic points lead to the fact that the installation of the illumination is prescribed for almost all uses in dwelling areas based on the first subsection. For instance, the installation of illumination is not required for the spaces of an industrial function for storage, to keep animals or other agricultural objectives.

Paragraph 2 provides a similar prescription as paragraph 1 for underground stations and underground parking garages.

An illumination installation, which provides an illuminance of 2 lux measured on the floor, must be present in a function space for such uses. For the definition and explanation of the concept 'function space' see Article 1.1(1).

Paragraph 3 regulates that an illumination installation that provides an illuminance of 2 lux measured on the floor must be present in a function space of an aboveground function unit for the transport of persons (station building) with a usable area of more than 50 m².

Paragraph 4 states that it requires 2 lux for a closed space that is a protected escape route.

An extra protected escape route and a safety escape route are a differentiation of a 'protected escape route', therefore, this requirement is also applicable to these escape routes. Paragraph 4 applies to all use functions except a light industry function.

Each floor, staircase, and floor ramp of a road tunnel of a tunnel with a tunnel length of more than 250 m must be able to be illuminated with 2 lux in accordance with paragraph 5.

It is noted that a transition provision has been included for existing buildings for the moment when this decision takes effect. See Article 9.2(1)(c).

Based on paragraph 6, the transition between the illumination outside and the illumination inside of the road tunnel of newly to be built tunnels must be such that the road users cannot be blinded by a sudden transition of day light to tunnel light or tunnel light to daylight. The nature of the fixture depends on a number of factors like environmental factors, orientation, and illumination in the road tunnel.

Article 6.3 Emergency lighting

The lighting installation must be connected to a facility for emergency power (emergency lighting) in risk situations in order to be able to escape safely when there is an electricity failure.

Based on paragraph 1, emergency lighting is required for dwelling rooms with more than 75 persons and each escape route, which the persons from this room depend on for escape, in so far as those routes go through a closed space. Paragraph 2 addresses the emergency lighting in and under the measurement level of the function space.

Paragraph 3 requires emergency lighting in a closed space through which runs a protected escape route. Paragraphs 4 and 5 concern the emergency lighting of an elevator cage. Paragraph 4 that applies to all use functions except the cell function is only applicable to newly to be built constructions.

It follows from paragraph 5 that the emergency lighting in an elevator cage is required both with new constructions as well as existing construction.

Paragraph 6 regulates the emergency lighting in a road tunnel with a tunnel length of more than 250 m.
It follows from paragraph 7 that all emergency lighting must have been activated within 15 seconds after the main electricity facility fails and subsequently it must provide a continuous luminance of at least 2 lux, measured on the floor and the stair step surface, during at least 60 minutes. Only closed spaces need to have emergency lighting where natural lighting cannot penetrate sufficiently, because both daylight, as well as the night sky light, provide sufficient lighting. Therefore, a pier for instance, does not need a lighting installation. See paragraph Article 9.2(1)(c) for the transition right for situations where formerly 1 lux was applicable.

Article 6.4 Connection to electricity facility
It appears from this article that both a required ordinary lighting installation, as well as prescribed emergency lighting, must be connected to an electricity supply as intended in Article 6.8.

Article 6.5 Darkened rooms
This article has a requirement for rooms for more than 50 persons in which it is normal to reduce the normal lighting or switch it off (for instance in theatres or cinemas). Orientation lighting is necessary in such a room so that one can escape in the dark if necessary. In that case, it concerns the illumination of the aisle or the stair steps to an exit.

Article 6.6 Temporary construction
Paragraph 4 of Article 6.3 is fully applicable to a temporary construction. Only closed spaces need to have emergency lighting where natural lighting cannot penetrate sufficiently, because both daylight, as well as the night sky light, provide sufficient lighting.
This requirement is a deviation from the main rule provided in Article 1.14 that the requirements for an existing construction are applicable to a temporary construction.

Section 6.2 Provision for the consumption and use of energy, new construction, and existing construction

General
Section 6.2 states requirements for the supply of electricity, gas, and heat.
It is not prescribed in section 6.2 to have an electricity supply and there are no longer requirements for the size of the installation like for instance the number of electrical outlets.
However, the requirements from this section do apply if there is an electricity supply. An electricity supply is necessary in any case if, based on section 6.1, a lighting installation or emergency lighting is necessary.
Electrical equipment that is connected to this electricity supply via cables and extension cables is not included in the scope of this section. The safety of such electrical equipment, cables, and lighting ornaments is regulated in the Commodities Act. The safe use of such matters and (unsafe) equipment that has not been placed on the market is generally not included in the assessment but it can be enforced if necessary, using the so-called safety net Article 7.8 (remaining risk of fire and development of fire).

Also, gas supplies are no longer prescribed, but if they are present they must comply with the requirements of this section.

Article 6.7 Direction article
Paragraph 1 of this article provides, as functional requirement, that if a construction has an energy supply, this supply must be safe.
Paragraph 2 determines that there is compliance with the functional requirement of paragraph 1 by the application of the prescriptions of this section. These prescriptions apply to all use functions and to both new construction, as well as existing construction unless it is indicated differently in a certain article.

Article 6.8 Electricity supply
Paragraph 1 indicates that an electricity supply, if present, must comply with the safety requirements of NEN 1010 with low voltage and NEN 1041 with high voltage. Also, a supply for emergency energy is a supply of electricity which must comply with NEN 1010. In the determinations of concepts (Article 1.1(1)) when it concerns high or low voltage, it has been defined.
Paragraph 2 provides an exception for a supply of high voltage with an existing construction.
The lower level of V 1041 will suffice with a supply of high voltage in an existing construction.
NEN 1010 applies to low voltage both for new construction as well as with existing construction and a lower level of requirements has been included in NEN 1010 for existing construction.

Article 6.9 Gas supply
Paragraph 1 regulates that a gas supply—if such a supply will be installed—must comply with NEN 1078 with a nominal operating pressure of up to and including 0.5 bar and with NEN 15001-1 with such a gas supply with a nominal operating pressure from 0.5 bar up to and including 40 bar.
Therefore, it is no longer required to have a gas supply and no more requirements are demanded of the size of the installation.
With an existing gas supply, a nominal operating pressure of up to and including 0.5 bar suffices with the lower level of NEN 8078 based on the second subsection. Therefore, for an existing gas supply with an operating pressure higher than 0.5 bar, NEN 2078 applies as with new construction.
Paragraph 3 provides a requirement to connect the gas supply to the distribution network for newly to be built constructions. It is necessary that there are pipe ducts and jacketed piping for these supplies that comply with NEN 2768.

Article 6.10 Connection to the distribution network for electricity, gas, and heat
Paragraph 1 prescribes in which cases the electricity supply must be connected to the public distribution network for electricity. A connection is required when the distance to the connection is not greater than 100 m. The connection is required with a distance greater than 100 m when the connection costs are not higher than with a distance of 100 m. In cases where the distance is greater than 100 m and the connection costs are higher, one can choose a voluntary connection to the distribution network or an individual facility like for instance a generator. The manner in which the distances mentioned in this subsection of the article must be measured results

from the concept definition ‘connection distance’ which has been included in Article 1.1(1).
The obligation to be connected only includes the obligation to apply the technical facilities which make it possible to obtain electricity. Whether electricity will actually be delivered depends on a contract to be entered into with the energy company. Besides, a connection to the distribution network is not compulsory when an alternative facility to obtain electricity is allowed based on the equivalence principle.
Paragraph 2 provides a similar requirement as paragraph 1 but then in the case that gas supply is present. Here, the compulsory connection applies to a connection distance which is not greater than 40 m or when the connection costs are not higher than they would be for a connection distance of 40 m.
Paragraph 3 has a requirement for newly to be built constructions with a dwelling area.
Such a construction must be connected to the distribution network for heat if the connection distance is not greater than 40 m or if the connection costs are not higher than what they would be for a connection distance of 40 m. Of course, in some cases one can appeal to equivalence to use another heat supply. For instance, one can think of a network for city heat with a distribution network for heat.

Section 6.3 Lighting, new construction, and existing construction

General
The requirements of this section are focused on health. It concerns the quality of water supplies for human consumption and hygiene. There is no prescription to have a water supply but if it is present then it must comply with the requirements included in this section. All requirements apply to both new constructions as well as to existing construction.

Article 6.11 Direction article
Paragraph 1 of this article provides as a functional requirement that if a construction has a drinking water supply or a warm water supply, this facility may not adversely affect the health of persons; in other words, the installation may not adversely affect the water quality.
Paragraph 2 determines that there is compliance with the functional requirement of paragraph 1 by the application of the prescriptions of this section. These prescriptions apply to all use functions and to both new construction as well as existing construction.

Article 6.12 Drinking water supply
When a construction has a water supply for human consumption and for hygiene, that facility must comply with NEN 1006. The objective of that requirement can be achieved when the drinking water installations deliver water of a quality that is suitable for human consumption and hygiene.

Article 6.13 Warm water supply
A warm water supply must comply with NEN 1006 based on this article. The objective of that requirement can be achieved when the drinking water installations deliver water of a quality that is suitable for human consumption and hygiene.

Article 6.14 Connection to the distribution network for drinking water
Article 6.14 regulates in which cases the drinking water supply must be connected to the public distribution network for drinking water. The manner in which the distances mentioned in this subsection of the article must be measured results from the concept definition 'connection distance' of Article 1.1(1). Besides, the obligation to be connected does not include that the drinking water company is obligated to deliver drinking water or that the person who is connected is obligated to consume drinking water. The obligation to be connected only includes the obligation to apply the technical facilities which enable the consumption of drinking water. Whether drinking water will be delivered depends on a contract to be entered into with the drinking water company. A connection to the distribution network is not compulsory when an alternative facility is allowed for obtaining drinking water, based on the equivalence principle.

Section 6.4 Drainage of household waste water and rain water, new construction, and existing construction

General
The requirements of this section concern facilities for the drainage of household waste water and rain water, outside sewer and connection of these facilities with the connection to the gulley, and by extension to the public facilities for the management of waste water (often the public dirty water sewage, public rain water system or public drainage system). The objective of these requirements is to prevent an adverse situation for the health of persons.
These requirements have been coordinated with the environment and water regulations.
The government care duties regarding waste water are described in those regulations and they determine what may be discharged. See the Environmental Management Act (care duties for city waste water, Article 10.33) and the Water Act (care duties for runoff rain water, Article 3.5) regarding the care duties. The rules for the discharge have been included in the Decision discharge of waste water from households and the Activities decision. Subsequently, the technical requirements for construction and installation that apply to discharge from constructions and the connection to the connection to gulley and in its extension the public facilities for the management of waste water have been included in the regulations for construction.

Article 6.15 Direction article
Paragraph 1 of this article provides as a functional requirement that the facility for household waste water or rain water must be such that the water can be discharged without adverse consequences for the health of persons.
The table of paragraph 2 indicates the requirements per use function which are applicable to that use function. When complying with these requirements, the functional requirement of the first subsection is met.

Article 6.16 Drainage of household waste water
Paragraph 1 contains the requirement that a construction with a toilet room or bathroom or with another site for a discharge device has a facility for the discharge of household waste water for each site.

The requirements for the capacity and the quality (air and water tightness) of that discharge facility are mentioned in paragraph 2. Different requirements apply to new construction (part a) and existing construction (part b). Lower requirements apply to existing construction than to new construction. There are no requirements for the presence and the location of the outlet of the relief pipe with existing construction and a lower capacity suffices. An existing drain facility must be such that discharge devices that are connected to it can be emptied within 5 minutes.
The rules included in this article apply irrespective of whether the construction is connected to a public facility for the collection, transport or purification of household waste water.

Article 6.17 Draining rain water
Paragraph 1 has requirements concerning catching and draining rain water from a roof of a construction that will be built. The drain facility must have sufficient drainage capacity, depending on the dimensions of the roof or part thereof connected to the drainage facility. This capacity is determined using NEN 3215. In paragraph 2 it is determined that a rain water facility, which runs through the construction itself, must be airtight and watertight. This applies to both new construction, as well as existing construction.

Article 6.18 Construction connection pipeline and exterior sewer
Technical requirements regarding the connection of the building sewer to the exterior sewer are included in paragraphs 1 and 2. Paragraphs 3 and 4 contain technical requirements concerning the execution of an exterior sewer that may possibly be present. The first 4 paragraphs apply irrespective of the question whether the construction is connected to a public facility for the management of waste water. Paragraph 5 is only applicable if a public facility for the drainage of waste water (household waste water or rain water) is present to which one can make a connection. Part a concerns the case that a public dirty water sewer or system as intended in Article 10.33(2) of the Environmental Management Act is present for the drainage of household waste water. Part b concerns the case that a public rain water system or a public dirty water sewer is present. The competent authorities determine in those cases in which location, at what height, and with what diameter the necessary connection to the house must be installed for the connection of the drainage facility at the façade of the construction or the border of the property of the land. Based on part c, the competent authorities can require facilities to guarantee the functioning of the drainage facilities, neighbouring connections and the public facilities for the collection and the transport of waste water. Whether public facilities for the drainage of waste water are present results from the abovementioned care duty in the part General. That care duty is not absolute. Citizens and companies themselves must provide the drainage or purification of household waste water and/or the drainage of rain water when the installation of facilities in the exterior area is not effective. The municipality can choose between separate or individual collection concerning the fulfilment of the care duty when there is collection of waste water.

Section 6.5 Timely determination of fire, new construction, and existing construction

Article 6.19 Direction article

In paragraph 1 it has been included as functional requirement that a construction must have such facilities that a fire can be discovered at an early stage (localised and detected) so that one can escape safely. In other words, so that people can place themselves in safety or can be taken to safety. The table of paragraph 2 indicates the requirements per use function which are applicable to that use function. When complying with these requirements, the functional requirement of paragraph 1 is met.

Article 6.20 Fire alarm installation

The fire alarm installation requirements have been included in this article. The objective of a fire alarm installation is to discover, localise and detect a fire at such a timely stage that the internal organisation can be warned and all necessary fire safety facilities are activated automatically so that persons can place themselves in safety or can be taken to safety.

A fire alarm installation is especially necessary when a fire cannot be noticed immediately without this installation (obscure), a building is not suitable or when fire safety facilities cannot function without a fire alarm installation. 'Suitable to call' signifies that it must be possible to inform the persons present that there is a fire in the building by calling out. See also the explanation to Article 6.23 for this (evacuation alarm installation).

For instance, the following fire safety provisions can depend on a fire alarm installation, except the evacuation alarm installation: automatic adhesive magnets with self-closing doors, overpressure installations, smoke and heat removal installations, fire valves, and fire pumps.

Furthermore, a fire alarm installation can be used for automatic alarm forwarding to the regional alarm central of the fire department (RAC) or an automatic alarm report to a care centre or a nurses' station (see below the fourth subsection).

Paragraph 1 indicates when a fire alarm installation is necessary. This results from Table 6.19 in connection with annex I with this decision (Table I). As usual, one can read per function from Table 6.19 which requirements from this section are applicable to which use function. A further explanation to the required scope of the monitoring and possible alarm forwarding of the signal to the fire department has been provided in Table I per use function. The choice has been to include these variables in this separate Table I because of the large number of variations in scope and alarm forwarding. The same layout in use functions has been followed in this table as in the regular direction tables in this decision. All use functions, therefore, also those for which no requirements are indicated based on Table 6.19 have been included in Table I.

