

(Only the Danish text is authentic)

Order amending the Order on permits and approvals etc. for livestock farms¹⁾

Section 1

Order no 294 of 31 March 2009 on permits and approvals etc. of livestock farms is amended by Order no 1681 of 22 December 2010 with the following changes:

1. *The footnote* to the title of the Order shall read:

"1) This Order contains provisions that implement parts of Council Directive 85/337/EEC of 27 June 1985 concerning the assessment of the effects of certain public and private projects on the environment (the EIA Directive), Official Journal of the EU 1985, no L 175, page 40, as last amended by Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC, Official Journal of the EU 2003, no L 156, page 17, parts of Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated prevention pollution prevention and control, Official Journal of the EU 2008, no L 24, page 8, parts of Council Directive 2009/147/EC of 30 November 2009 on the conservation of wild birds (the Birds Directive), Official Journal of the EU 2010, no L 20, page 7, and parts of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive), Official Journal of the EU 1992, no L 206, page 7, and parts of Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources, Official Journal of the EU 1991, no L 375, page 1, as amended by Regulation 1882/2003/EC of the European Parliament and of the Council of 29 September 2003, Official Journal of the EU 2003, no L 284, page 1."

2. The *introduction* to the Order shall read:

"The following is laid down, pursuant to Section 7, subsections 2 and 4, Section 9, subsection 4, Section 17, subsections 1, 2 and 3, Section 18, subsections 2 and 3, Section 34, subsections 1, 2 and 3, Section 35, Section 41, subsections 2 and 4, Section 55, subsections 8 and 9, Section 66, Section 78 and Section 111 of the Livestock Farming Environmental Approval Act, cf. Consolidated Act no 1486 of 4 December 2009, as amended by Act no 122 of 23 February 2011, and Section 35, subsection 2 of the Danish Environmental Protection Act, cf. Consolidated Act no 879 of 26 June 2010:"

3. *Section 3* shall read:

"**Section 3.** Prior approval is required for the establishment, expansion or modification of livestock farms for which carnivorous fur animals are produced with a scope of more than 3 livestock units and fewer than 25 livestock units; cf. Section 10 of the Livestock Farming Environmental Approval Act.

Subsection 2. Prior approval is required for the establishment, expansion or modification of livestock farms for which carnivorous fur animals are produced with a scope of more than 25 livestock units and up to the limits specified in Section 12, subsection 1 of the Livestock Farming Environmental Approval Act; cf. Section 11 of the Livestock Farming Environmental Approval Act."

4. – 17

(omitted)

Section 2

Subsection 1. The Order shall enter into force on 10 April 2011.

Subsection 2. Cases concerning applications for permits or approval pursuant to Sections 10, 11, 12 or 16 of the Livestock Farming Environmental Approval Act, and notifications pursuant to Section 19 of the Order on permits and approval etc. of livestock farms received by the municipal authority before 10 April 2011 will be processed in accordance with the rules previously in force.

Subsection 3. Section 19 f, as worded in Section 1, no 10 of the Order, is repealed on 1 January 2013.

Danish Ministry of the Environment, 6 April 2011

Karen Ellemann

/ Claus Torp

Annex 3

"Annex 3

Protection levels for ammonia, odour, phosphorus surplus and nitrates

The protection levels described in this Annex must be used when assessing whether there are substantial effects on the environment with regard to permits and approvals pursuant to Sections 10, 11, 12 and 16 of the Livestock Farming Environmental Approval Act.

The protection levels described below must be used when assessing applications, cf. Section 9, irrespective of whether more wide-ranging protection levels have been set for odour, ammonia, phosphorus or nitrates in municipal plan guidelines or regional plan guidelines maintained pursuant to Section 3, subsections 1 or 2 of Act no 571 of 24 June 2006 amending the Planning Act.

For each application, the municipality must undertake a specific assessment (cf. Sections 27 and 29 of the Livestock Farming Environmental Approval Act), and on this basis may, in special circumstances, decide to stipulate conditions based on Annex 4, that go beyond the protection levels found in this Annex; cf. Section 11, subsections 2-4. This will be relevant in exceptional circumstances if there are deemed to be nature areas that, in the view of the municipal authority, are not protected adequately by the established protection levels. As part of this assessment, it is incumbent on the municipality to specifically assess whether an activity for which an application has been made will comply with the obligations of the Habitats Directive. With regard to the impact of ammonia on natural habitats that are vulnerable to ammonia, this applies solely to situations in which the nature area was not correctly surveyed in connection with the Natura 2000 plans, and the Danish Nature Agency has stated that the area's survey status will be changed in a future update to the survey. The protection level for the impact of ammonia in the Order is based on the best scientific knowledge, which ensures that, if this protection level is complied with, no biological change to the nature areas will be detected. The municipality can therefore only reject applications in a situation where it can be documented on a specific experimental scientific basis that the impact of ammonia from the livestock farm will involve a demonstrable biological change to this nature area, even if the protection level in this Order is complied with.

