Nordic Ecolabelling for

New buildings

Version 4.6 15 February 2023 – 15 May 2026

Nordic Ecolabelling

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This document is the original. In case of dispute, the original document should be taken as authoritative.

Contact information

In 1989, the Nordic Council of Ministers decided to introduce a voluntary official ecolabel, the Nordic Swan Ecolabel. These organisations/companies operate the Nordic Ecolabelling system on behalf of their own country's government. For more information, see the websites:

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What is a Nordic Swan Ecolabel building?

A Nordic Swan Ecolabel building is a better choice for both the environment, the climate and for the occupants. It meets strict obligatory requirements for the whole life cycle of the building, including extraction and production of materials, the construction process, the use phase as well as the recycling and waste stages.

The requirements promote resource efficiency, reduced climate impact, a non-toxic circular economy and conservation of biodiversity. They also promote buildings with good indoor climate and high quality. A Nordic Swan Ecolabel building:

- Has a low energy demand (use stage) that is at least10% better than “nearly zero-energy buildings” (NZEB).*
- Has a good indoor environment by meeting strict requirements for moisture control, daylight**, and minimised exposure to harmful substances.
- Meets strict chemical requirements for substances harmful to health and the environment - in both construction materials and chemical building products.
- Meets requirements that promote circular economy: A material logbook ensures the traceability of the building components – and requirements for construction waste promote reuse, recycling, and other material recovery.
- Meets strict requirements that promote biodiversity. Partly via measures to preserve and improve biodiversity on the building plot, and partly via requirements for certified construction timber from responsibly managed sources.
- Is of a high quality through strict requirements for moisture control and the contractor’s self-monitoring in the building process.
- Is aligned with the technical screening criteria for substantial contribution in the EU taxonomy Annex 1* for construction of new buildings, including climate calculation for relevant buildings.

** Except for Iceland, which has not implemented Directive 2010/31/EU and Regulation (EU) 2020/852.*

*** Exemptions are in some cases possible in Finland and Sweden. Some building types are not subject to daylight requirements, see requirement O35.*

Warehouse buildings

The requirements promote resource efficiency, reduced climate impact, a non-toxic circular economy and conservation of biodiversity. They also promote buildings with high quality. A Nordic Swan Ecolabel Warehouse building:

- Has a low energy demand (use stage) that is at least 10% better than “nearly zero-energy buildings” (NZEB).*
- Has solar PV installed.
- Has been assessed and adapted for risks related to climate change adaption.
- Is designed with focus on the principles of design for disassembly.

- Meets strict chemical requirements for substances harmful to health and the environment - in both construction materials and chemical building products.
- Meets requirements that promote circular economy: A material logbook ensures the traceability of the building components – and requirements for construction waste promote reuse, recycling, and other material recovery.
- Meets strict requirements that promote biodiversity. Partly via measures to preserve and improve biodiversity on the building plot, and partly via requirements for certified construction timber from responsibly managed sources.
- Is of a high quality through strict requirements for moisture control and the contractor's self-monitoring in the building process.
- Is aligned with the technical screening criteria for substantial contribution in the EU taxonomy Annex 1* for construction of new buildings, including climate calculation for relevant buildings.

** Except for Iceland, which has not implemented Directive 2010/31/EU and Regulation (EU) 2020/852.*

Why choose the Nordic Swan Ecolabel?

- The licensee may use the Nordic Swan Ecolabel trademark for marketing. The Nordic Swan Ecolabel is a very well-known and well-reputed trademark in the Nordic region.
- The Nordic Swan Ecolabel is a simple way of communicating environmental work and commitment to customers.
- The Nordic Swan Ecolabel clarifies the most important environmental impacts and thus shows how a company can cut emissions, reduce their resource consumption and improve their waste management.
- Environmentally suitable operations are better prepared for future environmental legislation.
- Nordic Ecolabelling can be seen as providing a business with guidance on the work of environmental improvements.
- The Nordic Swan Ecolabel not only covers environmental issues but also quality requirements since the environment and quality often go hand in hand. This means that a Nordic Swan Ecolabel licence can also be seen as a mark of quality.
- Is aligned with the technical screening criteria for substantial contribution in the EU taxonomy Annex 1 * for construction of new buildings, including climate calculation for relevant buildings.