A fire alarm installation is required depending on the usable area of the use function (paragraph 1a) and the highest floor of a dwelling room of the use function, measured above the measurement level (paragraph 1b). See Article 1.1(1) for the concept 'measurement level'. A third criterion was used in the Decision fire safe use of constructions with the determination whether a fire alarm installation is necessary: That requirement has been cancelled with the implementation of this decision: it

always concerns the distance between the highest floor with a dwelling room and the connecting terrain as intended in part b.
Limiting values per use function have been included in Table I for each of the two previously mentioned criteria. The user of a building can simply check per use function whether a fire alarm installation is necessary and if that is the case, what its size is and whether there must be alarm forwarding to the fire department. In the case of an office building that has four construction layers and, therefore, the highest floor of a dwelling room is 12 m above the measurement level for instance, it may concern three construction layers with office spaces while the upper construction level exclusively contains a cafeteria and meeting rooms. In that case, the office function has three construction layers and the meeting function is on the fourth construction level. It concerns the highest floor of a dwelling room of the office function (in this case, twelve meters above the measurement level) to determine which installation is necessary in the office function. The height of the fourth construction layer above the measurement level is relevant to determine which installation is necessary in the meeting function. It appears from the table that the office function must have a non-automatic fire alarm installation if the usable area is greater than 500 m², if the floor of a dwelling room of the office function is more than 4.1 m above the measurement level. Forwarding the alarm to the fire department is not compulsory in this case. An automatic fire alarm installation is required for the meeting function in this example, due to the height of a dwelling room at more than 4.1 m above the measurement level (the fourth construction layer). Alarm forwarding in this case is not compulsory either.

From paragraph 1a follows that when different use functions of the same type are included in a building and these functions use the same escape route, the usable area of these use functions must be added up to determine whether a fire alarm installation is required. As indicated in paragraph 1b, the highest floor of a dwelling room of a use function, measured above the measurement level, also determines whether a fire alarm installation of a certain scope is required. Therefore, it does not always concern the highest floor of the building in which the use function is located, but it does concern the highest floor of that use function, measured from the measurement level.
A fire alarm installation is required for a number of use functions while no limit value is indicated in the table (paragraph 1c).
The fire alarm installation is required in those cases irrespective of the height and the scope of the use function(s). This is the case, for instance with the residential function for care and the health care function with bed area.

Ways of monitoring
Four monitoring ways are distinguished with a fire alarm installation under referral to NEN 2535.
- non-automatic monitoring: fire alarm installation with only manual fire alarms;
- partial monitoring: fire alarm installation with manual fire alarms and (in traffic spaces and the spaces with an increased risk of fire—as intended in NEN 2535, like storage rooms and archive rooms greater than 2 m^2, kitchens, and parking spaces) and automatic fire alarms;
- complete monitoring: fire alarm installations with manual fire alarms and (in almost all rooms) automatic fire alarms;

- monitoring of rooms: fire alarm installation where only automatic fire alarms are applied in a certain room or rooms.

Such a form of monitoring is required if it is desired to alarm persons present regarding limited escape possibilities (for instance, if there is only one escape route).The first three ways have been included in Table I and the fourth, the monitoring of space, is mentioned in paragraph 5 of this article (6.20). See, for the explanation to this, paragraph 5 on the explanation on monitoring of space.

Residential function for care

A distinction is made in Table 6.19 between the residential function for care (a), residential function for rental of rooms (b), and another residential function (c).
The residential function for care contains the following subdivision in Table I:

- care cluster residences for care on demand in a residential building
- care cluster residences for 24 hour care not in a residential building
- care cluster residences for 24 hour care in a residential building
- group care residence for care on appointment
- group care residence for care on demand
- group care residence for 24 hours care
- other residential function for care

This subdivision has been established with the implementation of the Decision fire safe use of constructions in consultation with the care sector (VGN, ActiZ, and GGZ Nederland), Ae-des, VNG, NVBR, the ministry of BZK, and the ministry of VWS and has been included in this decision.
Here, it concerns an object approach, and it no longer concerns the criteria ‘less independent’ and ‘permanent supervision’. The requirements for the fire safety provisions depend on the degree of care service for which the residential function is intended.
Under the residential function are included the residential functions whereby the professional care as described below is offered to the residents (usually based on the Exceptional Medical Expenses Act or the Social Support Act). With a care cluster residence or a group care residence, it concerns a grouping of care clients in specific dwelling form in view of the professional care which can be provided there. It concerns an organised link between living and care from an offer to provide care. The care service provider also takes over the responsibility for the fire safety of the client.

Care cluster residence

In this decision it concerns a care cluster residence if that residence:

- is intended for independent residence (hence no group care residence),
- is intended to offer care to at least one care client, with or without a partner or family, and
- is located in the direct neighbourhood of at least four other residences with a similar offer to provide care services.

A known example of a care cluster residence is so-called protected housing.
The supposition is that in a cluster care residence one cannot count on alarm reporting and help from the neighbours who also depend on care. This can also be the case, for instance, with a street or access gallery or a portico of an apartment building regarding a project of independently living people with a mental disability.
When such residences are 1 floor residences, they are only noted as care cluster residences when they are clustered (are contiguous like for instance row houses).

They are noted as care cluster residences in a residential building when the accesses of the care residences are adjacent to the same common traffic areas (access gallery or portico). Therefore, these apartment buildings do not have to be adjacent.

Group care residence
In this decision it concerns a group care residence if that residence:
- is intended for occupation in a group, and
- is intended to offer care to at least five care clients who together conduct one household.

For instance, here it may concern group living of mentally disabled persons or demented persons. Contrary to living in groups by an ordinary living group where the group can share the totality of care for fire safety (see also the explanation to the concept ‘room rental’) this is not the case with a group care residence.

It depends on the type of residential function for care whether a fire alarm installation must be present in a residential function for care and with what scope of the monitoring it must comply. This is determined by the type of residence (care cluster residence or group care residence or other residential function for care), the location of the residence (one floor only or in a residential building), the need for care, and the corresponding risk profile. The need for care is subdivided in three categories, ascending in seriousness of the need for care:
- care by appointment: the care provider only visits by appointment (for instance care at home). Furthermore, the resident can still take care of matters independently or using informal care. Therefore, there are no facilities present in the residence like
  a speaking/listening connection with a care station or a nurses’ station. However, a personal alarm system can be present. This type of residence is only distinguished from residential functions that are not intended for care to a limited extent;
- the care provider is called at times that are determined by the client for assistance with daily matters like visiting the rest room or getting dressed. Specific facilities are present in the residence to support that type of care, for instance, a professional intercom system to make a call in case of a question about care. This system is more expanded than a personal alarm system. The call is coordinated by a care station. A ‘care station’ is a point of coordination that is either located in the neighbourhood of the residence or not that is connected with this residence or other similar residences by a speaking/listening connection. Subsequently, the care is provided from a support point that is located close to the residence;
- 24 hours care: Care service is provided during 24 hours per day to the residence via employees who are either present in the residence or at a nurses' station. A ‘nurses’ station’ is a station that is located in the direct proximity of the residence and that is available 24 hours per day and from where direct assistance can be provided 24 hours per day.

Whether it concerns a cluster care residence or a group care residence and which variety of residence it happens to be is determined in principle by the person who operates or will operate the residential function. This explicitly does not mean that the operator 'may determine his own fire safety level'. The residence must be tested

regarding the decision based on the choice of type of residence when a certain type of residence has been chosen. The operator is responsible for the adaptation to a new situation when there is a change in the care service which would have an upgrade of the fire safety requirements. In this case, the care service is decisive for the opinion of the operator and not the increase of the need for care of a resident. Regarding the operator who does not comply with the adjusted fire safety requirements for more intensive care service when the actual care service is more intensive than the care service that was previously indicated by the operator, it may be necessary to prosecute the operator administratively and/or criminally.

The resident himself is primarily responsible for the fire safety in a regular residence. This also applies if the resident uses professional care or informal care. The requirements for a residential function for care are not applicable in such a case.
In paragraph 2, it is regulated that the total fire compartment must be provided with a fire alarm installation if a use function that is present in that fire compartment must have a fire alarm installation. The scope of the monitoring of the whole fire compartment is (at least) equal to the monitoring, which is required for the concerned use function.
Fire alarm installations, based on Table I, which must be provided with alarm forwarding as intended in NEN 2535, are provided directly to the RAC, based on paragraph 3. Direct means without intervention of a private emergency centre. The alarm forwarding to this regional emergency centre must take place without delay unless a delay of the alarm forwarding has been agreed by the competent authority based on Article 1.3.
Alarm forwarding is especially necessary when supplemental support from the fire department is needed to save persons in case the ground floor facilities fail for whatever reason (the assumption is and remains that a building should be able to be evacuated without help from the fire department). This is the case, for instance, with the cell function, health care function with bed areas, and with child care facilities where more than 6 children sleep on a floor that is located 1.5 m higher above the measurement level (see paragraph 11).
From paragraph 4 follows whether a residential function for care, which must have a fire alarm installation based on Table I, also needs direct alarm reporting to a care centre or a nurses' station. In such a case, not only the persons present in the residence will be alarmed but also alarm reporting to the care centre takes place. That alarm reporting takes place to the nurses' station with 24 hour care in a residential building or a group residence. Therefore, this alarm reporting to the care centre or nurses' station takes place besides the possible alarm forwarding to the RAC as it must take place based on the table.
It is of importance that the fire alarm installation is also deployed to report the alarm to the care centre or the nurses' station because the—independently living—less self-reliant clients of the care institution may need help assessing the situation or when escaping. The concept 'alarm forwarding' in this decision concerns the alarm forwarding to the RAC, and with an alarm report it concerns a care centre or a nurses' station. Observe that NEN 2535 determines the distinction between alarm report and alarm forwarding differently. NEN 2535 calls each alarm report at distance alarm forwarding. However, it is determinative what has been included in this decision. Paragraph 5 determines that a dwelling room with only one escape route that has spaces, on which one must depend when escaping, must have a fire

alarm installation with space monitoring. No distinction is made here between a traffic room or another room through which an escape route leads. Paragraph 5 only applies when:

a. the walking distance between the exit of the dwelling room and the place from where one can escape in more than one direction is more than 10 m, or
b. when the total floor surface of the rooms through which the escape leads, together with the dwelling rooms which depend on those rooms is greater than 200 m^2, or
c. when more than two dwelling rooms depend on the single escape route.

If only one escape route starts at the exit of the dwelling room and one or more of the limit values mentioned under a, b, and c are exceeded then an increased risk exists that the escape route becomes blocked by fire before everyone has escaped. A fire alarm installation with room monitoring as intended in NEN 2535 is necessary in such a case because people will be warned quickly and can escape before the escape route is blocked by fire. When there can be an escape in two directions it does not concern a single escape route (as intended in paragraph 5). The latter is also the case if the rooms where the escape starts have two or more exits, which lead to independent escape routes or if there can be an escape in two directions after passing the exit.

In paragraph 6 it is determined that a fire alarm installation that will be installed must be provided with a valid certificate that has been issued based on the CCV certification schedule Fire alarm installation. CCV means Centre for Safety and the Prevention of Crime. Instructions can be given by ministerial regulation regarding the application of a certification schedule or inspection schedule based on Article 1.5(3) of this decision. One must think, for instance, about the date of issue of this certificate scheme with these further instructions.

Paragraph 6 also clarifies that when a construction is remodelled, for instance, by the addition of a new wing and in relation to that the fire alarm installation present in the original building will be expanded, it will not be necessary that the whole installation must be provided with the certificate intended in this subsection. A certificate that concerns the adaptation will suffice. Of course, the correct operation of the original installation may not be subverted by the adaptation.

In paragraph 7, it is determined that because of or by virtue of the law the required existing fire alarm installation, as indicated in Table I, must be provided with a valid inspection certificate that has been issued based on the CCV inspection schedule Fire alarm installation. An installation that has been provided with a certificate as intended in paragraph 6 does not have to have an inspection certificate as intended in paragraph 7 immediately after delivery.

After all, the certificate as intended in paragraph 6 can be considered as sufficient evidence that a recently installed installation complies with the requirements. Requirements will also be included in the ministerial regulation as intended in Article 1.5(3), about the time when such a fire alarm installation must be provided with an inspection certificate as intended in paragraph 7. With the concept ‘valid’ is intended that the document may not be expired.

Paragraph 8 determines that the maintenance of a fire alarm installation as required by law or by virtue of the law for which no inspection certificate is required as intended in the seventh subsection must comply with NEN 2654-1. Paragraph 9 determines that the management and checking of all fire alarm installations required by virtue of the law must comply with NEN 2654-1. Therefore, both paragraphs 8

and 9 apply to both fire alarm installations, which are indicated in Annex I as well as fire alarm installations applied in the framework of an equivalent solution. It follows from paragraph 10 that for the use function for child care for children younger than 4 years, a fire alarm installation with complete monitoring is necessary for a usable surface greater than 200 m^2. Alarm forwarding is only necessary if a total of more than 6 children can sleep in one or more rooms with a floor that is higher than 1.5 m above the measurement level. The background for this is that children who sleep in a child care facility cannot independently exit a building in case of fire but that they depend on help from employees. Alarm forwarding is deemed to be necessary in relation with this higher risk.
The limit value of 6 children is derived from the distinction between foster parents care and child care facility as indicated in the Childcare Act and quality requirement toddler play rooms.
Child care with a usable area of a maximum of 200 m² must only be provided with smoke alarms that are linked with alarm forwarding. Besides, annually a risk assessment is made that is tested by the GGD for each type of child care. An important part of it is the risk assessment in the area of fire safety. The child care entrepreneur ensures that the employees who work in the child care facility can be informed about the risk assessment. This procedure can be found in the Policy rules quality child care facility 2004 based on the abovementioned law.

Equivalence
The equivalence can play an important role with fire alarm installations. A fire alarm installation is compulsory if the limit values included in the table are exceeded. Sometimes, a new building can be so orderly and can have such good escape possibilities, either using a good evacuation organisation or not that the envisioned safety level is also guaranteed with a less heavy installation or even without an installation. In such a case, there can be an appeal to equivalence as intended in Article 1.3. The competent authority must honour this appeal when the applicant demonstrates that the quality of the construction in connection with the measures taken guarantee that all persons can place themselves in a safe place or can be brought to safety in a timely manner.

Example 1. It follows from the limit values in the table that with a surface of more than 500 m², in combination with a dwelling room located on a floor that is higher than 4.1 above the measurement level (for instance the second floor), a fire alarm installation is necessary for a building with an office function. In practice, an office building above the limit value can be very orderly and have such good acoustics with little environment noise (for instance an office space or rooms with open doors in combination with an atrium across the whole height) that everyone can be warned in a timely manner without special installations.
In such a case, it is within reason that the competent authority will honour an appeal to equivalence.
Example 2. It follows from the limit values in the table that for ‘another meeting function’ with a surface of more than 1 000 m^2, an automatic fire alarm installation with partial monitoring is required. A large church building is among this category. A church room is usually very orderly and has such an acoustics quality that the envisioned objective can be achieved (timely detection of the fire) without a fire alarm installation. The following considerations can play a role in this case:

- the height of the room. The warm smoke of a fire will ascend and come down from the ceiling. The building can already have been evacuated before smoke obstructs escape;
- the fire load in a church is relatively limited due to which the production of smoke from a fire will be limited which has a positive effect on the escape time.