In the period until the River Basin Management Plans and Natura 2000 Plans are finally adopted pursuant to the Environmental Objectives Act, the municipalities must bring in all available knowledge of natural and environmental conditions when processing cases, including the knowledge that is available at the time of approval in connection with the production of the River Basin Management Plans and Natura 2000 Plans. In the proposals for the Natura 2000 Plans which were submitted for consultation in September 2010, it is stated that a reduction in nitrogen deposition in natural habitats in the Natura 2000 sites is expected to occur via a future amendment to the Livestock Farming Environmental Approval Act. Compliance with the protection levels set out in this Order will implement the aforementioned reduction of nitrogen depositions in the vulnerable nature areas in the Natura 2000 sites.

With regard to the proposal for River Basin Management Plans pursuant to the Environmental Objectives Act, which was submitted for consultation at the same time as the proposal for the Natura 2000 Plans, environmental approvals for livestock farms will contribute to the fulfilment of the environmental objectives of the plans through compliance with the protection levels set out in this Order. River Basin Management Plans and Natura 2000 Plans will thus not in themselves result in the below protection levels being tightened.

Knowledge of natural habitats in nature areas from Natura 2000 Plans under the Environmental Objectives Act must be brought in. Knowledge about the nature of aquatic areas in Water Resources planning pursuant to the Environmental Objectives Act should similarly be applied during case processing.

A. Protection levels for ammonia

Protection levels for ammonia are composed of several elements:

- 1) The general requirement to reduce ammonia for livestock farms covered by Sections 11 and 12 of the Livestock Farming Environmental Approval Act.
- 2) The maximum permissible total deposition of ammonia in nature areas that are vulnerable to ammonia and covered by Section 7 of the Livestock Farming Environmental Approval Act.
- 3) The maximum permissible additional deposition in nature areas that are vulnerable to ammonia according to a specific assessment; cf. Section 27, subsection 1 of the Livestock Farming Environmental Approval Act.

no 1. *The general requirement to reduce ammonia for livestock farms covered by Sections 11 and 12 of the Livestock Farming Environmental Approval Act.*

In the case of expansions, constructions and modifications of livestock farms (cf. Sections 11 and 12 of the Act), the basic standpoint is that ammonia emissions from animal housing and stores must be reduced by 30 percent in accordance with the reference animal housing system provided in Tables 1 and 2 (the reduction requirement). The requirement to reduce ammonia emissions applies to expansions, new animal housing facilities and housing that is being renovated. The requirement may be met by reducing ammonia loss in both existing and new facilities. The reduction requirement is set based on the time of applying.

In this context, the term "renovation" is synonymous with modifications to the animal housing facility for which approval is required. In other words, the requirement applies to renovations that are comparable to new construction. Replacing equipment without concurrent modifications to manure facilities etc., however, will not require approval and is thus not covered by the

general ammonia requirement. If an expansion is implemented in an existing unchanged animal housing facility, the general ammonia requirement will only cover the expansion.

This requirement is stipulated with the following modifications:

- In the case of cattle production based on grass as coarsfeed, where the total ration includes over 25 percent grass field crops, a requirement of 15 percent is set.
- In the case of dairy cows and male bovines in animal housing systems based on liquid livestock manure, as described in Table 1, a requirement of 15 percent is set.
- For piglets, a requirement of 20 percent is set.
- For certain types of poultry (described in Table 1) a requirement of 15 percent is set.
- Outdoor livestock are exempted from the general ammonia requirement during the period in which the animals are out of doors. For poultry, cattle or free-range sows, the reduction requirement is therefore reduced proportionally, according to the proportion of time that they are out of doors. (While outdoor animals are exempt from the general ammonia requirement, changes in the proportion of outdoor animals in the existing livestock production cannot be included in order to meet the general ammonia requirement.)
- No reduction requirement is set for beef cattle, sheep and goats that are outdoors most of the time.
- No reduction requirement is set for cattle and horses for the part of the nitrogen discharge that concerns solid manure, including deep litter.
- No reduction requirement is set for sows, piglets and pigs for slaughter that are produced organically, or for ducks and geese.

For most types of animals, the reference animal housing system is established as the modern animal housing system that had the lowest ammonia emissions from animal housing and stores according to the 2005/2006 standard figures (produced by the Faculty of Agricultural Sciences at Aarhus University). The general ammonia requirement has been calculated on the basis of the ammonia emissions in the reference animal housing system in 2005/2006, adjusted for new knowledge about deposits and ammonia losses from these animal housing systems. With regard to poultry, the requirement is established based on the standard figures from 2010/2011, while the requirement for mink is based on the requirement in the fur animal guidelines for a maximum loss of 1.65 kg N per yearling dam.

The livestock farm's ammonia emissions and other environmental effects relating to nitrogen must be calculated using the latest standard figures for nitrogen produced by Aarhus University; i.e. applications submitted after 1 October must use the standards for the relevant year. This also covers the use of ammonia losses from animal housing and stores used here. However, it will be possible to adjust for any errors. If ammonia emissions from one of the reference animal housing systems described in Tables 1 and 2 are revised based on new knowledge, this knowledge cannot be used in environmental assessments until it has been incorporated into an amendment to this Order, at which time the general ammonia requirement will have to be amended in accordance with the new knowledge.