** Except for Iceland, which has not implemented Directive 2010/31/EU and Regulation (EU) 2020/852.*

What can carry the Nordic Swan Ecolabel?

The following building types can be Nordic Swan Ecolabelled according to the criteria for new buildings. All building types can stand alone or be constructed as an extension to existing buildings.

1. Buildings classified as residential buildings in the national building legislation.

2. Educational buildings, including preschool buildings, kindergartens and day-care centres, schools, universities and other schools for higher education.

   For gymnastics halls and sports halls that are constructed in the same project as an educational building the following applies:

   a) Gymnastics and sports halls that are an integrated part of the educational building must be included in the licence and fulfil the requirements.

   b) Gymnastics and sports halls built as separate buildings can be included in the licence and must then fulfil the requirements.

3. Office buildings, including all associated facilities in the building.

4. Heated warehouse buildings (the warehouse must be designed for a minimum temperature of 15 ºC). The warehouse cannot be planned for production activities.

5. Buildings for residential care facilities for people in need of 24-hour health care and service, such as homes for the elderly, nursing homes (NO: omsorgsboliger), hospices , rehabilitation centres, and homes for persons with disabilities. If buildings are nationally classified as residential buildings, they are covered by bullet one.

6. Buildings for health centres and clinics that accommodate health consultations, diagnosis and treatment of injuries or ailments from qualified physicians, dentist, chiropractors, physioterapists, etc. Surgical clinics and surgical centres are not included.

7. Buildings for hotels or other establishments offering temporary accommodation. The following applies for the facilities below:

   a) Restaurants and conference centre buildings that are an integrated part of the hotel or other accommodation must be included in the licence and must fulfil the requirements.

   b) Restaurants and conference centres buildings built as separate buildings can be included in the licence and must fulfil the requirements.

   c) Spa facilities cannot be included in the licence and must be kept separate in the marketing of the licence.

8. Buildings accommodating conference centres. The following applies for the facilities below:

   a) Restaurant buildings that are an integrated part of the conference centre must be included in the licence and fulfil the requirements.

   b) Restaurant buildings built as separate buildings can be included in the licence and fulfil the requirements.

9. Buildings for cultural activities, such as libraries, archives, museums, cultural centres, religious buildings, concert halls, theatres or cinemas.
   For gymnastics halls and sports halls that are constructed in the same project as a building for cultural activities the following applies:

   a) Gymnastics and sports halls that are an integrated part of the building for cultural activities must be included in the licence and fulfil the requirements.

   b) Gymnastics and sports halls built as separate buildings can be included in the licence and must then fulfil the requirements.
10. Commercial areas, such as cafés, hairdresser, clothing stores, supermarkets, etc., that are integrated in one of the building types 1-9. The commercial areas may constitute a maximum of 25% of the total area of the building.

11. Temporary constructions such as modules, pavilions or annexes classified as the building types 1-10.

If any areas of the building are excluded from the license the load-bearing structure, the load-bearing part of the storey partition and slab on the ground must, however, meet the requirements.

When a building is a combination of two or more building types as described above, it must fulfil the requirements for these building types in the designated areas.

The following buildings cannot be Nordic Swan Ecolabelled

- Holiday homes and cottages.
- Permanent supplementary buildings, such as garages, refuse depots, bicycle storage rooms, and sheds constructed as separate projects. Supplementary buildings are included in the licence when planned and constructed along with the main building
- Separate educational buildings that primarily accommodate laboratories, workshops and similar.
- Ice skating halls, public and private swimming pools.
- Gymnastics halls and sports halls constructed as separate projects.
- Hospitals surgical clinics and surgical centres.
- Veterinary clinics.
- Spa facilities.
- Separate commercial buildings, shops and shopping centres
- Factories and other industrial buildings.
- Warehouses that are designed for heating to < 15º C.

Who may be a licensee?

The following can be licensee in the product group new buildings.

- Contractor
- Building developer
- Property owner
- House manufacturer including module house manufacturers.

The licensee must take full responsibility for the fulfilment of all requirements. Thus architects, technical consultants, or other parties can only be licensees if they can take full responsibility for all requirements.