One may assume that the competent authority must honour an appeal to equivalence in such a case.
It is explicitly indicated that in the assessment of such an appeal to equivalence, the competent authority's considerations regarding the ability of persons to safely escape may be exclusively based on these considerations. A consideration directed to the limitation of the damage (the conservation of the construction) may not play a role in this matter.

Article 6.21 Smoke alarms

Smoke alarms are required for the residential function, the meeting function for child care facilities for children younger than four years, and the accommodation function based on Table 6.19 under the circumstances indicated in this article.
Paragraph 1 requires smoke alarms on the escape routes with newly to be built residential functions. The smoke alarms are not necessary when a residential function has a required fire alarm installation as intended in Article 6.20. For instance, the latter can be the case with a residential function for care.
Each route between the exit of a dwelling room and the exit of a new residential function must have one or more smoke alarms.
The requirements with which smoke alarms must comply follow from the so-called primary installation requirements of NEN 2555; these are:

- requirements of the smoke alarms themselves including the operation principle;
- connection to electricity supply;
- connection to a secondary energy supply;
- smoke alarms must be linked or not;
- the quantity and the projection.

Requirements can be demanded regarding the application of NEN 2555 by ministerial regulation based on Article 1.5(1). This could include whether the smoke alarms must be connected to the mains supply. Whether the smoke alarms must be linked or not will be stated in the standard as dependent on the noise level within the dwelling rooms.
With the rental of rooms and accommodations it will soon concern extra or linked smoke alarms because a possible alarm must be sufficiently and clearly audible in all housing units, respectively rooms (with closed doors).Smoke alarms must only be placed on the route to the front door of the residence and not around the route between the front door of the residence and the exit of the residential building.
Paragraph 1 only concerns new construction; paragraph 2 and up to and including 4 are applicable to both new construction as well as existing construction.
Paragraph 2 of this article only applies to the rental of rooms.
Each dwelling room and all rooms on the escape route up to the front door of the residential function must have smoke detectors that are linked. The smoke alarms are not necessary when a residential function has a fire alarm installation as intended in

Article 6.20. For instance, the latter can be the case with a residential function for care.
Besides, it is observed that a residential function for room rental can also be noted as a residential function for care. In such a case, the most severe requirements apply.
Paragraph 3 determines in deviation from paragraph 2 that with a residential function for room rental no smoke alarms are necessary when each residential unit is located in a separate sub-fire compartment with a resistance to fire and spread of fire of at least 30 minutes. Smoke alarms do have to be in rooms in such cases due to which the escape routes lead between the exit of the housing unit and the exit of the residential function (residence) and in the common areas of the residential function. Common means that it concerns a room where housing units are indicated within the residential function like a common kitchen or living room (see also Article 1.4).
The sub-fire partitioning ensures that in case of a fire in a housing unit there is a safe escape to the exterior from all housing units. Paragraph 4 is applicable to a child care facility for children younger than 4 years and to an accommodation function. In such cases, each dwelling room and each closed room located on an escape route up to the exit of the building must have one or more smoke alarms. It is not necessary to apply smoke alarms supplementing a fire alarm installation if such a use function has a fire alarm installation based on Article 6.20.
Paragraph 5 regulates that paragraph 4 is only applicable to newly to be built accommodation functions that are not located in an accommodation building. Therefore, this requirement is not applicable to existing vacation houses.

Section 6.6 Escape when there is a fire, new construction, and existing construction

General
The requirements of this section are focused on the sufficiently safe and quick escape when there is a fire.

Article 6.22 Direction article
Paragraph 1 of this article provides the functional requirement that a construction must have such facilities that the escape can start in a timely manner.
The table of paragraph 2 indicates the requirements per use function, which are applicable to that use function. When complying with these requirements, the functional requirement of the first subsection is met.

Article 6.23 Evacuation alarm installation
This article concerns evacuation alarm installations. The objective of an evacuation alarm installation is to quickly warn the persons present in the building after the discovery of a fire so that a quick and orderly evacuation can take place of the persons present. An evacuation alarm installation is especially necessary when persons cannot be warned quickly enough by calling them. They would be warned too late without an evacuation alarm installation and cannot start their escape immediately.
The evacuation alarm installation can also be used to mobilise the necessary help to escape, for instance a nurses' station or a care centre. For instance, this is the case with less self-reliant persons, with persons who have been forcibly confined or with

the escape of large numbers of people. Sometimes, the evacuation signal will have to be a loud alarm, sometimes a silent alarm or a combination of both.
Paragraph 1 contains requirements about the compulsory presence and the quality of evacuation alarm installations. The presence of such an installation is compulsory in those cases that a fire alarm installation must be present based on Article 6.20. The evacuation alarm installation must comply with NEN 2575 and must be designed and installed in accordance with a schedule of requirements that has been approved by the competent authority.
The schedule of requirements can indicate, for instance, that such an installation must be executed with a silent alarm (with attention panels and optical signalling), loud alarm (with acoustics signalling) or a combination of silent and loud alarm. It depends on the specific situation (like the presence or not of less self-reliant persons, total number of persons present in the building, the concentration of those persons, and the number of floors of the building) what type of installation will be required.
Sometimes users of a building voluntarily choose a fire alarm installation. For instance, this may be in a building with low occupancy but with a valuable inventory as it can be the case sometimes with a light industrial function. An evacuation alarm installation is, therefore, not compulsory with such a voluntarily placed fire alarm installation.
Paragraph 2 contains the basis for the ministerial regulation to be able to give the further requirements about the quality of the evacuation signal of the evacuation alarm installation as intended in the first and second subsections.
The management, checking, and maintenance of the installation based on paragraph 3, as intended in paragraph 1, must comply with NEN 2654-2.
This decision contains no obligation to have an evacuation plan. As of now, it will follow from the Decision basic assistance whether an evacuation plan is necessary.

Equivalence
An appeal can also be made to the equivalence provision as intended in Article 1.3 regarding the evacuation alarm installation comparable with what has been described above with Article 6.20 about the equivalence of the fire alarm installation. For instance, an adequate warning can also take place without evacuation alarm installation in a situation, which is both orderly and has good acoustics with little environment noise. When it has been determined that no fire alarm installation is required based on an appeal to equivalence, this also means that no evacuation alarm installation is required. Namely, an evacuation alarm installation is only required in those cases that a fire alarm installation is compulsory. Therefore, the fire alarm installation and the evacuation alarm installation usually occur as a combination. However there are situations imaginable where an appeal to the equivalence of the fire alarm installation is rejected, while the same is honoured for the evacuation alarm installation.

Article 6.24 Escape route signs
The escape route direction is intended to give the user of a building clarity about the course of escape routes so that also persons who are less familiar with a specific escape route or who cannot orient themselves any longer due to smoke or darkness can quickly reach the connecting terrain. In principle the requirement for presence applies to all buildings. Table 6.22 gives an exception to the light industrial function because usually there are few persons present in that function (see also Article 1.1,

determinations of concepts). In paragraph 1, it is determined that a construction must have an escape route direction in each room through which the escape route leads and in each room which is intended for more than 50 persons.
Therefore, no indication is necessary in rooms for less than 50 persons unless an escape route leads through those rooms. An escape route indication is not necessary and usual in a closed little office for instance, but it is necessary in the hallway or office room through which there is an escape from that little office to a safe place.
The term traffic route originates from and has the same significance as in Construction decision 2003. See also Article 1.1(1). NEN 6088 has requirements for the colours and symbols (pictograms) used in escape directions.
In NEN-EN 1838, requirements for luminance and luminance proportions are especially mentioned. The luminance of each part of the safety colour of the escape route sign must be at a minimum 2 cd/m² in all relevant view directions. The standard mentioned in paragraph 1 contains no requirements about the lighting strength of the escape route signs themselves.
Therefore, escape route signs do not have to be executed per definition as fixtures with interior lighting. In a number of cases, it can suffice to apply the pictogram stickers, which can be illuminated by exterior lighting, if necessary, to be able to comply with the luminance requirement. Based on paragraph 2, the maximum height at which the escape route signs must have been applied in a road tunnel is 1.5 m. Of course, it is allowed to apply escape route signs above escape exits or escape doors in supplementation of this subsection.
In paragraph 3, it is determined that the escape route signs must have been applied on a clearly visible location, therefore, not behind a door, a curtain or in a high room, directly under the ceiling.
Paragraph 4 regulates that an escape route sign, as intended in paragraph 1, must comply with the visibility requirements of NEN-EN 1838 within 15 minutes after power failure during at least 60 minutes. Although in practice often an internally lighted fixture will be used it is also allowed to illuminate the escape route sign externally.
An exception for an escape route sign that is located on an escape route from a room with a lighting installation, which is not connected to a facility for emergency power as intended in Article 6.3 of this decision, has been included in paragraph 5. Such escape route signs do not have to comply with the visibility requirements of NEN-EN 838 during a power failure.
Paragraph 6 determines that a door, which gives access to a protected route, must be green on both sides (RAL 6024). This requirement only applies to a road tunnel with a tunnel length of more than 250 m.
Paragraph 7 indicates that, with an escape route sign as intended in paragraph 2, the walking distance to the end of the tunnel pipe, in two directions or, if that walking distance is shorter, the walking distance to the closest door, which gives access to a protected route, must be indicated clearly visible.
The obligation to maintain the escape route signs correctly and to check them regularly follows from Article 1.16 (Care obligation).

Article 6.25 Doors in escape routes

The objective of this article is to guarantee that doors in escape routes disturb as little as possible during an escape from a fire. The requirements concern the turn direction and the hinges and locks of the door. Requirements regarding the fire safety use of

doors in escape routes have been included in Article 7.10. Escape routes, on which many persons depend, run the risk to get blocked if doors on the escape route open in the opposite direction of the escape direction or if they cannot be opened in a timely manner. A group of people that is escaping could, therefore, be crushed.
Therefore, doors in escape routes may not open in certain situations contrary to the escape direction and there could be requirements for the hinges and locks.
In relation to this, a revolving door must be marked as a door that turns contrary to the escape direction. Sliding doors are allowed in most situations. However, see paragraph 4 for an exception for road tunnels with a tunnel length of more than 250 m.
A door in a residential building, which offers access to a stair case when escaping from a residence in that residential building, must turn in the direction of the escape direction pursuant to paragraph 1. Requirements for the unlocking mechanism of doors have been stated in the second subsection for the residential function of rental of rooms.
Each door on the escape route must simply be able to be opened with a light pressure or an unlocking mechanism that complies with NEN-EN 179 and NEN-EN 1125. Therefore, a panic closing may be applied, but it is not necessary.
Therefore, this paragraph does not concern the run direction of the access door of the housing unit itself but simply to be able to open doors in the escape direction on the escape route, which runs from the access of the housing unit to the front door of the residential function.
Paragraph 3 requires that a door of an exit through which runs an escape route must turn in the escape direction when during an escape more than 37 persons depend on that door.
If an exit is an emergency door then this may not be a sliding door based on paragraph 4.
There are insufficient guarantees that the sliding mechanism of an emergency door still works correctly due to the incidental use of the door. Using a sliding door regularly, for instance, in the access to a building, there are sufficient guarantees that the sliding mechanism remains usable. From the application for a building permit or the fire safety use or the reporting of a use follows how many persons depend on a door.
In paragraph 5 for road tunnels with a tunnel length of more than 250 m, it is regulated that escape doors may not turn contrary to the escape direction. This requirement has been included because the fact that many people must be able to escape through that exit at every exit of the road tunnel has been taken into account in case there is an accident in a road tunnel.
In paragraph 6, there are requirements for doors on which more than 100 persons depend when escaping. Such doors must be able to be opened in the direction of escape by a light pressure against that door or by a light pressure against a ‘panic bar’ applied at a height of approximately 1 m. A panic bar is an unlocking mechanism that is operated with a bar, which has been applied across the whole width of the door. The panic bar must comply with NEN-EN 1125. ‘In the escape direction’ means in the direction of the flow of escaping persons.
It follows from the situations of paragraph 3 mentioned in paragraph 6 that the door must turn open in the escape direction. Besides, there are no requirements for the manner in which the door must be opened from the other side. Based on paragraph 7, a specific requirement applies to rooms for the confinement of persons irrespective of

the use function (with exception of the regular residence and if the construction is not a building). This means that also interrogation rooms, detention rooms, and such in a police station or a court house, for instance, with the exception of a regular cell, an isolation room in the health care may be opened with a key.
The deviation of paragraphs 2 and 6 have been chosen because the confinement that may be forced or not is opposed to doors that may be opened without a key by anyone. See for an explanation to the concept ‘other room for the confinement of persons’ the general part of the explanation. The doors intended in paragraph 7 must be able to be opened sufficiently fast to make a timely escape possible in case of a fire. A requirement about that use is given in Article 7.10(2).
Paragraph 8 concerns automatic (sliding) doors and facilities for access or exit control.
Such facilities must open automatically or be able to be opened without using a key when the mains voltage fails (see also Article 7.10(1)). It must be clearly indicated immediately next to an automatic door how this door can be opened manually in case of a fire.
At doors which provide access to a so-called over pressure staircase, it must be clearly visible that that door gives access to such a staircase, based on paragraph 9. When an overpressure stairwell is on overpressure (this occurs automatically in case of a fire), the resistance of the doors, which provide access to that stairwell, give a higher resistance than under normal circumstances. People who are escaping could, therefore, draw the conclusion that the door is locked. People would be informed with a sign like ‘Push hard; stairwell can be on over pressure’.
Besides, note that an overpressure stairwell is not prescribed in this decision. However, an overpressure stairwell is regularly applied in the framework of equivalence (Article 1.3), for instance, as a part of an alternative for smoke locks for stairwells or to comply with the fire safety requirements of section 2.14 with tall buildings (> 70 m).
At the exterior side of an emergency door or emergency exit in an exterior façade, the sign ‘do not block emergency door’ or ‘emergency exit’ must be applied, based on paragraph 10.
This will make it clear to everyone that the concerned door or exit must be kept unobstructed so that it can be used immediately in case of a calamity. The sign must comply with NEN 3011.

Article 6.26 Self-closing doors
Openings in interior separation constructions between fire compartments or sub-fire compartments and a room located outside that compartment would negate the resistance of such a construction against fire expansion or smoke penetration. In that case, there would no longer be compliance with the resistance against fire penetration or fire spreading between the concerned rooms. Therefore, paragraph 1 determines that doors in the interior construction must be provided with a pusher. It concerns here the separation constructions between a (sub) fire compartment and closed rooms outside of them and not the separation construction within a (sub) fire compartment or between a (sub) fire compartment and the exterior air. This self-closing requirement does not apply to the front door of a residence or doors located within the residential function based on paragraph 2 and does not apply to a cell door based on paragraph 3.

Section 6.7 Escape when there is a fire, new construction, and existing construction

Article 6.27 Direction article

The functional requirement that a construction must have such facilities to extinguish a fire that a fire can be extinguished within a reasonable period of time has been included in paragraph 1.
Based on the *second* paragraph, that requirement is met when the requirements of Articles 6.28 up to and including 6.35 indicated in Table 6.27 have been applied. Those requirements concern fire extinguishing agents, and fire extinguishing water supply and smoke management systems.