When setting the requirement, a differentiation is made between nitrogen discharge relating to liquid livestock manure (Table 1) and nitrogen discharge relating to solid manure including deep litter (Table 2).

Table 1.

(omitted)

Table 2.

(omitted)

no 2. *The maximum permissible total deposition of ammonia in nature areas that are vulnerable to ammonia and covered by Section 7, subsection 1, nos 1 and 2 of the Livestock Farming Environmental Approval Act*

Category 1 natural habitats Section 7, subsection 1, no 1 covers specific natural habitats that are vulnerable to ammonia and situated within international nature protection areas.

International nature protection areas are a collective name for the habitat areas and special protection areas (known as Natura 2000 sites) that have been selected to meet the requirements of the EU's Habitat and Birds Directives, as well as Ramsar areas. The Danish Ramsar areas are all situated within the selected special protection areas and are protected as such.

The Natura 2000 natural habitats that are covered by Section 7, subsection 1, no 1, are limited to those Natura 2000 natural habitats that are vulnerable to ammonia, that are included in the selection criteria for the area and that have been surveyed by the Danish Nature Agency in connection with the Natura 2000 plans. Until further notice, Section 7, subsection 1, no 1 includes the following Natura 2000 natural habitats, irrespective of size:

2130 Fixed coastal dunes with herbaceous vegetation (grey dunes), 2140 Decalcified fixed dunes with *Empetrum nigrum* (heath), 2180 Coastal dunes with self-sown populations of native tree species, 2190 Humid dune slacks, 2250 Coastal dunes with *Juniperus* spp., 2310 Dry sand heaths with *Calluna* and *Genista*, 2320 Dry sand heaths with *Calluna* and *Empetrum nigrum*, 2330 Inland dunes with open *Corynephorus* and *Agrostis* grasslands, 3110 Oligotrophic waters containing very few minerals of

sandy plains (Littorelletalia uniflorae), 3130 Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea, 3140 Hard oligo-mesotrophic waters with benthic vegetation of Chara spp., 3150 Natural eutrophic lakes with Magnopotamion or Hydrocharition — type vegetation, 3160 Natural dystrophic lakes and ponds, 4010 Northern Atlantic wet heaths with Erica tetralix, 4030 European dry heaths, 5130 Juniperus communis formations on heaths or calcareous grasslands, 6120 Xeric sand calcareous grasslands, 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates, 6230 Species-rich Nardus grasslands, on silicious substrates, 6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils, 7110 Active raised bogs, 7120 Degraded raised bogs still capable of natural regeneration, 7140 Transition mires and quaking bogs, 7150 Depressions on peat substrates of the Rhynchosporion, 7210 Calcareous fens with Cladium mariscus and species of the Caricion davallianae, 7220 Petrifying springs with tufa formation, 7330 Mires, 9110 Luzulo-Fagetum beech forests, 9120 Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer, 9130 Asperulo-Fagetum beech forests, 9150 Medio-European limestone beech forests of the Cephalanthero-Fagion, 9160 Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli, 9170 Galio-Carpinetum oak-hornbeam forests, 9190 Old acidophilous oak woods with Quercus robur on sandy plains, 91D0 Bog woodland and 91E0 Alluvial forests with Alnus glutinosa and Fraxinus excelsior. 3150 Natural eutrophic lakes with Magnopotamion or Hydrocharition — type vegetation is covered to the extent that it has been surveyed as vulnerable to ammonia.

For those Natura 2000 natural habitats that have not been surveyed (primarily lakes) the municipality must evaluate the potential impact (cf. Section 27 of the Act; cf. Section 19). As well as lakes, this applies to 1230 Vegetated sea cliffs of the Atlantic and Baltic Coasts, 2110 Embryonic shifting dunes, 2120 Shifting dunes along the shoreline with Ammophila arenaria, 2160 Dunes with Hippophaë rhamnoides, 2170 Dunes with Salix repens ssp. argentea, 8220 Siliceous rocky slopes with chasmophytic vegetation and 8230 Siliceous rock with pioneer vegetation of the Sedo-Scleranthion or of the Sedo albi-Veronicion dillenii. Once a natural habitat has been surveyed, it will automatically be covered by Section 7, subsection 1, no 1 of the Act.

Section 7, subsection 1, no 1 also covers heaths and commons within the international nature protection areas that are not named above, but which are protected under Section 3 of the Danish Protection of Nature Act. To the extent that these natural habitats abut each other or are situated in a mosaic, the size is calculated on the basis of the total area in accordance with the rules in Section 3 of the Danish Protection of Nature Act.

Category 2 natural habitats. Section 7, subsection 1, no 2 covers specific natural habitats that are vulnerable to ammonia and situated outside international nature protection areas. This covers the following natural habitats: Raised bogs, Lobelia lakes and heaths larger than 10 ha that are covered by Section 3 of the Danish Protection of Nature Act, and commons larger than 2.5 ha that are covered by Section 3 of the Danish Protection of Nature Act.