The holder of a base licence can be any of the previously mentioned stakeholders if they are fully responsible not only for all the requirements but also for all the internal quality procedures, ensuring the viability of a base licence (please see the section on Licence types).

How to apply

Application and costs

For information about the application process, various licence types (base licence or project licence) and fees for this product group, please refer to the respective national web site. For contact information see page 4.

What is required?

The application must consist of an application form/web form and documentation showing that all relevant requirements are fulfilled. Documentation is provided throughout the planning and construction process. Documentation is uploaded and handled in the Nordic Ecolabelling Portal (NEP) and the Supply Chain Declaration Portal (SCDP). For links, please see the respective national web site as mentioned above.

The criteria for new buildings comprise a combination of obligatory and point score requirements. The letter “O” indicates an obligatory requirement whereas the letter “P” identifies a point score requirement. The point score of each point requirement is summed up to verify that the minimum total point score for the building type is achieved to fulfil the licence constraints.

The requirement text also describes how the applicant must demonstrate fulfilment of each requirement. The following icons are used:

✉ Enclose

⇪ Upload

To be awarded a Nordic Swan Ecolabel licence the following must be fulfilled:

- All obligatory requirements must be fulfilled.
- The minimum point score according to O2 must be achieved.
- Nordic Ecolabelling must conduct inspection(s) on the construction site and/or module factory. Serial production of houses will be subject to sampling inspection on the construction site.

All information submitted to Nordic Ecolabelling is treated confidentially. Suppliers can send documentation directly to Nordic Ecolabelling, and this information will also be treated confidentially.

Licence types

Various licence types exist (e.g., base licence or project licence). For details on licence types please contact the relevant national Nordic Ecolabelling office.

Licence validity

The Nordic Swan Ecolabel licence is valid providing that relevant requirements in the criteria are fulfilled and until the criteria expires. The validity period of the criteria may be extended or adjusted, in which case the licence is automatically extended, and the licensee informed. The building is ecolabelled according to a specific generation of the criteria.

Revised criteria will be published at least one year prior to the expiry of the present criteria. The licensee is then offered the opportunity to renew their licence.

On-site inspection and other control measures

In connection with handling of the application, Nordic Ecolabelling performs on-site inspection(s) to ensure adherence to the requirements. For such an inspection, data used for calculations, original copies of submitted certificates, test records, purchase statistics, and similar documents that support the application must be available for examination.

Nordic Ecolabelling can require measurements of relevant parameters in order to verify compliance with national legislation and/or requirements defined in these criteria. If the relevant requirement is not fulfilled, the applicant must pay for the testing and perform corrective measures.

Queries

Please contact Nordic Ecolabelling if you have any queries or require further information. See page 4 for contact information. Further information and assistance (such as calculation sheets or electronic application help) may be available. Visit the relevant national website for further information.

1 What is subject to the requirements?

Buildings, supplementary buildings, and outdoor areas

The Nordic Swan Ecolabel building, outdoor areas on the plot and any permanent supplementary building must fulfil all relevant requirements. Communal/shared areas for residents or occupants are also included, e.g., gyms and hobby rooms in the building. Supplementary buildings are refuse depots, bicycle sheds, storage buildings, garages (both as a separate structure or connected to the building), carports and similar constructions.

Commercial areas making up more than 25% of the building area such as shop premises, hairdressers, restaurants etc. are exempt from the requirements. Please see the section “What can carry the Nordic Swan Ecolabel?”.

General scope of the material requirements

- The requirements include all materials and products that are incorporated in the Nordic Swan Ecolabel buildings and supplementary buildings included in the project.
- The material requirements apply to all structures above the capillary layer. This includes materials used for insulation of the base plate (above or below the plate) and any radon barrier wherever it is placed.
- Materials used on outdoor areas that are included in the building project and/or delivered by the house manufacturer are covered by relevant requirements. This includes products and construction materials such as decking, fences, pergolas, permanently installed outdoor furniture, playground and park equipment and similar items.
- Installations up to the building are not included. This means, for example, that electrical cables up to the main fuse box are not included.
- Requirements apply to permanently installed fittings, furniture and trimmings as well as loose fittings and furniture (e.g., wardrobes and lockers) that are included in the construction project and sold/let with the residential unit or premise.