Article 6.28 Fire hose reels

Paragraphs 1 and 2 prescribe in which cases a fire hose reel must be present.
The user can extinguish a starting fire that usually has only one fire heart by using a fire hose reel.
From paragraph 3 follows how many fire hose reels are necessary (projection requirement).
The requirement is based on the fire hose length and 5 m (the throw length or the distance, which the water jet travels from the nozzle) and the floor surface, which must be able to be covered with the fire hose reel. This requirement applies to use functions which, based on paragraphs 1 and 2, must at least have one fire hose reel. One must count with the corrected walking distance from the fire hose reel. See for the concept ‘corrected walking distance; Article 1.1 determinations of concepts.
Paragraph 4 contains the requirements with which a fire hose reel must comply.
It is noted that a fire hose reel and the corresponding pump installation will be checked and maintained in an adequate manner based on Article 1.16 (Care obligation). This means that also repair will be executed, if necessary, but even better is that defects will be prevented. It is of importance that the hose will be replaced in a timely manner and the pump installation will run regularly to guarantee the reliability of its operation.

Article 6.29 Dry riser system

By using the concept ‘dry riser system’ in this article it is not envisioned to prohibit a wet riser system but to regulate that, at a minimum, there must be a riser system, which at least meets the requirements for a dry riser system.
Paragraph 1 of this article prescribes a dry fire line for buildings, which have a floor of a dwelling area, which is located 20 m higher. Such a riser system can also be necessary regarding equivalence and building high-rise buildings or underground buildings. The head of the discharge of the pump of a fire engine is insufficient because it is not possible to have the riser system function there without a pump installation, especially with buildings with a floor of a dwelling area that is over 70 m high. In such a case, it will be necessary to install a pump installation based on section 2.14, high-rise buildings and underground buildings.
In all these cases, it concerns rise systems and pump installations required by virtue of the law and, which require checking and maintenance in accordance with Article 1.16 (care obligation). See also paragraph 7 below.

Paragraph 2 offers the possibility to demand further requirements by ministerial regulation of the dry riser system intended in paragraph 1. One can think of the requirement of a horizontal dry rise in certain situations.
Paragraph 3 regulates that a road tunnel with a tunnel length of more than 250 m has a dry rise with a connection in each aid station. The dry riser system and each fire hose connection must have a flow opening which can provide a capacity of at least 120 m³ fire fighting water when there is a fire. From Article 6.30(2) follows that this capacity must be warranted during at least one hour of use of at least one fire hose connection. Therefore, it is not the case that a fire extinguishing capacity of 240 m³ must be provided with the simultaneous use of two connections.
Paragraphs 4 up to and including 6 contain requirements with which new construction (paragraphs 4 and 5) or existing buildings (paragraphs 4 and 6) must comply. The checking and the maintenance of dry riser systems and the corresponding pump installation have been regulated in Article 1.16 (Care obligation). The riser system and the corresponding pump installation must be checked and maintained regularly in an adequate manner. This means that also repair will be executed, if necessary, but even better is that defects will be prevented. Article 2.29(7) determines that supplementing the general care obligation of Article 1.16, a dry riser system and pump installation are required by virtue of the Housing Act with the delivery and subsequently that it must be tested in accordance with NEN 1594 once every five years.

Article 6.30 Fire fighting water supply
Based on paragraph 1, buildings and other constructions must have an adequate fire fighting water supply. The objective of this requirement is to guarantee that an adequate public or non-public fire fighting water supply is available for the fire department in or at a construction.
A non-public fire fighting water supply must be arranged when there is no adequate public fire fighting water supply present. Examples of fire fighting water supplies are a hydrant or another connection to the drinking water network or other pipeline network for extinguishing water, a water supply like a reservoir, a basin, an extinguishing pond, a water well or a source (ground water) or surface water like a lake, the sea, a ditch or a channel. A fire fighting water supply must be available and reliable, therefore, also in a drought or when it freezes.

Paragraph 2 regulates the presence and the capacity of a fire fighting water supply for road tunnels with a length of more than 250 m. The riser system of a road tunnel, as intended in Article 6.29(3), must be connected to the fire fighting water supply. The fire fighting water supply must be guaranteed for at least one hour irrespective of the number of connections to the riser system and during this hour at least 120 m³ of fire fighting water must be available. And, just as with other constructions, one can use a pipeline network, a water supply or surface water. Paragraph 3 regulates the maximum allowable distance between a fire fighting water supply and a fire fighters' entrance of a construction (building or construction that is not a building) with a firemen entrance as intended in Article 6.37. That distance may not be more than 40 m. This makes it possible that a hose can be connected to the fire fighting water supply site (see Article 6.39) within three minutes after arrival of the fire department. One must take into account a detour, which is a consequence of a physical separation in the street or the road like a canal or protected tram tracks. Paragraph 4 regulates

that the fire fighting water supply must be available immediately at all times. For instance, it can be necessary to take measures to prevent that a fire fighting water supply is blocked by parked cars or other objects.

Article 6.31 Fire extinguishers

This article concerns portable fire extinguishers and fire extinguishers on wheels. Mobile fire extinguishers generally only have a supplemental function to the fire hose reels prescribed in Article 6.28.

Paragraph 1 of Article 6.31 determines that there must be sufficient portable fire extinguishers or fire extinguishers on wheels, if there are insufficient fire hose reels present to extinguish a starting fire adequately. Whether there are sufficient fire hose reels present can be assessed based on the new construction requirement of Article 6.28 for both new construction as well as existing construction. It can be determined whether there are sufficient fire extinguishing resources present in an existing building without the presence of mobile fire extinguishers based on that article, although that article does not apply to existing constructions.

Other fire extinguishing resources can be necessary if a situation can arise as a consequence of the use of a building whereby water as a fire extinguishing agent is inadequate or dangerous.

For instance, this is the case with the possibility of a liquid fire or with high electric voltage.

It can also be the case that, as a consequence of the installation of a room, the basic premises in Article 6.28 for the calculation of the number of fire hose reels is insufficient to be able to cover the whole room with the water jet. In such cases, it will be necessary to have portable or mobile fire extinguishers. Paragraph 1 offers some room in the assessment whether the number and the nature of the available manual fire extinguishers is sufficient. It is indicated in paragraph 2 for room rental that there is compliance with paragraph 1 if there is at least one fire extinguisher in a common kitchen and at least one present in the common hallway or on the landing, per construction layer.

Paragraph 3 requires that each aid station in a road tunnel with a tunnel length of more than 250 m must have a portable fire extinguisher.

Paragraph 4 regulates that a portable fire extinguisher or mobile fire extinguisher, without prejudice to the provision in Article 1.16 (Duty of Care), must be checked and maintained adequately at least once every two years and that the check and maintenance must occur in accordance with NEN 2559. The objective of this requirement is to warrant the correct operation of the fire extinguisher. The user of the construction is of course free to have the fire extinguishers checked/maintained more often.

Article 6.32 Automatic fire extinguishing system and smoke control system

An automatic fire extinguishing system (i.e., a sprinkler installation) has the objective to extinguish a starting fire or to keep a fire under control so that the size of the fire will be limited. A smoke and heat discharge system (smoke control system) has the objective to discharge smoke and heat from a construction when there is a fire. Such an installation makes it possible to be able to escape safely during a longer period of time. The installation can also have been intended to prevent that rescue and extinguishing activities will be obstructed by smoke that stays in a room. In this article that is focused on warranting a correct operation of the mentioned installations,

it concerns requirements by or by virtue of the law. This means that such installations can play a role with an appeal to equivalence as intended in Article 1.3 of this decision, although they are not prescribed in this decision. This is an example of by or under the law. The mentioned installations can contribute to an equivalent solution for architectural fire resistant facilities or to allow a longer walking distance than intended in section 2.12. It is also possible to install an automatic fire extinguishing installation and/or a smoke control system as a part of the compliance with the required equivalent fire safety of large fire compartments and the functional fire safety requirements of section 2.14 (High-rise and underground buildings).
When an automatic fire extinguishing installation is applied with an appeal to equivalence then it follows from paragraph 1 that the installation that will be installed must be provided with a valid certificate that has been issued based on the CCV-certificate schedule Permanently Placed Fire Control and Fire Extinguishing Systems. CCV means Centre for Safety and the Prevention of Crime. Instructions can be given by ministerial regulation regarding the application of a certification schedule or inspection schedule based on Article 1.5(5) of this decision. One must think, for instance, about the date of issue of this certificate scheme with these further instructions. The certificate that is mentioned guarantees that the design, projection, installation, and effective date of connection of the installation comply with the specifications mentioned in the certificate scheme. An existing automatic fire extinguishing installation must be provided with a valid inspection certificate that has been issued based on the CCV inspection scheme permanently installed Fire Control and Fire Extinguishing Systems based on the second subsection. That inspection guarantees that automatic fire extinguishing installations also remain compliant with the basic premises as they have been formulated at the time of its installation.
When a smoke control system has been installed with an appeal to equivalence then it follows from Article 6.32(3) that this system must be provided with a valid inspection certificate that has been issued based on the CCV-inspection scheme Smoke Control Installations. With the concept ‘valid’, it is intended that the document may not be expired.

Article 6.33 Fire extinguishing agents sign
The objective of this requirement is that the persons who are present in the building can see where the fire extinguishing resources are located. A fire extinguishing agent that has been built-in in a closet, for instance, or that has been installed in a room with all types of visibility obstacles, like warehouse shelving, must be indicated by a pictogram.

Article 6.34 Temporary construction
Paragraphs 1 up to and including 3 of Articles 6.28 and Article 6.29 are fully applicable to the construction of a temporary building. This requirement is a deviation from the main rule provided in Article 1.14 that the requirements for an existing construction are applicable to a temporary construction.

Article 6.35 cancelled

Section 6.8 Availability for emergency services, new construction, and existing construction

General
This section concerns the fire fighters' entrance of constructions in which persons can be present, the availability of such buildings for emergency services, set-up locations for fire engines, fire fighters' elevators, and facilities for mobile radio communication of emergency services.
In the different articles there is mention of buildings where people dwell. Therefore, such a building can be both a building as well as a construction that is not a building. Concerning the latter, one could think of bleachers at a sports playing field.

Article 6.36 Direction article
The functional requirement that a construction must be adequately available to emergency services that fire extinguishing activities must be able to be executed in a timely manner and aid can be offered has been included in paragraph 1.

Article 6.37 Fire fighters' entrance
The fire fighters must be able to access a construction in a simple way to enable a quick and adequate deployment. Therefore, it is of great importance that the fire fighters immediately know where the construction can be accessed.
Paragraph 1 indicates that a building and a construction that is not a building in which persons can be present must have a fire fighters' entrance. A fire fighters' entrance is not necessary if the competent authority does not deem that necessary due to the nature, location or use of the construction. One or more accesses will be designated as fire fighters' entrances in consultation with the fire department based on paragraph 2 if the building/construction has multiple accesses. The fire department will take this into account with the possibilities to be able to correctly organise and execute the fire fighters' deployment from the specific entrance or entrances. Requirements are demanded in paragraph 3 regarding the unlocking mechanism of the fire fighters' entrance. This entrance must either open automatically in the event of a fire or be able to be opened with a system that has been determined in consultation with the fire department, for instance with a 'fire fighters' key'. Paragraph 3 is exclusively applicable to the buildings intended in paragraph 1 in so far as they have a fire alarm installation with compulsory alarm forwarding to the regional alarm centre of the fire department (see also Article 6.20).

Article 6.38 Availability construction for emergency services
This article contains requirements for the availability of buildings and constructions, which are no buildings where persons can stay, for fire engines and vehicles of other emergency services.
Based on paragraph 1, a connecting road must be present between the public road and the access to a construction for persons to stay in, which is suitable for the traffic to be expected like fire engines and vehicles of other emergency services. Not every building or every construction that is not a building in which persons can stay has to have such a connecting road. Such a road is required in the cases indicated in paragraph 2 like with a construction with a usable surface of no more than 50 m², or

if access to the construction is at most 10 m from the public road or when the competent authority is of the opinion that the nature, location or use of the construction does not make the presence of that facility necessary.
In paragraph 3, it is indicated with which requirements a connecting road, as intended in paragraph 1, must comply. The required minimum width of the connecting road and the required minimum load capacity of that road are adjusted to the use by ordinary vehicles without these vehicles having to pass each other. The requirements mentioned in paragraph 3 do not have to be met when a deviating requirement has been included in the destination plan or a municipal regulation.
In paragraph 4, it is determined that no obstacles may be present on a required connecting road (the road intended in the first subsection), which block the necessary height and width clearance for the passage of fire engines. For instance, such a road may not be blocked by parked cars or overhanging tree branches.
Paragraph 5 determines that a connecting road may not be closed in such a way that this would unnecessarily impede the [passage] of the fire department or other emergency services.

Article 6.39 Set up locations for fire engines
This article concerns the set up locations for fire engines at constructions, which are intended for the dwelling of persons.
At a building or a construction that is not a building where persons can dwell, set up locations must be present for fire engines so that those vehicles can be connected in an effective manner to the fire fighting water supply, based on the first paragraph. Those set up locations must be present in a sufficient quantity depending on the size of the construction.
Such set up locations are not required in the cases indicated in paragraph 2, like with a construction with a usable surface of no more than 50 m², or if the nature, location or use of the building, respectively the construction, does not require it in the opinion of the competent authority. The third subsection regulates the maximum allowable distance between a set up location and a fire fighters' entrance of the building/construction. That distance may not be more than 40 m. The objective is that a hose can be built up within three minutes between a fire engine and the fire fighters' entrance by the fire department.
In paragraph 4, it is determined that a set up location must remain clear across the prescribed height and width for fire engines. For instance, such a set up location may not be blocked by parked cars or overhanging tree branches.
Paragraph 5 determines that a set up location may not be closed in such a way by fences that this would (unnecessarily) impede the [passage] of the fire department or other emergency services. A possible access system must be chosen in consultation with the fire department.

Article 6.40 Fire department elevator
In some cases (for instance, with high-rise buildings), it may occur that a fire department elevator must be present in the building to be able to rescue persons when there is a fire and combating the fire by the fire department. If an elevator is designated as fire department elevator then the fire department must be able to trust that this elevator will be suitable to transport material and crew safely when there is a fire. There is a referral to Article 1.1 for an explanation to the concept 'fire department elevator'. The fire department is enabled to deliver fire extinguishing

material to stories that are located higher along a safe way when such an elevator is present. It is required that the fire department elevator must be managed, maintained, and checked in an adequate way based on the provision in Article 1.16 (Care obligation). It will be necessary to take into account the specific properties of the fire department elevator because the ordinary periodic checking of the elevators based on the Elevator (Commodities Act) Degree (once every 18 months) does not check the safety aspects, which are specific for a fire department elevator like for instance shaft ventilation. This will generally mean that each fire department elevator must have a specific check and maintenance service every 18 months. If this does not occur adequately, the fire department will not want to use the elevator anymore as a fire department elevator. It is observed that when a required fire department elevator is missing, for instance, because the fire department does not want to use the elevator anymore as a fire department elevator, this may lead to limitations that will be imposed on the use of the construction.