When calculating whether a heath or common is larger than 10 ha and 2.5 ha respectively, only the "heath" or "common" natural habitat is taken into account. In other words, only heaths that in themselves are larger than 10 ha, and commons that in themselves are larger than 2.5 ha, are covered.

No 3. *The maximum permissible additional deposition in nature areas that are vulnerable to ammonia according to a specific assessment; cf. Section 27 of the Livestock Farming Environmental Approval Act.*

Category 3 natural habitats. In the case of natural habitats that are vulnerable to ammonia and that are not covered by the above categories 1 and 2, the municipality must undertake a specific assessment as to whether requirements should be set. The municipality must specifically assess the following natural habitats that are vulnerable to ammonia and situated outside the international nature protection areas, that are not covered by Section 7, subsection 1, nos. 1 and 2: Heaths, bogs and commons that are protected under Section 3 of the Danish Protection of Nature Act. The municipality must also specifically assess forests that are vulnerable to ammonia situated outside the international nature protection areas.

Forests are defined as areas that are larger than 0.5 ha and over 20 metres wide, which are vegetated with trees that form, or will form within a reasonable timeframe, a closed forest of high-standing trees; cf. the definition of forests in the Forestry Act.

A forest is designated as vulnerable to ammonia if:

- 1) forest land has been present in the area for a long time (in the region of over 200 years), so this is a matter of old "forest soil",
- 2) the forest is self-sown in a nature area, e.g. a previous heath, bog or common, meaning that the soil has not been cultivated for a period corresponding to the period for old "forest soil" (i.e. in the region of over 200 years), or
- 3) the forest contains natural species that are indicative of a forest or old forest species that are included in the list of species that are used to prioritise particularly valuable forests covered by Section 25 of the Forestry Act.

In the specific assessment as to whether special regional or local nature interests are present, and when assessing whether requirements should be stipulated for the maximum N additional deposition in nature areas covered by Category 3 natural habitat, the municipality must incorporate all of the following four criteria:

- 1) the status of the relevant nature area in the municipal plan, particularly whether the relevant nature area that is vulnerable to ammonia is covered by the list in the municipal plan of particularly valuable nature areas, recreational areas and/or valuable cultural environments, and the guidelines in the municipal plan for managing nature protection interests, recreational interests and cultural-historic interests,
- 2) whether the relevant area is earmarked for protection, covered by an action plan for nature management or another planned nature initiative,
- 3) the quality of the relevant nature area, and

4) nitrogen input to the area from other sources (e.g. fields), including, with regard to forests, whether they are fertilised.

These criteria are incorporated with a view to enabling the municipal authority to stipulate a requirement regarding a maximum additional deposition of N for nature areas of special regional and local nature interests, if the area is covered by one of the aforementioned lists in the municipal plan, is listed for protection, appears in an action plan for nature management or in any other planned nature initiative and/or is nature of a high quality, and if the ammonia input from livestock farms is of particular importance relative to the impact of nutrients that these areas receive from other sources.

In its justification for stipulating a higher requirement for a natural habitat that is vulnerable to ammonia and covered by Category 3, the municipality must review the status of the natural habitat in terms of the aforementioned four criteria.

Requirements relating to ammonia depositions for the various natural habitats that are vulnerable to ammonia (cf. Category 1, Category 2 and Category 3 natural habitats)

Table 3. Requirements relating to ammonia depositions in the various areas. "Total deposition" refers to ammonia depositions from animal housings and stores from all livestock farms (from both existing farms and those for which an application has been made), while "additional deposition" refers to the change in ammonia deposition from the livestock farms' facilities (animal housing and stores) as a consequence of the application.

Natural habitats	Established protection levels
Category 1. Section 7, subsection 1, no 1	Max. total deposition depending on number of livestock farms in the vicinity ³⁾ : 0.2 kg N/ha/year for > 1 livestock farms. 0.4 kg N/ha/year for 1 livestock farm. 0.7 kg N/ha for 0 livestock farm.
Category 2. Section 7, subsection 1, no 2	Max. total deposition for 1.0 kg N/ha per year.
Category 3. Heaths, bogs and commons protected under Section 3 of the Danish Protection of Nature Act, and forests vulnerable to ammonia.	Max. additional deposition of 1.0 kg N/ha per year. The municipality may permit additional deposition that is greater than 1.0 kg N/ha per year, but may not stipulate a requirement for less additional deposition than 1.0 kg N/ha per year.

³⁾ The number of livestock farms in addition to those for which an application has been made is broken down as follows (cumulation model):

- number of livestock farms over 15 LU within 200 metres +
- number of livestock farms over 45 LU within 200-300 metres +
- number of livestock farms over 75 LU within 300-500 metres +
- number of livestock farms over 150 LU within 500-1,000 metres +
- number of livestock farms over 500 LU that contributes over 0.3 kg N/ha beyond the 1,000 metres.

With regard to the limits set out in the cumulation model specified in terms of the number of LUs, fur animals and chickens for slaughter should be included as follows: the number of LU fur animals for the relevant use is increased by a factor of 5, and the number of LU chickens for slaughter for the relevant use is increased by a factor of 3.