Exempted areas, materials and products

The following are not subject to any requirement:

- Technical service areas* including lift cabins* and lift shafts*
- Garage floors* and floors* in bicycle rooms where there is a need for waterproofing due to a dry level below the floors in question.
- Control units* for water, ventilation and heating.
- Marking paint, marking tape that is removed, cable/pipe lubricant and cleaning agents.
- Sealing foam, formwork oil, etc. used to seal or lubricate casting moulds.
- Touch-up paint for damage and repairs.

- Rust protection paint to restore railings and beams after welding and when screw holes have been drilled or similar work.
- Builders' hardware (e.g., locks, handles, hole plates and hinges).
- Nails, screws, nuts, bolts, washers and similar fixings and fasteners.
- Palletising trays, plastic spacers, ground spacers, inflow and outflow pipes for white goods and similar items.
- Temporary products and structures used in the construction but later removed. Examples of temporary products and structures are moulds, struts, tarpaulins or plastic film temporarily used for weather protection or sealing. However, wooden products are always covered by O29 such as wood in casting moulds.

** The materials used are however subject to the logbook requirement O13.*

Any other exemption must be communicated to Nordic Ecolabelling for approval.

Prefabrication

When anything that would normally have been built on site is built in a module/construction element factory the same chemical and material requirements apply. This for instance includes:

- Prefabricated bathroom modules.
- Sandwich elements and other modules for wall, floor, roof or similar
- Concrete elements (incorporated building products and surface treatment)

Chemical curing products can be used in prefabrication if mixing and application takes place in designated areas and/or with methods and systems protecting from exposure (in accordance with national work environment legislation). Apart from this, these products are not subject to chemical requirements.

Chemical curing is a chemical process that produces the hardening of a polymer material by cross-linking of polymer chains. One- or two-component products, where the curing can depend on various factors such as reactive substances, UV light, heat, humidity.

Industrial surface treatments

Painting, varnishing, powder coating, galvanising or other surface treatments performed in factories.

Examples where chemical requirements (chapter 6.2) apply:

- Primed and final-coated outdoor wooden panels and boards that are not covered by the bullet below.

Examples where chemical requirements (chapter 6.2) do not apply, but where material requirements on construction products (chapter 6.4) still apply:

- Outdoor wooden facade panels and boards that are primed or treated with a biocidal product (PT8) according to Regulation (EU) 528/2012, if all other coatings (including products used at the construction site) are ecolabelled.

Examples where chemical requirements (chapter 6.2) do not apply, but where material requirements on construction products (chapter 6.3 & 6.4) still apply:

- Pre-painted windows, doors, and interiors (mouldings, kitchen and bathroom fittings, indoor stairs)
- Primed and final-coated indoor wooden panels, boards and ceilings
- Fire retardant-treated wood for indoor and outdoor use where the only purpose is to achieve a certain fire protection class.
- Surface-treated steel, aluminium or other metals.

2 Alignment with the EU Taxonomy framework

Disclaimer

There are many uncertainties on how EU Taxonomy compliance can be documented as well as the interpretation. Therefore, Nordic Ecolabelling cannot guarantee EU taxonomy alignment through our criteria for New Buildings.

Nordic Swan Ecolabel do not take any legal responsibility for the (degree of) alignment, nor can a building project or a building material ecolabelled with NSE (or declared in the SCDP) be claimed as taxonomy aligned based on the ecolabelling criteria.

The responsibility for documentation of EU taxonomy compliance solely belongs to the company who is claiming it.

This section describes how the Delegated Act on the objective climate change mitigation (Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021) is handled in these criteria for New Buildings. Specifically, reference is made to the activity 7.1 "Construction of new buildings". From here on it will be referred to as "the EU Taxonomy".

The following two tables display how Nordic Ecolabelling assume how the EU Taxonomy can be interpreted in relation the criteria for New Buildings. This assessment is done to the best of our knowledge and no responsibility is taken on these interpretations.