Article 6.41 Mobile radio communication emergency services

Adequate communication between public aid providers is essential to be able to function correctly in case of a calamity. In many cases no extra facilities are needed for this. Two specific requirements are given in this article. Special facilities for an adequate mobile radio communication between aid providers within and outside that construction can be necessary (first subsection) with a construction intended for a large number of visitors. Such an installation for mobile radio communication approved by the competent authority between emergency services within and outside the road tunnel is always needed (paragraph 2) in the case of road tunnels with a tunnel length of more than 250 m. The necessity for such an installation depends on the specific circumstances in the case of constructions, which are accessible to large numbers of visitors. This will depend, for instance, on the already available coverage of the communication network of public emergency services inside and outside the construction, the number of persons, and the complexity or the size of the building. The already available coverage of the so-called C2000-system will suffice in most cases. C2000 is a national digital radio network for the mobile communication of the Dutch emergency services. In practice, this means that the aid provider can always, at any time, establish a connection with colleagues or the dispatch room or the alarm centre outdoors, everywhere in the Netherlands.

In many cases, it will also concern coverage indoors because of the manner in which the C2000-radio network has been designed. However, this strongly depends on the nature and the location of the construction. The lack of indoors coverage can sometimes lead to objectionable situations in constructions accessible to the public at large. Such locations are indicated as special coverage locations (SCLs) in the C2000 jargon. In those cases, it will sometimes suffice to take local and temporary coverage measures like direct mode of operations (DMO) or with a so-called DMO-TMO-gateway. This must be assessed on a case-by-case basis.

First must be determined whether it concerns a construction intended for large numbers of visitors. Generally it concerns constructions temporarily accessible for the public at large like soccer stadiums, large covered shopping malls, airport buildings, stations, and underground constructions like car, train, and metro tunnels. Such buildings do not belong to the category constructions intended in paragraph 1 because in office buildings, school buildings, and court buildings, for instance, only large numbers of users may be present but not large numbers of visitors.

Subsequently it must be determined whether the construction has sufficient coverage indoors (SCL location) and whether there is insufficient coverage indoors of the existing radio network (C2000) in that SCL without supplemental facilities. If that coverage is not present (or not in the whole construction), it must be determined whether a DMO or DMO-TMO offers a sufficient solution. One must only search for a more structural solution for adequate indoors coverage when the latter is not the case, based on Article 6.41.

Section 6.9 Supplemental tunnel safety, new construction, and existing construction

General
The requirements of this section concern the safe use of road tunnels. 2004/54/EC of the European Parliament and the Council of the European Union of 19 April 2004, regarding minimum safety requirements for tunnels in the trans-European rod network (OJ L 167, corrected in OJ L 201) (hereinafter: the guideline tunnel safety). Until this decision takes effect, the requirements of this section were included in paragraph 2 of the Decision supplemental rules safety road tunnels (Stb. 2006, 248). In accordance with the promise in the bill of explanation with the last mentioned decision they have been included in the decision from now on.

Article 6.42 Direction article
Paragraph 1 gives as a functional requirement that a road tunnel with a tunnel length of more than 250 m has such facilities that the safety is warranted for the road traffic. The requirements in this section apply to all road tunnels which are longer than 250 m, irrespective whether it concerns new construction or existing construction. From paragraph 2, it follows that the requirements of this section are applicable to each road tunnel with a tunnel length of more than 250 m.

Article 6.43 Equipment aid station
Based on this article, an aid station as intended in Article 2.1
23 must have an emergency telephone and a wall power socket with 230 volt. Aid stations are intended to offer different safety facilities like emergency telephones and fire extinguishing equipment (see also Article 6.31), however, they are not intended to protect the road users against the consequences of a fire.

Article 6.44 Operation centre
Based on this article, a road tunnel with a tunnel length of more than 500 m must be connected to an operation centre with a facility for permanent video monitoring and automatic detection of accidents and fire. This article is for the implementation of the guideline for tunnel safety.
The operation centre can also be used for the operation of mechanical ventilation because in the Netherlands such long tunnels are always provided with mechanical ventilation.
It is noted that the automatic detection systems especially react to so-called "underrunning" of the maximum speed limit, therefore, also slower driving or standing still of cars, for instance, in relation to a breakdown or an accident. Besides, the operation centre does not have to be located in or close to the tunnel. The supervision over different tunnels can be centralised in one operation centre.

Article 6.45 Discharge of flammable and poisonous liquids

Based on paragraph 1, a new construction road tunnel with a length of more than 250 m must have a facility every 20 m in the drive lane surface for the discharge of flammable and poisonous liquids to limit expansion of fire by the spreading of flammable liquids and the limitation of the spreading of poisonous liquids. The distance between these discharge points is measured in the direction of the length of the tunnel.

The total system to which the grills and such are connected is understood as discharge facility. No concrete performance requirements have been demanded of the capacity of the separate grills and the discharge pipeline and such. It is necessary that these liquids can be removed quickly and safely in order to prevent the spreading or origination of fire or the spreading of poisonous liquids when there is a calamity whereby a leak of hazardous liquids occurs. Generally, this will mean that a discharge pipeline in the system has a diameter of at least 0.2 m and that via a slope or a pump system a sufficiently quick removal to a reservoir (middle cellar) is possible. Information about this can be found in the Safety Guideline part C (VRC), publication of the Directorate-General for Public Works and Water Management, Support for Tunnel Safety, January 2004.

Paragraph 2 provides a similar requirement as paragraph 1 for existing construction. The difference with existing construction is that there are no requirements of the mutual distance between the discharge facilities.

Article 6.46 Traffic technical aspects tunnel

Paragraph 1 determines that a road within and outside the tunnel must have the same number of driving lanes. Possible shoulders are not taken into consideration. If the number of driving lanes changes, this must occur at sufficient distance before the tunnel portal. Based on paragraphs 2 and 3, no two direction traffic is allowed in a road tunnel unless it has been demonstrated that one-way traffic is not possible because of physical, geographic or traffic technical circumstances and the two directions traffic has been covered by sufficient safety guarantees. In any case, the road tunnel must be provided with a system for permanent supervision and a system for the closing of driving lanes and the allowable maximum speed is 70 k/h, based on the fourth subsection.

Article 6.47 Communication facilities

Paragraph 1 regulates that a road tunnel with a length of more than 500 m has a facility:

a. with which communications can be made to persons on each driving lane and escape route,
b. for the re-transmission of radio signals in each road tunnel, and
c. for the interruption of radio transmissions to execute communications.

The concerned messages are not only issued in the Dutch language but also in the English language (paragraph 2) for the promotion of safety.

Article 6.48 Connection to emergency power supply.

The emergency power supply intended in this article must guarantee that the power supply is such that the essential safety facilities for evacuation remain in operation when there is a power failure in a road tunnel (with a tunnel length of more than 250 m, see Article 6.42).

Section 6.10 Availability of buildings for disabled persons, new construction, and existing construction

General
This section must read the context with section 4.4 Availability and accessibility about the construction technical accessibility of the buildings both for disabled persons as well as for non-disabled persons.

Article 6.49 Direction article
The functional requirement included in paragraph 1 is directed at a construction with an accessibility sector that can be reached by anyone from the public road. There is a referral to Article 1.1 for an explanation to the concept 'accessibility sector'.
Paragraph 2 determines that there is compliance with the functional requirement of paragraph 1 by the application of the prescriptions of this section.
These prescriptions apply to all use functions with an accessibility sector and to both new construction as well as existing construction.

Article 6.50 Availability of buildings for persons with disabilities
Paragraph 1 of Article 6.50 indicates when a passable route (road or path) must also be present between the entrance to a building and the public road with a width of at least 1.1 m for disabled persons. When there is a difference in height of more than 0.2 m, then that difference in height must be bridged by a ramp. See section 2.6 for the requirements for a ramp.
Paragraph 2 contains the requirements with which a passage on the road or path, as intended in paragraph 1, must comply. Such a passage must have a clear width of at least 0.85 m and a height clearance of at least 2 m. For an explanation to the concepts 'clear width' and 'height clearance', there is a referral to the explanation to Article 1.1.

Section 6.11 Prevention of common criminality, new construction, and existing construction

Article 6.51 Direction article
In the functional requirement included in paragraph 1 that a residential building should have facilities that prevent common criminality has been expressed that the requirements in this section do not concern buildings other than residential buildings.
Paragraph 2 determines that there is compliance with the functional requirement of paragraph 1 by the application of the prescriptions of this section.

Article 6.52 Prevention of common criminality in a residential building
The objective of this article is to prevent that unauthorised persons can enter a residential building in a simple way.
Paragraphs 1 and 2 only concern residential buildings that will be built.
Based on paragraph 1, each access of a residential building that will be built must be provided with a door that locks itself, for instance via a pusher, based on the first subsection.
This is to prevent that residents of a residence located in the building will easily leave a door open. Such an access door must be provided with a lock so that the building

cannot be entered without the use of a key or the intervention of the resident. Besides, the key does not have to be a traditional key. The chances are that residents consciously leave an entrance door open without the facilities to be able to observe whether there are visitors from their residence, speak with them, and allow them entrance, if desired. Therefore, paragraph 2 contains requirements regarding the presence of a door opener, bell, and intercom. This door opener, bell, and intercom are common facilities, which are a part of each designated access to a residence.
Paragraphs 3 and 4 concern existing residential buildings. Based on those paragraphs, a lockable access of an existing residential building must be equipped with facilities for the door to lock itself (paragraph 3) and to give a signal to the concerned residence (paragraph 4).
In reality, this means the presence of a pusher and a bell. Therefore, no door opener and intercom is required other than with a new construction. Both paragraphs only apply to residential buildings with a lockable access. A portico without a lockable access (open or Hague portico) is allowed in the existing construction.

Section 6.12 Safe maintenance buildings, new construction

General
The requirements of this section concern the ability to execute maintenance to a newly to be built building. The Working Conditions Act supervises the safety of maintenance employees who execute maintenance activities on existing constructions.

Article 6.53 Direction article
Paragraph 1 of this article gives as a functional requirement that a construction to be built must be such that maintenance to the building can be executed in a safe manner. Paragraph 2 determines that there is compliance with the functional requirement of paragraph 1 by the application of the prescriptions of this section. These requirements apply to all newly to be built buildings.

Article 6.54 Safe maintenance buildings
Article 6.54 prescribes that these requirements must actually be executed if ground floor facilities are necessary to be able to safely execute maintenance activities to a building.
The execution of maintenance includes, among others, painting and cleaning and repairing roofs, gutters, chimneys, facades, windows and installations for climate control, elevators, and telecommunications. Measures which prevent danger or eliminate it (source measures) are preferred over facilities which limit or screen off danger when choosing safety facilities. Facilities, which screen off danger permanently like railings or, which limit the danger like glass cleaning installations, are in turn preferred over personal safety oriented facilities like attachment points for lines or harness belts
Besides, it is quite possible that a building can be maintained without building related facilities.
However, the space that is necessary for the use of those facilities (labour resources), like a set up location for a high-rise worker, must have been taken into account in the construction plan.

It should be demonstrated that the possibility to be able to safely execute maintenance activities has been provided to a sufficient degree when requesting the permit for the construction and to the satisfaction of the competent authority. It follows from the Regulation environment law (Mor) which information must be supplied with the request. It concerns a check list that must be filled in by the applicant based on which will be determined whether a building related safety facility is necessary or not and if that is the case which facilities these should be.
The mentioned check list has been composed by the ministry of Social Affairs and Employment together with the different organisations from the maintenance industry group as test framework 'Safe maintenance on or to buildings'. This auxiliary resource for principals, designers, and construction plan examiners serves to check whether the ability to safely execute maintenance activities at a height has been taken into account sufficiently can be found at www.HBA.nl and www.rijksoverheid.nl.
Currently, the maintenance industry group, together with the BNA, is drawing up a manual in which solutions for safe maintenance at height are necessary and possible. As soon as the mentioned manual is available, it will be assessed whether it is suitable to be used as a determination method with the application of paragraph 1. If so, this will be regulated in the ministerial regulation as intended in paragraph 2.

Chapter 7 Requirement concerning the use of constructions, open properties, and terrains

General
This chapter contains requirements concerning the use of constructions, open properties, and terrains. Chapter 7 has been divided into three sections.
Section 7.1 concerns the prevention of fire danger and development of a fire. Section 7.2 concerns the safe escape when there is a fire. Section 7.3 contains other provisions for safe and healthy use.
The system of chapter 6 is different than those of chapters 2 up to and including 5. A distinction has been applied between the requirements for new construction and existing construction and these requirements have been placed in separate paragraphs, if they are both present in chapters 2 up to and including 5.
In chapter 7, the sections are not subdivided into separate paragraphs for new construction and existing construction. This is also expressed in the title of the sections with the addition 'new construction and existing construction' Although requirements regarding the use in a certain sense only can concern an existing situation, in principle the use requirements in this chapter are also oriented towards new construction. The envisioned use will eventually play a role with the evaluation of an application for an environment permit or a use report. It will be prevented that such a permit is granted for a building that cannot be used in accordance with the intention of the permit applicant by including the envisioned use in the evaluation of an application for environment permit for the construction. Only Article 7.17(1) exclusively concerns existing construction.

Section 7.1 Prevention of fire danger and development of a fire, new construction, and existing construction

The requirements of this section are oriented towards preventing fire danger and the development of fire as much as possible.

Article 7.1 Direction article
The functional requirement of paragraph 1 indicates that the use of a construction must be such that the origination of a flammable situation and the development of a fire will be prevented.
The table of paragraph 2 indicates the requirements per use function, which are applicable to that use function. When complying with these requirements, the functional requirement of paragraph 1 is met.

Article 7.2 Ban on smoking and open flames
Paragraph 1 contains a ban on smoking or to have open flames in rooms, which are intended for the storage of flammable substances, with the execution of actions, which can cause the flowing of flammable liquids and when filling a combustible reservoir with flammable liquid or gas. Paragraph 2 determines that the ban must be announced by pictograms that are applied in a clearly visible manner, as described in NEN 3011 (publication 2004).

Article 7.2a Securing self-closing construction part

Article 7.2a prescribes that a self-closing door may not be secured in an open position unless that door is automatically released when there is a fire or there is smoke because of a fire.

By being automatically released it is understood that the door closes automatically (and with automatic detection, therefore, without the intervention of a person) when there is a fire and when there is smoke because of a fire. Generally, the temperature of the smoke, in the initial phase of a fire, is still so low that a fuse would not function adequately. Therefore, a system other than a fuse must be applied at a smoke separation. Requirements can be issued regarding the smoke penetration of a fire separation based on Articles 2.95(3) and 2.108(3) by ministerial regulation. It may result from these requirements that a fire separation will also have to be a smoke separation. This means that in such a case another system will still have to be applied (or besides it) although the fuse is sufficient with a fire separation.

Article 7.3 Direction article

Requirements have been included in this article for the dressing of a closed space in view of fire danger prevention. These requirements are exclusively demanded from a closed space because it is assumed that other (limited) fire safety risks are involved in a non-closed space, for instance, a courtyard or a garden. In such a specific case there may be an appeal to the 'safety net' Article 7.8 in the case of such non-closed spaces. In this decision, a distinction is made between construction parts, dressing, inventory, and 'installation elements' (a sub-collection of 'inventory'). The construction technical requirements of construction parts of rooms are stated in chapter 2 of this decision and use requirements of dressing and inventory of those rooms in this chapter (7). By 'dressing' it is intended to mean curtains, sheer curtains, garlands, and other decorations in a room which are not included in the construction parts or the inventory. Furniture in a room is not included in the dressing or construction parts but it is under inventory (see also Article 7.11). Article 7.4 mentions installation elements in the sentence 'stands, booths, shelves, podiums, and other installation elements'. Such installation elements are considered to be 'inventory' just like furniture.