Distance is measured relative to the most critical nature point in accordance with the protection levels set for natural habitats that are vulnerable to ammonia in the Natura 2000 area. The most critical nature point will typically be the border of the nature area that is closest to the largest animal housing facility, since this is where the ammonia burden can be assumed to be greatest. However, there may be cases where the impact from other livestock farms, in respect of to the above cumulation rule, means that the most critical nature point is located elsewhere, including in the nature area itself.

Calculation of ammonia depositions is based on ammonia emissions in the farm for which an application is made, including the programme of measures that are implemented. In the environmental assessment of permits under Section 10 of the Livestock Farming Environmental Approval Act, the calculation basis and protection levels stated in nos 2 and 3, including the requirements in Table 3, must only be used for cases where one or more facilities are positioned closer than 300 metres from natural habitats covered by categories 1, 2 or 3. The calculation of ammonia dispersion and spreading must be undertaken using dispersion and spreading models produced by the National Environmental Research Institute (NERI) (standard dispersion curves based on the OML-DEP model). It must be noted that there is a prohibition zone of 10 metres surrounding animal housings or manure facilities in Category 1 and 2 natural habitats, in which no establishment, expansion or modification may take place.

For Category 3 natural habitats, additional depositions are calculated based on calculations of the emission in a before-and-after scenario using the same standard figures as the general ammonia requirement. However, the "before" scenario is calculated on the basis of earlier project modifications in connection with EIA screenings or from prior environmental approvals

that have been used, if any such exist. In all cases, a modified proportion of outdoor animals in the existing livestock farms production cannot be included when calculating additional depositions.

It must be noted that additional depositions (cf. Section 26, subsection 2 of the Act) must be calculated on the basis of all establishments, expansions or modifications undertaken since 1 January 2007, but for no more than an 8-year period.

Exceptions to the protection levels

The requirements in Table 3 may be exceeded in the following cases and in the following ways:

- 1) If the existing production (current management of the farm) involves a total deposition in relation to a Category 1 or 2 natural habitat that is at least 100 percent greater than the total deposition limit, a requirement must be stipulated at the time of approval to reduce the ammonia deposition by at least half of the deposition that exceeds the legal requirement, but at a minimum to reduce depositions in line with the legal requirement. The remaining reduction in the ammonia deposition must be ensured after 8 years. The legal requirement regarding total depositions of ammonia in vulnerable nature areas must thus be met no later than 8 years after the approval has been issued. If the livestock farm applies for expansions or modifications that require approval before 8 years have elapsed, the full requirement relating to depositions will have to be met in connection with that application. The above total deposition requirement does not affect the rule in Section 40 of the Act regarding reassessment, including reassessment within the legal protection period.
- 2) In a regular reassessment where a livestock farm has not undertaken modifications or expansions that require approval, the livestock farm must meet a requirement that is based on the best available techniques (BAT requirement) for the appropriate type of livestock farm at the time of reassessment, even if this requirement differs from the total deposition requirement for the relevant natural habitat type (Category 1 and Category 2 natural habitats respectively). As in the case of approvals, the BAT requirement can mean that the total deposition limit may be made more stringent than that set out in the Order. This is in line with general practice for reassessments, whereby considerations such as BAT are applied as part of the general principles of administrative law, including the principle of proportionality. Irrespective of the BAT level, the total deposition requirement must be met before the deadline specified when the individual case is reassessed.
- 3) Nitrogen removal through grazing is considered in connection with the protection level when issuing permits and approvals and undertaking reassessment, so that the requirements for Category 1 natural habitats change to 0.3, 0.5 and 1.0 kg N/ha respectively instead of 0.2, 0.4 and 0.7 kg N/ha, if the livestock farm undertakes grazing or a combination of grazing and mowing with a resulting supposed net removal of nitrogen from the nature area, for the purpose of nature management in the affected natural habitat. The grazing animals are required to be part of the relevant livestock farms.
- 4) Certain building-related modifications to livestock farms arising from legal animal welfare requirements may exceed the limits for total deposition of ammonia with respect to the obligations under the Habitats Directive. However, new legislative requirements for animal welfare do not permit the limits for total deposition to be exceeded as a result of renovation on a larger scale than necessary. The building-related modifications are limited by the conditions stated in the notification scheme in Section 19c, pertaining to modifications with consideration for animal welfare. The limits for total deposition may be exceeded, irrespective of whether the notification is rejected, and the case transferred as a permit or approval under Sections 10, 11 or 12 of the Act, provided that the extension or modification is limited to fulfilling the necessary animal welfare-related requirements.

B. Protection levels for odour

A requisite nuisance distance is calculated according to both the new odour guidelines (Guidance on permits and approvals for livestock farms), and the FMK guidelines (Guidelines for the assessment of odour and limitation of nuisance from animal housings, FMK, 2nd edition, May 2002). Both sets of guidelines provide emission factors for various animal groups, a dispersion model and nuisance criteria corresponding to the sensitivity to odour of different areas. The nuisance distance is set on a case-by-case basis according to the longest nuisance distance calculated in accordance with the two guidelines.