Nordic Ecolabelling closely follow interpretations of the EU Taxonomy criteria in both the Nordic countries and from EU. In the end the interpretation is a task for national authorities or other officially appointed bodies.

Implementation strategy

The overall implementation strategy for Nordic Ecolabelling is to:

- Implement the technical screening criteria for significant contribution to climate change mitigation as mandatory requirements in this Nordic Swan Ecolabelling criteria generation 4 in all countries where it is feasible.
- Implement those Do-No-significant-harm criteria in generation 4, that are considered relevant and reasonable, and where the delegated act is relatively clear on what is required to fulfil the requirement.
- Social minimum guarantees as defined in the EU Taxonomy are not evaluated or covered by these criteria.

- In generation 5 of the criteria (next generation) Nordic Ecolabel aims to become a tool for documentation of alignment with The EU Taxonomy Climate change mitigation.

The Technical screening criteria are according to the internal assessment done by Nordic Ecolabelling assumed to be handled in the following way (please note the disclaimer in the beginning of this section):

Technical screening criteria in the EU Taxonomy for substantial contribution to climate change mitigation	**Nordic Ecolabelling evaluation of the screening criteria compared to the Nordic Swan Ecolabel criteria for New buildings generation 4**
7.1.1: Primary energy demand The Primary Energy Demand (PED) [281], defining the energy performance of the building resulting from the construction, is at least 10% lower than the threshold set for the nearly zero-energy building (NZEB) requirements in national measures implementing Directive 2010/31/EU of the European Parliament and of the Council [282]. The energy performance is certified using an as built Energy Performance Certificate (EPC). [281] The calculated amount of energy needed to meet the energy demand associated with the typical uses of a building expressed by a numeric indicator of total primary energy use in kWh/m2 per year and based on the relevant national calculation methodology and as displayed on the Energy Performance Certificate (EPC). [282] Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings (OJ L 153, 18.6.2010, p. 13).	The primary energy demand of the building is restricted in requirement "O3 Energy demand of the building". See national details below. Finland, Sweden and Denmark: have implemented Directive 2010/31/EU and defined the threshold limits in the national building legislation to be in accordance with NZEB. The threshold limits for the building's energy demand defined in O3 in these criteria are all minimum 10% better than the national building legislation for all building types covered by this requirement. According to the Commission notice C/2023/267 on the EU Taxonomy climate delegated act question nr. 115 compliances must be verified by an Energy Performance Certificate after completion of construction. This is implemented in O3. Norway: Has not implemented Directive 2010/31/EU, but a guidance on how to calculate primary energy demand and energy threshold limits for NZEB was published by the Ministry of Local Government and Regional Development on 31 January 2023. The threshold limits are defined as primary energy use. Separate energy calculations must be conducted for buildings to document alignment with the taxonomy since the guidance for NZEB refers to primary energy use and O3 refers to net energy demand. Since all primary energy factors should be set to 1 according to the guidance, the threshold limits for primary energy use will correspond to the calculated delivered energy on the energy performance certificate, when energy use for technical equipment is subtracted for all building types, and in addition energy use for lighting is subtracted for small houses and apartment buildings. The threshold limits for the building's energy demand in O3 in these criteria correspond to levels that are between 10 % (apartment block) and 31 % (small house of 170 m2) lower than the threshold limit set for NZEB for the relevant building types when a conservative system efficiency for energy supply systems is included in the calculation from net energy demand to primary energy use. This means that the taxonomy requirement of at least 10 % lower than NZEB is most likely fulfilled for all relevant building types. Iceland: has not implemented Directive 2010/31/EU and have therefore not defined the threshold limits in the national building legislation in accordance with NZEB. Nordic Ecolabelling awaits the national authorities before any conclusions can be made. In conclusion, it is assessed that the documentation required to verify O3 for DK, FI and SE can be used as documentation to verify taxonomy compliance. For NO, an additional energy calculation must be conducted.