In paragraph 1 of this article it has been determined that dressing may not result in fire danger and in which cases one may assume that it does not concern fire danger. Fire danger is present in any case when:

a. the dressing supplies a subordinate contribution to fire danger;
b. the dressing is non-flammable, determined in accordance with NEN 6064;
c. the dressing complies with fire class A1 as intended in NEN-EN 13501-1;
d. the dressing complies with the requirements for construction parts as intended in section 2.9 or
e. the after flame duration is at most 15 seconds and the afterglow duration is at most 49 seconds.

The answer to the question when dressing does not supply a subordinate contribution to fire danger strongly depends on the circumstances. Generally, Christmas decoration on the tables in a restaurant is no problem. However, that Christmas decoration can become a problem when there is dressing close to it to where a fire can simply flash to the Christmas decoration. Part a of paragraph 1 also offers the possibility to hang garlands or drawings in a school room as long as these deliver a

subordinate contribution to fire danger. Therefore, the fire may not be able to spread through the room like wildfire.
In paragraph 2, a special provision has been included for dressing in a closed room for the dwelling or the escape of more than 50 persons. When there is dressing in such a room, which complies with the provision stated in paragraph 1, it is not necessarily assumed that there is no fire danger. The maximum after flame and afterglow durations insufficiently guarantee the fire safety when there is dressing (decorations) which hangs lower than 2.5 m above a part of the floor where people could be present. There is a risk with low hanging decoration that this will get in contact with open flames of, for instance, burning lighters, candles, pyrotechnics or cigarettes. The criteria intended under e are adequate when the dressing has been applied directly to the floor, stairs or ramp or when it concerns permanent carpet. In other words: in a close room for the dwelling or escape of more than 50 persons the dressing is considered fireproof when this complies with the mentioned conditions in parts a up to and including d of paragraph 1. If this is not the case, but the after flame duration and afterglow duration are under the limit of paragraph 1e, then the dressing is fireproof if it is located more than 2.5 m above a floor intended for persons or is located above a part of the floor not intended for persons (irrespective of the height of the decoration) or if it concerns carpet.
Paragraph 2 is, therefore, mainly of importance for the prevention of fire danger because of low hanging decoration. It depends on the installation of the room whether it concerns a part of the floor that is not intended for persons. It concerns those locations where usually no persons are located, for instance, above a table, a bar or stand. It does not have to be taken into account that someone may climb onto such an installation element.
Practical information is provided by the NVBR in its folder ‘Fire safety info 18: party decorations, it can be done and must be safe!’ This folder can be downloaded via www.brandweer.nl.
The recently developed Dutch technical agreement NTA 8007 ‘Fire behaviour decoration materials’ also contains practical information, which may be useful with the application of the requirements stated in this article. This NTA is available at NEN (www.nen.nl).
In paragraph 3, it is determined that those parts of equipment and installations, which irradiate heat (more than 90 C) may not get into contact with the dressing. However, this is allowed when the dressing is inflammable. One may act with this requirement, for instance, against the situation where a fire could originate in the curtains because of a halogen light fixture.
Paragraph 4 prescribes that no balloons filled with a flammable gas may be present in a closed room.
Based on paragraph 5, paragraphs 1 up to and including 5 are not applicable to non-common rooms of the residential function and the other accommodation function. This means that these requirements are not applicable to, for instance, the furniture, wall paper or curtains within a residence or within a vacation house.
Paragraph 6 offers the possibility to demand other requirements by ministerial regulation regarding the contribution of dressing to fire danger.

Article 7.4 Fire safety installation elements

This article states requirements of the fire safety of stands, booths, shelves, podiums, and other comparable installation elements when they have been set up in spaces

accessible to the public, like stores, stock market, exposition, school, music, theatre, and covered swimming pools, neighbourhood centres, and libraries. The objective of these requirements is to prevent that a starting fire can develop quickly in the set up space and/or that the materials used could result in injury risks to persons present in that space when there is a fire. No requirements for the products or objects exposed in the stands. Problems to be expected as a consequence of the exposed products or objects can be approached based on the 'safety net Article' 7.8 if necessary. In paragraph 1, it has been determined that the installation elements must be fire safe. This means that these elements may not catch fire quickly and may not result in a large contribution to the reproduction of fire.
In paragraph 2, it is determined when there is compliance in any case with the requirements of paragraph 1. This is the case when a part that is oriented toward the sky:

a. is non-flammable, determined in accordance with NEN 6064;
b. complies with fire class A1 as intended in NEN-EN 13501-1;
c. has a thickness of at least 3.5 mm and complies with fire class D, as intended in NEN-EN 13501-1;
d. has a thickness of at least 3.5 mm and complies with class 4, as intended in NEN 6065, or
e. has a thickness of at least 3.5 mm and has been glued across the whole surface to a part as intended under c or d.

Generally, thin materials have less favourable fire properties than thicker ones (thin materials often burn quicker). If a thin material, as intended under e, has been glued across the whole surface to a material, as intended in part c or d (the carrier), then the properties of the merged materials approach the fire properties of the thicker carrier material.
Based on paragraph 3, paragraphs 1 and 2 are not applicable to the common rooms of a residential function and another accommodation function (vacation house).

Article 7.5 Flammable substances

This article concerns the presence of flammable substances in, on, and close to constructions, the so-called household storage. By flammable substances it is understood, as indicated in Article 1.1(1): solid substances, liquid substances, and gases, which are flammable or increase the fire hazard or result in danger when there is a fire. For several years, the prescriptions about substances, which are both dangerous to the environment or can cause a fire, are exclusively under control of the environmental regulations and the issue of prescriptions about such substances up to the so-called Ivb-limit are under control of the construction regulations. The Ivb-limit is the lower limit with which is indicated in the Installations and permits decisions of environmental management (Ivb) for which quantities and which substances are under the scope of the control of that environment decision. Since 1 October 2010 (Wabo entry into force), the Ivb has been absorbed in the ministerial regulation environment law (Mor). Therefore, the issue of requirements about the operational storage of substances, which are both dangerous for the environment as well as for fire, only occurs in regulation based on the Act Environment management, like the Activities Decision on environment management and in environment permits for an environment installation that is being founded, changing or is in operation, as intended in Article 2.1(1e) of the Wabo.

The construction regulations are limited to household storage, i.e. smaller quantities, which may be considered as working inventory for the good operation, taking into account the danger aspects of the concerned substances. This has been elaborated in Article 7.5 into a ban on the presence of flammable substances in combination with explicit exceptions to that ban.
It has been indicated per type of substance and packaging group (see the definition in Article 1.1(1)) in Table 7.5 included in this article what quantity of a flammable substance is allowed. The concerned substances are organised corresponding to the sub-collection 'substances, which are flammable as well as dangerous to the environment' of the ADR (see the definition in Article 1.1(1)) in the first column of the table. The net mass in kilos is used as a unit to determine quantities of solid substances, gases that were turned into liquid and gases under high pressure in accordance with the ADR terminology and the nominal contents in litres is used as the unit when it concern s liquids and compressed gases. The ban on having a flammable substances present has been included in paragraph 1. In Table 7.5 can be read what a flammable substance is. It appears from this table that also medicinal oxygen is a gas that is included under the requirements of Article 7.5. The ban stated in paragraph 1 is not applicable based on paragraph 2 when the allowable maximum quantity of a certain substance is not exceeded (part a), the substance has been adequately packaged (part b), and that substance is used taking into consideration the danger signs indicated on the package (part c).
To this applies that the total quantity of substances may not be more than 100 kilograms or litres. The substance should be packaged in such a way that the packaging is resistant to a normal handling (which usually will be the case with the original packaging) and nothing can escape from the packaging without planning (which will be the case with an adequate closing of the packaging of an unopened original packaging). The so-called R and S sentences must be taken into consideration when used in accordance with the danger indications. Those sentences, which are usually indicated on the original packaging, indicate the product properties (R = risk: for instance 'flammable') and contain instructions for its use (S= safety: for instance 'do not smoke while using [the product]')
In paragraph 3, a number of deviations from paragraph 1 can be read independently. The substances included in paragraph 3 do not have to be taken into account with the determination of the total quantity of allowable substances. For instance, motor combustibles present in a car or in a scooter (a) or alcohol containing beverages intended for consumption (c) do not have to be taken into account.
Part f of paragraph 3 determines that paragraph 1 is not applicable to flammable substances in so far as the presence of them is allowed by or by virtue of the Act on environment management or the Wabo. This secures that exclusively for such substances the Act on environment management and an environment permit as intended in Article 2.1(1) of the Wabo apply and, therefore, contradictory requirements are excluded. The content size of an opened packaging must be completely included based paragraph 4. For instance, if there are still four litres of the original ten litres in a barrel, then one must calculate ten litres.
Some of the following calculation examples are based on Article 7.5. Gas bottles with a maximum content of a total of 115 litres and a maximum of 1 000 litres of diesel, gasoline or light heating oil (ignition point between 61 °C and 100 °C) may always be present, irrespective of the presence of other substances. It does not only concern a maximum quantity for substances per ADR-class with the other substances

(for instance: no greater quantity of substances of ADR-class 3 of packaging group II than a total of 25 litres) but also the quantities of substances from all mentioned ADR-classes together may not be more than 100 kilograms or litres. When, for instance, in a construction 50 litres of liquid of ADR-class 3 of packaging group III and 50 kilogram substances of ADR-class 5.1 are present, the limit of the allowable maximum quantity of 100 kilograms or litres has been reached. In that case, the previously mentioned gas bottles and oil types may be present up to the maximum quantity indicated for them may still be present, but none of the other substances indicated in the table. In paragraph 5, it has been regulated that in deviation from paragraph 3e, more than 1 000 litres of an oil type mentioned in that article part may be present if the method of storage and its use is such that the origination of a flammable situation and the development of a fire are sufficiently prevented in the opinion of the competent authority. Therefore, the competent authority can agree with the presence of a larger quantity, based on that. The scope of that competence is limited to cases which are not included in the operation area of the Act on environment management.
For instance, this is the case when more than 1 000 litres of diesel oil are present for generators, which are used during an event in a construction that is no installation in the sense of the Act on environment management (for instance a stadium).

Article 7.6 Flammable non-environmentally friendly substances
In this article, it concerns the operational storage of flammable non-environmentally dangerous substances (for instance wood, car tires, and plastics). Such substances are not included anymore in the environment regulation since 2008 because being flammable per se is not viewed as a direct environmental risk.
Paragraph 1 gives a functional requirement for the operational storage of flammable non-environmentally dangerous substances. The storage of such substances in a construction or in the open air must be such that with a fire no unacceptable risk will originate for lots, which are located next to the lot where that storage is located. This only applies when the adjacent lot is an existing or a future camping ground, a playground or storage of flammable substances, and to buildings on the adjacent lot. The concept ‘flammable substance’ is defined in Article 1.1(1).
It means that the enterprise will have to adapt because this paragraph 1 is also applicable to future situations. In this case, it concerns only future situations which can be realised based on the existing destination plan.
Therefore, it concerns the prevention of fire spread to those adjacent lots in this chapter. In chapter 2, it is indicated when a building is compliant with paragraph 1 when storing wood.
It may not concern a fire spread to the other lot during an hour after a fire started in the storage. The functional requirement given in paragraph 1 has also been met when there is compliance with this performance requirement. The person who is responsible for the storage will have to demonstrate for the competent authority that the storage complies with the requirements stated in the prescription. See also the ‘Determination method heat radiation exposure of wood storage’ of the former ministry of VROM (May 2004) (can be downloaded via www.rijksoverheid.nl) and the corresponding computer model (can be downloaded via www.infomil.nl).
In paragraph 3, it is determined how the radiation exposure of the storage must be measured.

The measuring must be on the lot boundary when a camping ground, playground or storage of flammable substances is located on the adjacent lot. No radiation exposure as intended in paragraph 2 may be exceeded on a single point of the exterior separation construction when a building is located on the adjacent lot.
This can be measured best on the wall facing the lot boundary.
An example:
The exterior wall of a school building is located next to a pallet company at a distance of 100 m of the lot boundary of that company. In that case, the radiation exposure must be measured on the exterior wall of that school facing the wood storage of that company. The radiation exposure will be best calculated based on a new exterior wall when the school wants to expand with a room, which will cause the exterior wall of the school to be located at, for instance, 50 m from the lot boundary of the pallet company. The radiation exposure must be calculated on the exterior wall, which is located at 100 m from the lot boundary as long as the possibility of an extra room will not be used. The radiation exposure must be calculated on the new exterior wall which is located at 50 m from the lot boundary as soon as the new room has been built.
It can be necessary that the wood storage on the grounds of the company must be relocated after the construction of the extra room or that the pallet company must take extra fire resistant measures on this ground to be able to comply with the requirements. The company cannot derive any right from the old situation in such a case.
It is not possible to provide concrete performance requirements for the operational storage of other flammable non-environmental dangerous substances like, for instance, car tires or plastic products because no determination method is available yet.

Article 7.7 Storage in boiler room
This article determines that no flammable goods may be stored or set up in a room in which one or more combustion appliances are present, which have a total nominal exposure of more than 130 kW.

Article 7.7a Safe use of combustion appliance
In this article are the conditions with which must be complied with the use of a combustion appliance. Part a of paragraph 1 determines that during the use of a combustion appliance, the openings in the facility for the supply of combustion air or the removal of smoke gas may not be closed. This prevents a flammable situation and carbon monoxide poisoning as a consequence of a bad supply of combustion air or insufficient removal of smoke gases. In Article 3.49, it says that a room with a storage location for a combustion appliance must have facilities for the supply of combustion air or the removal of waste gas.
Part b determines that a combustion appliance may not be used if the capacity of the facility for supply of combustion air or the facility for the removal of waste gas is insufficient to have the appliance function correctly. Also, the capacity of possible applied connections between these facilities and the combustion appliance must be adequate. See for capacity also section 3.8.
Part c determines that the set up including the connection pipeline between the appliance and the facility for the removal of waste gas must be fireproof. In paragraph 2 of this article it is mentioned when in any case there is compliance.

Part d requires that a chimney or discharge channel must be effectively cleaned. This is generally the case for a heating appliance if the chimney is cleaned once per year, depending on its use. Part e regulates that the combustion appliance that has a waste gas discharge opening with a possibility to connect it to a chimney must be connected in a correct manner to the chimney channel. An improper connection could lead to, among other things, leakage of waste gas or a fire. It follows from Article 2.66 that a waste gas drain must be fireproof. An existing waste gas drain which does not meet these criteria must be restored immediately and may not be used prior to the restoration. Besides the specific requirements included in this article, Article 1.16 (Care obligation) obviously applies where in paragraph 1c it has been determined that the use must be such that no danger for the health or the safety [of persons] originates or continues.
It has been determined in paragraph 2 that it concerns in any case a fireproof set up when NEN 3028 has been met.