With regard to the FMK guidelines, an adjustment may be made to the odour emissions via the use of environmental technology which has a documented effect on odour emissions; similarly, the stated dispersion model may, in special cases involving widely diverging ventilation conditions, be replaced by a specific dispersion calculation using the OML model (developed by the National Environmental Research Institute (NERI)).

The new odour guidelines may be amended on the basis of new knowledge, and the dispersion model may at the request of the applicant be replaced in general by a specific dispersion calculation using the OML model. Where no specific dispersion calculation is made, the nuisance distance according to the new odour guidelines must be adjusted in a simpler manner with regard to the position relative to prevailing winds and as a consequence of other livestock farms in the vicinity.

It should be noted that the nuisance criteria in the new odour guidelines apply solely with regard to establishments, expansions and modifications.

The calculation of the nuisance distance according to the new odour guidelines must be based on the following nuisance criteria:

Table 4. The following odour nuisance criteria must be used for the establishment, expansion or modification of livestock farms, including animal housings etc., stated as 99 percent fractile with an average time of one hour.

Category	Guideline nuisance level
Existing or, under a municipal plan framework, future urban zone or summer house area	5 OU _E /m ³
Conglomeration in a rural zone according to the definition in the Order on commercial	7 OU _E /m ³

livestock holdings, livestock manure and silage, or an area in a rural zone that is assigned in a local plan for housing, mixed housing and commerce or for public use with a view to providing dwellings, institutions, buildings for recreational purposes, and so on. Establishment, expansion or modification of individual properties	15 OU _E /m ³
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In the first Category, the nuisance criteria must be observed with regard to the entire area, not just with regard to residential buildings in the area.

With regard to a conglomeration, the nuisance criterion of 7 OU_E /m³ must be observed with regard to the residential buildings that may constitute the conglomeration, i.e. residential buildings where there are more than six other residential buildings within a distance of 200 metres, each on a separate property. Residential buildings on properties with agricultural obligations under the rules of the Agricultural Act and residential buildings that are owned by the farmer are not included. It may well be that certain of these six other properties in a conglomeration cannot form a conglomeration with themselves at the centre. These will not be covered by the nuisance criterion of 7 OU_E /m³.

With regard to individual dwellings, the nuisance criterion must be observed in respect of the actual neighbouring dwelling, and not, for example, the garden. In the same manner as for conglomerations, residential buildings on properties with agricultural obligations under the rules of the Agricultural Act and residential buildings that are owned by the farmer are not included.

If the calculated nuisance distance is greater than the actual distance, a rejection must be issued. However, approval may be granted on a case-by-case basis, e.g. if the livestock production for which the application is made involves unchanged or lower odour nuisance in relation to existing production and the distance to neighbours is over half of the calculated odour nuisance.

It must be noted that in the environmental assessment of permits pursuant to Section 10 of the Livestock Farming Environmental Approval Act, the same calculation is used for odour nuisances as in approvals pursuant to Sections 11 and 12.

C. Protection levels with regard to phosphorus surplus

The requirement relating to phosphorus surplus will depend on the type of soil, drainage conditions and phosphorus concentrations. Requirements are stipulated relating to surplus phosphorus in drained clay soil and low-level areas, including drained and ditched sandy soil that drains into Natura 2000 aquatic areas that are over-burdened with phosphorus.

If a balance of phosphorus can be documented for the livestock farm after implementation of the establishment, expansion or modification which is the object of the application, no requirement will be stipulated with regard to phosphorus, irrespective of the phosphorus concentrations of the holding.

In other cases, the following requirements are stipulated for the holding with regard to the phosphorus surplus. However, it should be emphasised that for all four groups, this only covers fertilised areas in catchment areas for Natura 2000 sites that are over-burdened with phosphorus. Please refer to the map documentation, where these catchment areas are marked:

- No requirement is stipulated for areas of drained clay soil with a phosphorus concentration of less than Pt 4.0. However, the phosphorus surplus may not exceed the amount permitted in the harmonised rules for the relevant livestock farms (Phosphorus Class 0).
- For areas of drained clay soil with a phosphorus concentration of Pt 4.0-6.0, a requirement is stipulated that the phosphorus surplus may increase by a maximum of 4 kg P/ha/year. However, the phosphorus surplus may not be greater than the amount permitted in the harmonised rules for the relevant livestock farm, and the requirement for the phosphorus surplus will always be met provided that the phosphorus surplus does not exceed 4 kg P/ha/year in the "after" scenario (Phosphorus Class 1).
- In low-level areas, a requirement is stipulated for a maximum phosphorus surplus of 2 kg P/ha/year. "Low-level areas" are low areas relative to a receiving environment with permanent, high-standing ground water, which is gradually removed via draining or ditching. However, these areas are not subject to the requirement if the applicant can document through soil analyses that the iron-phosphorus ratio (FeBD:PBD-molar ratio) is greater than 20. The soil analyses for the Fe/P ratio must be extracted by an independent body (Phosphorus Class 2).
- For areas of drained clay soil with a phosphorus concentration of over Pt 6.0, a phosphorus balance requirement is stipulated (Phosphorus class 3).