	Calculation methods and documentation can be seen in O3.
7.1.1.2: Air tightness For buildings larger than 5 000 m^2 [(283)], upon completion, the building resulting from the construction undergoes testing for airtightness and thermal integrity [(284)], and any deviation in the levels of performance set at the design stage or defects in the building envelope are disclosed to investors and clients. As an alternative, where robust and traceable quality control processes are in place during the construction process this is acceptable as an alternative to thermal integrity testing. [(283)] For residential buildings, the testing is made for a representative set of dwelling/apartment types. [(284)] The testing is carried out in accordance with EN13187 (Thermal Performance of Buildings - Qualitative Detection of Thermal Irregularities in Building Envelopes - Infrared Method) and EN 13829 (Thermal performance of buildings. Determination of air permeability of buildings. Fan pressurisation method) or equivalent standards accepted by the respective building control body where the building is located.	The airtightness of the building is covered by the requirement "O38 Air permeability". In the Nordic Swan Ecolabel criteria, the applicant must have routines to test air permeability/airtightness based on the standard EN ISO 9972 or alternative method referred to in national building legislation in order to ensure the performance that is set at the design stage. To our knowledge the standard EN ISO 9972 has replaced EN 13187. The routines must include defect analysis and corrective measures in cases where the projected air permeability is not achieved. The tests and follow-up based on the routines must be documented in requirement "O42 the contractor's self-monitoring system". According to the Commission notice C/2023/267 question nr.nr 116 it is assessed that by requiring a traceable and robust quality system in O42 the contractors self-monitoring system, it is not necessary to perform thermal integrity testing if the construction is certified. Nordic Ecolabelling conclude that the documentation required to verify O38 and O42 can be used as documentation to verify taxonomy compliance. Please note that any deviation in the levels of performance set at the design stage or defects in the building envelope are disclosed to investors and clients. This is not handled by the Nordic Swan Ecolabel.
7.1.1.3: GWP calculation For buildings larger than 5 000 m^2 [(285)], the life-cycle Global Warming Potential (GWP) [(286)] of the building resulting from the construction has been calculated for each stage in the life cycle and is disclosed to investors and clients on demand. [(285)] For residential buildings, the calculation and disclosure are made for a representative set of dwelling/apartment types. [(286)] The GWP is communicated as a numeric indicator for each life cycle stage expressed as kg CO_{2e}/m^2 (of useful internal floor area) averaged for one year of a reference study period of 50 years. The data selection, scenario definition and calculations are carried out in accordance with EN 15978 (BS EN 15978:2011. Sustainability of construction works. Assessment of environmental performance of buildings. Calculation method). The scope of building elements and technical equipment is as defined in the Level(s) common EU framework for indicator 1.2. Where a national calculation tool exists or is required for making disclosures or for obtaining building permits, the respective tool may be used to provide the required disclosure. Other calculation tools may be used if they fulfil the minimum criteria laid down by the Level(s) common EU framework (version of 4.6.2021: https://susproc.jrc.ec.europa.eu/product-bureau/product-groups/412/documents), see indicator 1.2 user manual.	The GWP- calculation is covered by the requirement "O6 Climate calculation of the building". For buildings larger than 5000 m^2 a calculation in agreement with the requirements in the EU taxonomy must be performed and be disclosed to investors and clients on demand. Where a national calculation tool exists or is required for making disclosures or for obtaining building permits, the respective tool may be used to provide the required disclosure. This is the case in Denmark and Finland. Other countries official tools are not currently in line with the requirements in the EU taxonomy. For the other countries other calculation tools can be used if they fulfil the minimum criteria laid down by the Level(s) common EU framework. For Sweden, IVL's guidelines "Anvisningar för LCA-beräkning av byggprojekt" can be used. This might change if authorities or the EU Commission propose other methods. For Norway, this is not clear until the Norwegian authorities have made an official interpretation of this part of the EU Taxonomy. In conclusion, it is assessed that the documentation required to verify "O6 Climate calculation of the building" can be used as documentation to verify taxonomy compliance.