Article 7.8 Residual risk for fire and development of a fire
This general determination of a ban ('hook article') concerns fireproof use in which the other requirements of this decision does not provide. The competent authority has a 'hook' with this to intervene in a specific case when the fireproof use has been insufficiently warranted (also if the use in itself complies with the requirements of this decision). Here, it concerns a special stipulations authority, which can exclusively be applied to the circumstances mentioned in this article. It is expressly not the intention that the municipality demands general supplemental or further requirements.
Furthermore, the required measures must always be in proportion to the risk that must be combated. The municipality will have to be able to demonstrate the necessity of this in a concrete case.
Some examples of situations in which an appeal to this 'hook' article can be justified:
- if the danger for fire is caused by, for instance, the storage of flammable materials or the collection of waste in an unsafely set up container (part a):
- if there are objects which cause danger for fire on a protected or extra protected escape route (part a):
- if the roll back space of an escalator is not cleaned correctly. Dust collection, grease, and dirt can lead to fire in such a space (part a);
- for instance, if, in a space, such a large fire exposure is present and/or such a fast fire progress can occur that the control of the fire as envisioned with the fire partitioning or sub-fire partitioning is not guaranteed, and, as a consequence, the fire could flash over to, for instance, an adjacent or nearby residence, hospital or other vulnerable use function (part b).

See also explanation to Article 7.14. (Residual risk for safe escape when there is a fire).

Section 7.2 Escape when there is a fire, new construction, and existing construction

The requirements of this paragraph are focused on being able to escape sufficiently safe and quick when there is a fire.

Article 7.9 Direction article

In the functional requirement of Article 7.9(1) it is indicated that the use of a construction may not be such that being able to safely escape when there is a fire will be obstructed because of it.

The table of paragraph 2 indicates the requirements per use function, which are applicable to that use function. When complying with these requirements, the functional requirement of paragraph 1 is met.

Article 7.10 Doors in escape routes

This article concerns the doors in escape routes of constructions. The objective of these requirements is to guarantee that doors in escape routes disturb as little as possible during an escape from a fire.

The basic principle has been included in paragraph 1. Doors, which play a role in an escape, may not be locked when there are people present in a building so that it will not be necessary to use a key to be able to exit the building. By key is not only understood a key belonging to the lock but any other separate object that may be necessary or a code or scan, which is necessary to open a door of at least the required width when there is a fire. A so-called button cylinder is, therefore, allowed.

The requirement may also be met with a door that has a bolt; in that case it is necessary that this bolt is located in an easy to reach location and not for instance all the way at the top or bottom of the door. In such cases, it cannot comply with the criterion ‘immediately’ to be opened.

The requirement of paragraph 1 also means that goods may not be placed in such a manner that they are an obstacle for the (immediate) opening of the door (see also Article 6.25 about the minimum required width).

It has been determined in paragraph 2 that paragraph 1 does not apply to a door on an escape route, which starts in a room for the confinement of persons. Such a room can be both a cell function (for instance, a cell in a penitentiary institution) or another room for the confinement of persons in another use function like an office function (for instance, an interrogation room or detention room in a police station or court house). This determination for an exception has been chosen because the nature of such buildings usually resists doors, which can be opened by anyone without a key. However, it is necessary that the doors can be opened sufficiently fast across the required width. It must be checked carefully, case by case, what this means in practice. Institution, use, and the organisation of the use function must be such that the envisioned safety level in Article 7.9 is warranted. It is noted that this requirement does not only apply to the part classified as cell function of, for instance, a penitentiary institution or psychiatric institution (closed department) but also to other use functions with the same safety regime located in a similar institution. These other use functions must be considered as an ancillary function of the cell function. One can think for instance about a recreation room (meeting function) or teaching room (teaching function). Of course, the same applies to ancillary functions of other use functions where people can be locked up. Examples of this are the isolation room in the health care function and also a vault (in which people can be present) in a bank (store function). Paragraph 1 is not applicable based on paragraph 3 to a non-common escape route with another residential function. This means that the requirement is not applicable to the exterior door and interior doors of a regular residence. Paragraph 4 determines the same for doors of an accommodation dwelling

like a hotel room or a vacation house (see also the explanation to the concept ‘accommodation dwelling’ in Article 1.1(3)).

Article 7.11 Set up seats and further installation

The possibilities to be able to escape sufficiently quick and safe from a construction are determined to a large extent by the flow capacity for persons. The flow capacity is also determined, except by architectural properties and by the presence and the specific set up of inventory like chairs, tables, cabinets, and plant boxes. This article contains the requirements about the method of set up of inventory in relation to the occupancy (the number of persons) in rooms in which many people meet at the same time like playhouses, theatres, cinemas, hotel rooms, restaurants and cafés, churches, and rooms for teaching, meeting, and conferences.

The main rule has been included in paragraph 1. That rule applies irrespective of the dimensions and the occupancy of the space. It appears from the context with the other paragraphs of this article that the requirement will especially affect larger spaces and rooms with a higher occupancy. The main rule indicates how much room must at least be available per person (either with a seat or not) and with what the installation of this room must comply:

0.25 m² for each person for whom there is no seat present;

- 0.3 m² for each person for whom there is a seat present, which cannot move or fall as a consequence of a scuffle;
- 0.5 m² for each person for whom there is a seat present without taking or going to take measures to prevent moving or falling as a consequence of a scuffle.

The available floor surface is the floor surface of a room after subtracting the surface of installation elements and inventory, which can obstruct the freedom of movement of persons and, therefore, the speed of escape. Therefore, the assumption is the floor surface after subtracting possible present installation elements (like podium elements; see also explanation to Article 7.4) and the inventory (like the previously mentioned seats) with the calculation of the floor surface available for each person. Besides, the choice has not been the concept 'free floor surface' as defined in NEN 2580 because in that case one would omit the presence of loose installation elements like inventory.

Calculation example 1: The floor surface of a room is 70 m².

In this room, there are 60 chairs, set up with a surface of 0.22 m² per chair (total of 13.2 m²) and loose podium elements with a total surface of 15 m². In this room there are no standing places. The available floor surface of this room is, therefore, 70 m² – (13.2 m² + 15 m²) = 41.8 m². This results in an available floor surface per person of 41.8 m². 60 = 0.69 m^2. Therefore, the seats do not have to be attached to the floor if there are no more than 60 persons in the room.

Calculation example 2: If 90 seats are realised in the same room as before (90 x 0.22 m² = 19.8 m²) then the room's available floor surface is 70 m² - (19.8 m² + 15 m²) = 35 m². This results in an available floor surface per person of 0.39 m². Therefore, the seats must be linked in such a way that they cannot move or fall as a consequence of a crowd. One can calculate with the calculation methodology that can be downloaded from www.rijksoverheid.nl how many persons may be in the room under what circumstances. In paragraph 2, a further requirement has been given for rooms with more than 100 seats.

If seats have been set up in five or more rows and the number of seats in the room is 100 or more, the seats must be linked or attached to the floor in such a way that they cannot move or fall as a consequence of a scuffle.
Paragraph 3 determines that in rows of seats that have been set up there must be a free space between the rows of at least 0.4 m. This means that there must be an adequately ample walkway for escape. The free space is measured between the perpendiculars that are the closest approaching parts of the rows. The calculation is based on the space in folded situations with self-folding seats, like for instance, in a theatre or cinema.
In paragraph 4, it is underlined that also escape along a table that has been placed between the rows of chairs must be possible. In other words, there also must be a free space of at least 0.4 m at the table.
Paragraph 5 determines that a row of seats which is located at only one side of a walkway or exit may not have more than 8 seats. This requirement warrants a sufficient exit flow capacity of a dead end row of seats. The risk exists that one cannot escape fast enough and, therefore, one could get into a panic when a dead end row of seats is too long.
Paragraph 6 places a relation between the allowable number of seats in a row and the certain free space in accordance with paragraph 3 for situations where there is a walkway or an exit on both sides of the row. The assumption is that people can escape to both sides when there is a walkway or an exit on both sides of the row. The requirement distinguishes three possibilities:

a. up to and including 16 seats per row if the walking space for the row with seats is between 0.4 m and a maximum of 0.45 m and the walkway or the exit is at least 0.6 m wide on both sides;
b. up to and including 32 seats per row if the walking space for the row with seats is at least 0.46 m and the walkway or the exit is at least 0.6 m wide on both sides;
c. up to and including 50 seats per row if the walking space for the row with seats is at least 0.46 m and the walkway or the exit is at least 1.1 m wide on both sides;

Article 7.12 Walkways

This article warrants sufficient flow and exit flow capacity of walkways and exits in spaces in which stands, booths, shelves, podiums, and comparable installation elements are present in rooms accessible to the public. One must especially think of stores, stock exchange, market, and exposition rooms with such spaces. This will prevent that the capacity of escape routes is insufficient due to which one cannot escape in a timely manner or that panic will originate.
Paragraph 1 regulates that walkways along which the stands and such have been set up must be at least 1.1 m wide.
In paragraph 2, it has been determined that a floor surface, which is at least the same length and width as the width of that exit, will be kept free from installation elements for the exits.

Article 7.13 Limitation of likelihood of injury

It may not be that dressing that has been mounted under the ceiling will fall down or will drip with the likelihood of injury to the persons present in the room or escaping from it, or that it blocks an escape route. To prevent this, this article sets

requirements to prevent the (falling) behaviour of such dressing. In Article 7.3, there are requirements for the fire behaviour and smoke behaviour of the dressing. The dressing in a closed space will, therefore, have to comply with this article as well as Article 7.3. The dressing of a non-closed space has to comply exclusively with Article 7.13. In paragraph 1, it concerns glass that has been applied against or under a ceiling that can cause cuts (for instance: mirrors' glass in a lowered ceiling). Such glass must be safety glass or be provided with moulded cross reinforcement with a very small mesh.
In paragraph 2, it concerns textile, foil, and paper in a horizontal application in which people can get tangled. An under voltage of wire is always needed, which complies with dimensions in paragraph 2. In paragraph 3, it has been determined that the dressing in a closed space may not cause drops above a part of a floor that is intended for use by persons when there is a fire.
The requirement is, therefore, not applicable to parts where no persons should be present.
Based on paragraph 4, paragraphs 1 up to and including 3 are not applicable to non-common rooms of a residential function.
Based on paragraph 5, paragraphs 1 up to and including 3 are not applicable within an accommodation dwelling like a hotel room or a vacation house, but they are applicable to other parts of an accommodation function (see also Table 7.9)

Article 7.14 Residual risk safe escape when there is a fire
This general determination of a ban ('hook article') concerns fireproof use in which the other requirements of this decision does not provide, just like Article 7.8. The competent authority has a 'hook' with this to intervene in a specific case when the fireproof escape has been, insufficiently warranted (also if the use in itself complies with the requirements of this decision). Here, it concerns a special stipulations authority, which can exclusively be applied to the circumstances mentioned in this article.
It is expressly not the intention that the municipality demands general supplemental or further requirements. Furthermore, the required measures must always be in proportion to the risk that must be combated. The municipality will have to be able to demonstrate the necessity of this in a concrete case. Some examples of situations in which an appeal to this 'hook' article can be justified:
- if obstacles have been applied in front of manual fire alarms of automatic fire alarms due to which these cannot function fast enough when there is a fire (part a);
- if an escape route contains obstacles, which make a quick escape impossible when there is a fire (part b);
- if obstacles have been applied on the connection route between the exit of a fire fighters' elevator and an exit of the elevator at a higher located floor (part a and c) necessary for the fire department.

Section 7.3 Other provisions safe and healthy use, new construction, and existing construction

Article 7.15 Direction article

In the functional requirement of Article 7.5(1) it has been indicated that the use of a construction, open property, and terrain may not lead to health risks and other safety risks than fire safety risks for persons.

The table of paragraph 2 indicates the requirements per use function, which are applicable to that use function. When complying with these requirements, the functional requirement of paragraph 1 is met.

Article 7.16 Overcrowded occupancy

This article is intended to prevent that the health of the residents will be compromised due to overcrowded occupancy. This requirement is not intended, of course, as a standard regarding the distribution of residential space. The competent authority can only act based on this requirement in the exceptional case that so many people live in a residence or a mobile home that this can result in health problems. Paragraphs 1 and 2 connect with what has been included previously in the model Construction regulation of the VNG for the standardisation.

It appears from paragraph 3 that the requirement regarding overcrowded occupancy is not applicable to a residential function in which the Central Body for care of asylum seekers offers care to asylum seekers. Such care must comply with the standards as determined in the Guideline of the Council of the European union of 27 January 2003 to determine the minimum standards for the care of asylum seekers in the member states (2003/9/EC).

Article 7.17 Asbestos fibres and formaldehyde

The requirements of this article concern the prevention from a health point of view of high concentrations of asbestos fibres and formaldehyde in spaces of constructions that are accessible to people. The competent authority can decide to discontinue the use of (the concerned part) of the construction until measures have been taken with which the concentration is reduced to a level that is below the concerned limit value when the limit value mentioned in paragraph 1 (concentration of asbestos fibres) or paragraph 2 (concentration of formaldehyde) is exceeded. Which measures will be necessary is also dependent upon the source(s) of the concentration that is too high. This must be assessed on a case-by-case basis.

Requirements about concentrations of asbestos fibres and formaldehyde were included up to the taking of effect of this decision in the Regulation Construction Decision 2003.

The scope of those requirements was limited to concentrations which originated from construction materials. However, concentrations of asbestos fibres and formaldehyde that are too high in a room accessible to people can also come from another source, for instance, from ventilation ducts (asbestos) or material that has been used for the dressing of the room.

That is the reason why this requirement of Article 7.17 only concerns construction materials.

Based on paragraph 1, the concentration of asbestos fibres in rooms of an existing construction that are accessible to people may not be higher than 100 000 fibre equivalents per m^3. This corresponds with a health lower limit with the previously applicable requirement for the existing construction based on the Regulation

Construction Decision and corresponds with the so-called maximum allowable risk (mtr). The requirement is from now on limited to existing construction because asbestos may not be applied anymore to new construction.
The concentration of asbestos fibres is determined in accordance with NEN 2991.
The second paragraph determines how large the concentration of formaldehyde may be in spaces that are accessible to people.
Based on paragraph 3, requirements may be given by ministerial regulation about the determination of the formaldehyde concentration in a space.

Article 7.18 Dilapidation
This requirement that originates from the model Construction Regulation of VNG concerns the discontinuation of the use of constructions, sites, open properties, and terrains if that use is dangerous in relation with the dilapidation of a construction that is located nearby. It is necessary that the competent authority first has communicated that the use of the construction is dangerous due to the quality of that other construction before there may be a violation against which law enforcement can act. That communication is a communication of a factual nature and not a decision. Law enforcement can act by imposing a coercive burden or a burden under a fine if the use is continued anyway after receipt of the intended communication based on Article 125 of the Municipality Act and Article 5:32(1) of the General Act administrative law. Coercive burden can be applied in emergency cases without an advance burden (Article 5:31 of the General Act administrative law).

Article 7.19 Sanitary condition of constructions, open properties, and terrains
This article can be reduced to the reasons usability, health, and safety.
This connects with what has been included about this for the implementation of this decision in the model Construction regulation of the VNG.
This article envisions that a construction, open property, and terrain are in such a sanitary condition that no nuisance originates for persons and no danger originates to safety or health.
Based on this article, for instance, there can be action when there is an excessive burden of damaging or annoying animals in a residence or on a property or when it befits the general cleanness (health). An open property and terrain should, therefore, not result in a danger to the safety or health because of marshiness, stench, pollution, vermin, animals, growth or objects. It must concern severe cases. There can be law enforcement action against violation of this requirement based on Article 125 of the Municipal Act and Article 5:32(1) of the General Act administrative law. No one should lightly decide to act based on this article.