In both the "before" and "after" scenarios, the balance of phosphorus must be calculated based on the entirety of the area to which the application applies. New areas that are not included in the "before" scenario are included in the phosphorus balance calculation in the "before" scenario solely in the form of removal from the crops. In other words, the calculation is merely an expression of the consequences of the requested expansion/modification of the livestock farms in which the use of new areas is anticipated.

The phosphorus surplus is defined with regard to protection levels as follows:

The phosphorus surplus is calculated as the difference between input and output	Current management of farm	Requested operation
Input	Phosphorus added via livestock manure	Phosphorus added via livestock manure and waste (sludge)
Output	Phosphorus removed with crops	Phosphorus removed with crops

Phosphorus added through livestock manure is calculated according to the standard figures and based on the volume of livestock manure from the holding +/- livestock manure added to and removed from other holdings. If adequate documentation

demonstrates a lower phosphorus content in the livestock manure with optimal feeding, the standard figures may be adjusted in accordance with the current adjustment formulae issued by the Danish Institute of Agricultural Science. In this case, conditions are stipulated regarding adequate documentation.

Phosphorus added with waste (sludge) may only be included in the "after" scenario.

Phosphorus removed with crops is calculated according to the standard crop rotation selected in the fertilised areas. Standard figures are used for phosphorus removal, irrespective of yield.

It must be noted that, when assessing permits pursuant to Section 10 of the Livestock Farming Environmental Approval Act, the calculation of the maximum phosphorus surplus must be based on the same model as that shown above; however, when calculating the maximum phosphorus surplus, consideration should only be given to the part of the model that covers the requirements for low-level land and areas with phosphorus concentrations of over 6.

D. Protection levels for nitrates

Protection levels for nitrates are composed of two elements:

- 1) Protection levels with regard to surface water
- 2) Protection levels with regard to ground water

No 1. Protection levels with regard to surface water.

Protection of aquatic environments from nitrate loads with regard to surface water focuses on the catchment areas that drain into the most vulnerable Natura 2000 areas. In the case of agricultural areas that drain into these aquatic areas, the requirement is for a lower concentration of livestock per hectare than that permitted in the general harmonised rules.

Table 5. Requirement to tighten the general rules regarding the maximum volume of livestock manure that may be spread per ha, stated as the number of livestock units/ha (harmonised rules) in establishment, expansion and modification in catchment areas adjacent to vulnerable Natura 2000 sites.

	Extremely vulnerable to nitrogen	Less vulnerable to nitrogen	Other areas
Reduction potential expressed in percent from root zone to aquatic area.			
0-50	50 percent of general rules (Nitrate Class 3)	85 percent of general rules (Nitrate Class 1)	General rules
51-75	65 percent of general rules (nitrate class 2)	General rules	General rules
76-100	General rules	General rules	General rules

A map indicating the catchment areas that are classified as Nitrate Classes 1, 2 and 3 has been produced.

It must be noted that, in the environmental assessment of permits pursuant to the Livestock Farming Environmental Approval Act, catchment areas adjacent to less vulnerable areas should merely follow the general rules, irrespective of the reduction potential. The tightened harmonised requirements are thus calculated only for catchment areas in very vulnerable areas, i.e. Nitrate Classes 2 and 3. Aside from this, the same calculation model and, thus also the same requirements, are used for tightening the general rules regarding harmonised requirements.

It will be possible for an applicant to have a higher concentration of livestock than that stated in Table 4, if measures are set in motion to reduce nitrate drainage to at least the same extent as would ensure compliance with the tightened harmonised requirements. The following measures may be applied:

- A higher volume of catch crops in addition to the general requirements
- A requirement to reduce nitrogen concentrations
- A requirement to change the standard crop rotation

The leaching calculations must be made using the leaching models produced by the Danish Institute of Agricultural Science (Farm-N).

No 2. Protection levels with regard to ground water

Extraction areas that are vulnerable to nitrates.

The planning status for extraction areas that are vulnerable to nitrates, cf. Section 8a of the Environmental Objectives Act, forms part of the basis for issuing permits and approvals pursuant to the Livestock Farming Environmental Approval Act. This planning may involve three scenarios:

- The area is listed as an extraction area that is vulnerable to nitrates, the area has been zoned, and an action plan has been produced for it (Scenario 1).
- The area is listed as an extraction area that is vulnerable to nitrates, but has not been zoned, and no action plan has been produced for it (Scenario 2).
- The area is listed as an extraction area that is vulnerable to nitrates, and has been zoned, but no action plan has been produced for the area (Scenario 3).

The planning status of extraction areas that are vulnerable to nitrates and which affect the areas of holding must be investigated.

If the area has been zoned and an action plan has been produced for it (cf. Scenario 1, above), the permit or approval must set conditions to ensure compliance with the existing action plan.

If the area has not been zoned and no action plan has been produced for it (cf. Scenario 2, above), the permit or approval must set conditions to the effect that no additional load can occur if the leaching from the root zone exceeds 50 mg nitrates per litre in the "after" scenario.

If the area has been zoned but no action plan has been produced for it (cf. Scenario 3, above), a specific assessment must be made as to whether conditions relating to ground water protection should be stipulated; cf. Annex 4, no 3.