The Do No Significant Harm criteria are according to the internal assessment done by Nordic Ecolabelling assumed to be handled in the following way (please note the disclaimer in the beginning of this section):

DNSH criteria in the EU Taxonomy	Evaluation and relevant requirement in criteria for New buildings
7.1.2.1: Climate Change adaption The activity complies with the criteria set out in Appendix A to this Annex.	The requirements defined in Annex A for climate change adaption are covered by the requirements for "P7 Assessment of risks in a changing climate" and "P8 Adaptation to a changing climate". In conclusion, it is assessed that the documentation required to verify P7 and P8 can be used as documentation to verify taxonomy alignment. Please note that these are point requirements, so it is up to the licence holder to include these points in the application for the building, in order to assess taxonomy alignment on this DNSH criteria.
7.1.3.1: Sustainable use and protection of water and marine resources Where installed, except for installations in residential building units, the specified water use for the following water appliances are attested by product datasheets, a building certification or an existing product label in the Union, in accordance with the technical specifications laid down in Appendix E to this Annex: (a) wash hand basin taps and kitchen taps have a maximum water flow of 6 litres/min; (b) showers have a maximum water flow of 8 litres/min; (c) WCs, including suites, bowls and flushing cisterns, have a full flush volume of a maximum of 6 litres and a maximum average flush volume of 3,5 litres; (d) urinals use a maximum of 2 litres/bowl/hour. Flushing urinals have a maximum full flush volume of 1 litre.	The requirements are covered by “P2 Water saving sanitary tapware”. Single family homes are not included in the EU Taxonomy requirement. Whether multi-flat or multi-home developments are included in the Taxonomy requirement depend on the operator of the building. See more in the Commission notice C/2023/267 question nr.nr. 122. Average flush volume is calculated as the average of three half flush and one full flush. See more in the Commission notice C/2023/267 question no. 123 for further specifications. In conclusion, it is assessed that the documentation required to verify P2 can be used as documentation to verify taxonomy compliance. Please note that this is a point requirement, so it is up to the licence holder to include these points in the application for the building, in order to assess taxonomy alignment on this DNSH criteria.
7.1.3.2: Sustainable use and protection of water and marine resources To avoid impact from the construction site, the activity complies with the criteria set out in Appendix B to this Annex.	No requirements in Nordic Ecolabelling's criteria cover Appendix B specifically. It is assessed that this will be handled by national legislation in the Nordic. When obtaining a building permit this issue should have been addressed and handled by the authorities. In conclusion, the applicant should ask for confirmation from the authorities that the requirements in appendix B is fulfilled.
7.1.4.1: Transition to a circular economy At least 70% (by weight) of the non-hazardous construction and demolition waste (excluding naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Decision 2000/532/EC) generated on the construction site is prepared for reuse, recycling and other material recovery, including backfilling operations using waste to substitute other materials, in accordance with the waste hierarchy and the EU Construction and Demolition Waste Management Protocol [(287)]. Operators limit waste generation in processes related to construction and demolition, in accordance with the EU Construction and Demolition Waste Management Protocol and taking into account best available techniques and using selective demolition to enable removal and safe handling of hazardous substances and facilitate reuse and high-quality recycling by	The requirement is covered by “O10 Construction waste management” that requires a waste management plan in accordance with the EU Construction and Demolition Waste Management Protocol. Construction waste must be accounted for by reports from the waste management company showing the amounts of relevant waste fractions collected in relation to the total volume of the project’s construction waste. The intended treatment form of the waste fractions and the receiver of the fractions must be stated. Both construction site and module/prefabricated element factories must be accounted for. The mandatory level is in alignment with the requirement in the EU Taxonomy. Demolition waste and requirements for the demolition process (such as selective demolition) is not accounted for in Nordic Swan Ecolabel criteria as the demolition work can have been done years before the start of the