Article 7.20 Residual risk use of constructions, open properties, and terrains
This general determination of a ban ('hook article') concerns the use of constructions, open properties, and terrains in which the other requirements of this decision does not provide. The competent authority has a 'hook' to intervene in a specific case when the use of a construction, open property or terrain leads to nuisance, health risks, and safety risks other than fireproof risks. There can be a reason for an appeal to this article also if the use per se complies with the requirements of this decision. Here, it concerns a special stipulations authority, which can exclusively be applied to the circumstances mentioned in this article. It is expressly not the intention that the municipality demands general supplemental or further requirements. Furthermore,

the required measures must always be in proportion to the risk that must be combated. The municipality will have to be able to demonstrate the necessity of this in a concrete case.
Some examples of situations in which an appeal to this 'hook' article can be justified:

- if it concerns noise pollution;
- if stench causing substances have been stored;
- if it concerns an illegal cannabis nursery;
- materials have been stacked in a dangerous manner (for instance barrels within the reach of children which may roll);
- if asbestos containing materials or remainders of it are located in such a condition that the risk of spreading asbestos fibres can be feared. The Asbestos removal decision 2005 monitors the situation of the demolition and is not applicable to the situation of weather or wear and tear.

Chapter 8 Construction and demolition activities

Section 8.1 The prevention of unsafe situations and the limitation of nuisance during the execution of construction and demolition activities.

General
This section concerns the prevention of unsafe situations or nuisance during construction or demolition activities.

Article 8.1 Direction article
The functional requirement, execution of construction and demolition activities are such that an unsafe situation for the environment or adverse nuisance for the health of persons or usability is prevented as much as possible makes it clear that unsafe situations or nuisance cannot be completely prevented under certain circumstances.

Article 8.2 Safety in the environment
Measures must be taken to prevent unsafe situations during the construction of demolition activities and to prevent injury to persons or damages or obstacles of roads, works or movable goods which are located in the proximity of the construction or demolition terrain. It concerns both the prevention of injury of persons on adjacent lots as well as the prevention of injury to persons which are on the construction site unauthorised. The safety of the staff working on the construction site is included in the Labour conditions Act. The manner in which this article is used in practice will depend on the location and the presence of buildings and people in its environment. This offers the necessary space for customisation and deposits the first responsibility with the person who executes the work activities.

Article 8.3 Safety plan
The measures, which are necessary to comply with what is stated in Article 8.2, must be recorded in a number of cases in a construction or demolition plan.
The competent authority determines from case to case whether a construction or demolition plan is necessary. No safety plan is necessary if, for the execution of the construction activity, no permit for the construction, respectively for the demolition, no communication, as intended in Article 1.28 of this decision is required. In practice, this means that the measures which must be taken based on Article 8.2 with the larger construction or demolition projects must be included in a safety plan. In this article it is indicated which measures must be recorded in any case in the safety plan. This means that in any case, all affairs mentioned in this article must be arranged and that it is included in the plan how this has been arranged.
For instance, the separation and closing of the construction or demolition grounds under a: this separation must be such that unauthorised persons (like playing children) are averted from the grounds so that no accident will occur to them. With the choice of the separation, it will be ensured that the access to fire hydrants and other public facilities like pipelines are not obstructed.
Article 1.31 offers the competent authority the possibility to state further conditions after a communication about a demolition because local circumstances can demand a local evaluation.

For instance, this can be the case with the demolition in a busy inner urban environment. These supplemental measures must be included in the safety plan of the demolition based on part f of this article (8.3). The same applies to possible further conditions, which are imposed by the competent authority when granting the permit for construction.

Article 8.4 Noise pollution

Noise can be caused during the execution of construction and demolition activities and this can cause nuisance to the environment. It may be expected from the environment that this temporary nuisance will be tolerated up to a certain extent.
In paragraph 1, the assumption is that construction and demolition activities must be executed in principle between 7:00 o'clock in the morning and 7:00 o' clock in the evening. The execution of those activities may take place with a certain degree of noise pollution. In Table 8.4, it is indicated how much noise pollution that may be. The calculation is done with maximum exposure duration in days that the day value is reached. See Article 1.1(1) for the definition of the concept 'day value'. The day value is determined in accordance with the Manual measure and calculation Industry noise. This manual is available via the website of the Ministry of Infrastructure and Environment (www.rijksoverheid.nl).
It follows from the table that as the construction and demolition activities cause more noise, the number of days that the work activities may be executed decrease. For activities which cause a day value of more than 60 dB(A), at most 50 days are available and a maximum of 30 days during which the day value may be higher than 65 dB(A). Of these 30 days, the day value may be higher than 70 dB(A) during a maximum of 15 days. The value may be between 70 and 85 dB(A) during a maximum of 5 days. A day value above 80 dB(A) is not allowed.
Based on paragraph 2, the competent authority can grant exemption of paragraph 1. This may well mean that a (temporary) exemption of the maximum day value is granted as well as granting the exemption of the obligation to demolish or built exclusively on business days between 7:00 and 19:00. When there is an exemption when work is allowed on business days between 19:00 and 7:00, or on Saturday, Sunday or holidays, the builder or demolisher must always use the most silent techniques available and the most advantageous work method. Therefore, appliances and installations which are operated during the day and the night, like water pumps, can also be used when there is an exemption.
The most advantageous work method means, for instance, also that with the execution of the work activities a certain layout of the grounds must be kept or an advantageous sequential order of construction or demolition must be used with the objective to avoid noise nuisance as much as possible for the environment.
See also the Circular construction noise 2010 in which there are recommendations to prevent and reduce construction and demolition noise (www.rijksoverheid.nl).
Paragraph 3 determines that the day values included in the table apply to the façade of noise sensitive buildings and to the boundary of noise sensitive grounds.
Noise sensitive buildings are both residences as well as buildings, which based on Article 1 of the Noise Nuisance Act are indicated as other noise sensitive buildings. Among these are included teaching buildings, hospitals, nursing homes, and medical nurseries.

There is also a referral to the Noise Nuisance Act for the concept ‘noise sensitive grounds’.

Article 8.4a Vibrations nuisance

Besides the noise pollution as intended in Article 8.4, also vibration nuisance may occur.

Here, it concerns the prevention of vibration nuisance, especially because continuous vibrations may not be felt. Such continuous vibrations are usually caused by stationary installations like compressors. Vibration nuisances that are not continuous are for instance the coming and going of trucks to supply the construction site and the removal of demolition waste from the demolition site. Not all construction and demolition activities will cause a vibration nuisance.

Vibrations in relation to construction or demolition activities in the spaces mentioned in paragraph 1 may not rise above the limit values of Table 4 of the Measurement and Assessment Guideline part B, Nuisance for persons in buildings 2006 as published by the Foundation Construction research Rotterdam. It is expected that vibration measurements will only be necessary sporadically because the vibration standards included in Table 4 will not be easily exceeded. The vibration standards only apply to the so-called noise sensitive spaces and in dwelling rooms (see Article 1 of the Noise Nuisance Act and Article 1.1e of the Noise Nuisance Decision). It is necessary to execute measurements in the building to be able to determine what the vibration strength is in a building or space. Of course, the user of a building cannot object to a vibration nuisance if the user does not collaborate to do this and, therefore, it is not possible to determine the vibration strength.

Based on paragraph 2, the competent authority can grant exemption of the values intended in paragraph 1. This can be the case if vibrations like discontinuous, intermittent or sporadically occurring vibrations exceed the values in Table 4 (for instance due to transport activities). The competent authority can, for instance, agree with the Industrial Noise Guide and granting of permits 2005 (www.agentschap.nl) when adapting the maximum vibration strength.

Article 8.5 Dust nuisances

Based on this article, all demolition activities, among which transport, working, loading, and unloading of, for instance, debris and granulate or other waste substances, must be executed in such a manner that the spreading of dust to the environment will be prevented. Measures like cover, installation of wind reduction screens, keeping the grounds wet or clean and watering during demolition are matters to be thought of.

Article 8.6 Ground water

This article is of importance regarding the safety of other buildings around excavation pits. This is a public law interest. The article does not monitor possible damage in the sense of public law.

The drainage of excavation pits, pipe trenches, and similar temporary excavations may not result in a danger to safety, health or usability of adjacent locations. The quantity of water that will be extracted from the soil is decisive.

Besides, a permit is required based on the Water Act for both being allowed to drain an excavation pit as well as for being allowed to evacuate the ground water that has been pumped up.

Section 8.2 Waste separation

Article 8.7 Direction article

The functional requirement of paragraph 1 monitors the timely and careful separation of waste; construction and demolition activities are executed in such a manner that construction and demolition waste that is released during the execution will be separated.

Paragraph 2 determines that there is compliance with the functional requirement of paragraph 1 by the application of the prescriptions of this section.

Article 8.8 Separation of construction and demolition waste

The separation of construction and demolition waste is especially of importance for dangerous waste substances, which can be located in the construction or demolition waste like among other things tar or bituminous roof waste with a certain concentration of PAK-10, waste with a certain degree of mercury, asbestos and other waste substances polluted with asbestos, certain waste substances that contain PCB, and, for instance, wood that has been treated with agents that contain copper and chrome (CC-wood) or copper, chrome, and arsenic (CCA-wood).

Categories of construction and demolition waste can be indicated by ministerial regulation, which must be separated during the construction or demolition activities. Rules can also be implemented regarding the storage and removal of the construction and demolition waste to and from the construction or demolition site.

Chapter 9 Transition and Final Provisions

Article 9.1 General transition law

This article contains general transition law. This achieves that permit applications and communications, which have been submitted before this decision took effect, will be handled based on the law as it was applied before this decision took effect. This means that this decision will first be applicable to permit applications and communications, which are submitted with the competent authority after this decision took effect. It concerns applications for permits for the construction (paragraph 1), permits for fireproof use (paragraph 2), and environment permits for the demolition as intended in Article 2.2(1) of the Wabo (paragraph 3) as well as use communications as intended in Article 2.12.1(1) of the Decision on fireproof use constructions (paragraph 4), and demolition communications based on the municipal construction regulations (paragraph 5). Permit applications and communications which were submitted before this decision took effect must, therefore, comply with and be handled based on requirements as they were before this decision took effect.
Regarding applications for permits for construction which have been submitted in phases that apply to both the application first phase as well as the application second phase. The transition regulation of paragraph 1a applies if the application for construction first phase has been submitted at the time that this decision took effect, therefore, also to the application for a permit for construction second phase in connection with it, which is submitted after this decision took effect.
To prevent that the cases, as intended in paragraphs 3 up to and including 5, also still require the submission of a demolition communication as intended in Article 1.28, respectively a usage communication as intended in Article 1.18, despite the fact that before this decision took effect a demolition application (paragraph 3) respectively a usage communication (paragraph 4) or a demolition communication (paragraph 5) had been submitted. In these articles, it concerns both applications for permits and communications, which were already settled at the time that this decision took effect, as well as applications and communications which were submitted but not yet settled at that time.

Article 9.2 Specific right of transition

This article contains a number of specific transition provisions.
The requirements of paragraph 1 concern the omission of some requirements of this decision in cases that, at the time that this decision took effect, the requirements of the Construction decision 2003 were met regarding the maximum allowable number of persons in a construction or a space of it (part a), flow capacity of escape routes (part b), and lighting installation and emergency power supply (part c). This ensures that the relevant requirements of this decision have no adverse consequences for cases where at the time that this decision took effect, the requirements of the Construction decision 2003 concerning those aspects were met. Therefore, the relevant requirements of this decision only concern new cases and cases in which the existing use of a construction changes after this decision took effect in relevant matters concerning this requirement. In that case, the exception of paragraph 1 is not met anymore. An example of it is when after the change of the use, more persons will be present (parts a and b). Therefore, at that time, it does not suffice anymore to comply with the concerned requirements of the Construction decision 2003 but from

now on there must also be compliance with that part of the requirements of this decision. A specific transition regulation has been included in paragraph 2 regarding existing road tunnels in the trans-European rod network. Based on that, section 2.17 (Supplemental rules tunnel safety) and some articles from chapter 6 for such tunnels will remain beyond application up to 1 May 2004. That date corresponds with the date when existing road tunnels must comply with the requirements of guideline No 2004/54/EC of the European Parliament and the Council of the European Union of 29 April 2004 regarding minimum safety requirements for tunnels in the trans-European rod network (OJ L 167, corrected in OJ L 201).
Paragraph 3 concerns the realisation of sufficient storage area with newly to be built utility buildings. The requirements of section 4.1 of the Construction decision 2003 were applicable to the construction of utility buildings until this decision took effect. In this decision, no requirements regarding the storage area for bicycles have been included. From now on, this subject must be regulated in municipal destination plan requirements as it will also be the case for parking facilities for motor vehicles. This has been chosen because the need for such storage space strongly depends on local circumstances like for instance the presence of teaching institutions or entertainment facilities and office buildings. In so far as no requirements about storage space for bicycles has been included in the destination plan for a construction that will be built, the requirements of section 4.11 of the Construction decision 2003, as it was written before this decision took effect, will remain applicable until 1 January 2007. In the period between the time that this decision took effect and 1 January 2007, municipalities have time to include such storage requirements in the destination plans.
With paragraph 4, it will be achieved that a document as intended in Article 2.1.7 of the Decision on fireproof use of constructions that has been issued before the time that this decision took effect, and of which the validity duration has not expired at that time, may be classified as a document as intended in Article 1.17 of this decision for the application of this decision.
This will prevent that one would have to take care of a new document based on this decision while the validity duration of the already available document was not yet expired at the time that this decision took effect.
Paragraph 5 is comparable with paragraph 4. It is not necessary to purchase a new document as long as the validity duration of the already available document has not yet expired. Although the documents intended in the Articles 2.2.1(9), 2.3.9, and 2.5.1 of the Use decision formally are not the same as the certificates intended in Articles 6.20(6) and (7), and Article 6.32(1), (2), and (3) of this decision, one may wait until the validity duration of the old documents expires before the new certificates are needed. A period of transition applies to businesses given sufficient time to get used to the new certificates and inspection schemes and the old documents may still be issued in the period between this decision taking effect and 1 January 2004. They are considered as a valid certificate in the sense of this decision until the time that the validity duration expires, which can, therefore, be after 1 January 2004. Therefore, in the period between the time that this decision takes effect and 1 January 2004, a dual system applies; there can be a choice between the old and the new requirements during that period.

Article 9.3 Withdrawal regulation
The requirements of the Building Decree 2003 are in this decision (Stb. 2001, 410), the Decision fireproof use constructions (Stb. 2008, 327) and paragraph 2 of the Decision supplemental rules safety road tunnels (Stb. 2006, 248) have been placed together. Those decisions and that paragraph will be cancelled in connection therewith at the time that this decision takes effect.

Article 9.4 Taking effect
This article regulates the entry into effect of this present decision. The proposal is to determine the entry into effect on 1 January 2012. This has been taken into account with the system of permanent change moments.

Article 9.5 Official title
The official title is Buildings Decree 2012. A year has been included in the official title as was also the case with the Buildings Decree 2003 in order to express that this concerns a completely new decision. 2012 is the year that is envisioned that the decision will take effect.

The minister of Home Affairs and Kingdom Relations,

J.P.H. Donner