When calculating the additional load, both the "before" and "after" scenarios must be calculated based on all areas within the holding, including any expansion of the fertilised area for which an application has been made. Nitrogen added with waste (sludge) may only be included in the "after" scenario. The calculation is thus solely an expression of the consequences of the requested establishment, expansion or modification of the livestock farms in which the use of new areas is anticipated."

Annex 4

"Annex 4

Criteria for setting tightened conditions; cf. Section 11, subsection 2; cf. Section 27 of the Act

When setting more stringent conditions (cf. Section 11, subsection 2), the municipal authority must use the following criteria for phosphorus surplus and nitrates respectively:

No 1. Criteria for phosphorus surplus

If the municipal authority decides that conditions must be stipulated extending beyond the protection levels for surplus phosphorus as stated in Annex 3, one of the following criteria is used:

A. In other drained clay soil with lower phosphorus levels than those laid down in the relevant phosphorus classes (cf. Annex 3), and which is located in catchment areas adjacent to Natura 2000 aquatic areas with a phosphorus overload, surplus phosphorus limits are stipulated.

B. In drained, non-clay soil, conditions are stipulated depending on the phosphorus concentration, corresponding to the rules for drained clay soil located in catchment areas adjacent to Natura 2000 aquatic area with a phosphorus overload.

In catchment areas adjacent to less vulnerable Natura 2000 aquatic areas, conditions are stipulated corresponding to the conditions for catchment areas adjacent to Natura 2000 aquatic areas with a phosphorus overload and subject to requirements relating to phosphorus Classes 1, 2 or 3.

The municipal authority must calculate the phosphorus surplus and the increase in phosphorus surplus according to the guidelines used in connection with protection levels for surplus phosphorus as stated in Annex 3.

No 2. Criteria for nitrates in surface water

If the municipal authority decides that conditions extending beyond the protection levels for nitrates in surface water as stated in Annex 3 must be set, the following criteria are applicable:

A. In catchment areas adjacent to Natura 2000 aquatic areas covered by Nitrate Class 1 (cf. Annex 3), conditions are stipulated corresponding to Nitrate Class 3.

B. In catchment areas adjacent to Natura 2000 aquatic areas classified as less vulnerable to nitrogen with a reduction potential of 51-75 percent (cf. Annex 3), conditions are stipulated as for Nitrate Class 2.

It is possible for an applicant to have a higher concentration of livestock if measures have been set in motion to reduce nitrate leaching to at least the same level as stipulated by the stricter harmonised requirements. Permitted measures correspond to the measures stated in point 1 of Annex 3 for protection levels for nitrates in surface water.

Calculations for nitrate leaching to surface water are calculated according to the guidelines for protection levels for nitrates in surface water stated in Annex 3.

No 3. Criteria for nitrates in ground water

As stated in Annex 3, point D, no 2 concerning protection levels for nitrates in ground water, an investigation must be made into the existence of any action plans for extraction areas that are vulnerable to nitrates affecting the areas of the holding.

If the areas of the holding, including any expansion of the fertiliser area for which an application has been made, affect surveyed extraction areas that are vulnerable to nitrates and for which zoning has been carried out, but for which no action plans have been produced, a specific assessment must be taken of the load that will ensue from the application. In the assessment, the calculation method for calculating leaching as stated in Annex 3, point D, no 1 must be used. The method for calculating additional load as stated in Annex 3, point D, no 2 must also be used in the assessment.

Based on the specific assessment, conditions may be stipulated for areas that have been identified via zoning as being vulnerable to nitrates, and which at a later date will be classified as extraction areas that are vulnerable to nitrates and will be covered by an action plan. Based on the specific assessment, conditions may be stipulated regarding a prohibition against additional loads if the municipality deems that leaching from the root zone exceeds 50 mg of nitrates per litre in the "after" scenario.

Based on the specific assessment, the municipality may choose not to stipulate conditions for areas that are listed as extraction areas vulnerable to nitrates, but which have been identified via zoning as not being vulnerable to nitrates, and the area will no longer be listed as an extraction area that is vulnerable to nitrates in a subsequently produced action plan (cf. Annex 3, point D, no 2). However, the municipality may also choose to stipulate conditions in this scenario. Where required, conditions may be stipulated in the form of a prohibition against additional loads if the municipality finds that leaching from the root zone exceeds 50 mg of nitrates per litre in the "after" scenario."

Official notes

¹¹ This Order contains provisions that implement parts of Council Directive 85/337/EEC of 27 June 1985 concerning the assessment of the effects of certain public and private projects on the environment (the EIA Directive), Official Journal of the EU 1985, no L 175, page 40, as last amended by Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC, Official Journal of the EU 2003, no L 156, page 17, parts of Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated prevention pollution prevention and control, Official Journal of the EU 2008, no L 24, page 8, parts of Council Directive 2009/147/EC of 30 November 2009 on the conservation of wild birds (the Birds Directive), Official Journal of the EU 2010, no L 20, page 7, and parts of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive), Official Journal of the EU 1992, no L 206, page 7.