selective removal of materials, using available sorting systems for construction and demolition waste. (287) EU Construction and Demolition Waste Protocol (version of 4.6.2021: https://ec.europa.eu/growth/content/eu-construction-anddemolition-waste-protocol-0_en).	construction project. Applicants must account for this separately to verify taxonomy alignment. Sweden: According to Byggföretagen's and Fastighetsägarna's taxonomy interpretation sorted wood waste can be calculated as part of the non-hazardous construction and demolition waste prepard for reuse, recycling and other material recovery even if it is incinerated after collection by the waste management company. This interpretation differs from the other Nordic countries. Nordic Ecolabelling awaits clarification from the EU commission on this issue. In conclusion, it is assessed that the documentation required to verify O10 can be used as documentation to verify taxonomy alignment. But it should be noted that demolition waste and the demolition process is not accounted for in these criteria.
7.1.4.2: Transition to a circular economy Building designs and construction techniques support circularity and in particular demonstrate, with reference to ISO 20887 (288) or other standards for assessing the disassembly or adaptability of buildings, how they are designed to be more resource efficient, adaptable, flexible and dismantlable to enable reuse and recycling. (288) ISO 20887:2020, Sustainability in buildings and civil engineering works - Design for disassembly and adaptability - Principles, requirements, and guidance (version of 4.6.2021: https://www.iso.org/standard/69370.html).	The requirement is covered by the requirement "P18 Design for disassembly and adaptability". The requirement text is in close alignment with the EU taxonomy. However, what must actually be verified to be in alignment with the EU Taxonomy is unclear. According to the Commission notice C/2023/267 question nr. 125 " a relevant set of measures needs to be put in place by the construction company to demonstrate that a new building is more (a) resource efficient, (b) adaptable, (c) flexible and (d) dismantlable compared to the average new built building." It is not specified what can be considered an average new built building and what is relevant measures. In conclusion, it is assessed that the documentation required to verify P18 can be used as documentation to verify taxonomy alignment. But what level of documentation the EU commission will accept for alignment is not clear. Please note that this is a point requirement, so it is up to the licence holder to include these points in the application for the building, in order to assess taxonomy alignment on this DNSH criteria.
7.1.5.1: Pollution prevention and control Building components and materials used in the construction comply with the criteria set out in Appendix C to this Annex.	Evaluation of the requirements in annex C: a) It is considered that the requirements in the EU taxonomy and the national legislations are the same. Applicants must always fulfil the current regulatory requirements in relation to their activities. No further documentation is therefore needed. b) The EU Taxonomy do not refer either to the annexes or to the exemptions in the directive and are therefore stricter than the regulation. These criteria regulate the content of mercury in all chemical products through O18 and in building products covered by O25. For these product types the criteria are aligned with this EU Taxonomy requirement. Products or materials that are not covered by these requirements must be evaluated by the applicant for alignment with this requirement. c) The EU Taxonomy refers to Annexes I and II, but no reference is made to any exemptions, it is therefore stricter than the general regulation. However, the exemptions in question (e.g. (substances used as feedstock, process agents, destruction essential laboratory and analytical uses, hydrochlorofluoro-carbons, methyl bromide and halons) do not seem relevant for the products in question.

	d) The EU Taxonomy refers to Annex II and Article 4(1). EEE placed on the market shall not contain the substances listed in Annex II. RoHS do however have exemptions in Annex III and IV (probably not relevant) which are not mentioned in the taxonomy. The EU taxonomy is therefore stricter than the legislation. In general, electronic equipment is not regulated in these criteria. The applicant should be aware if any exemptions in annex III are relevant as they are not covered by these criteria. e) The EU Taxonomy refers to Annex XVII in REACH. The EU Taxonomy and the national legislations have the same criteria. Applicants must always fulfil the current regulatory requirements in relation to their activities. No further documentation is therefore needed. f1) The EU Taxonomy refers to Article 57 and identified in accordance with 59(1), the Candidate List in REACH. This is a list for eventual inclusion in Annex XIV. The EU Taxonomy prohibit the manufacture, placing on the market or use of these substances and is therefore stricter than the national legislation. These criteria restrict the use of substances on the Candidate List for chemical products (O18) and specific listed construction products/materials specific (O25). Products or materials that are not covered by these requirements must be evaluated by the applicant for alignment with this requirement. f2) The EU Taxonomy refers other substances, whether on their own, or in mixtures or in an article, in a concentration above 0,1% weight by weight (w/w), that meet the criteria of Regulation (EC) No 1272/2008 in one of the hazard classes or hazard categories mentioned in Article 57 of Regulation (EC) 1907/2006. This means substances not yet on the Candidate List. This criteria for new buildings restrict the use of the relevant hazard classes and categories (CMRs, PBT, vPvB and endocrine disruptors) for all chemical products and construction products/materials covered by O25. Overall conclusion: In general, chemical products and buildings products covered by O25 are assumed to be aligned with the requirements in the EU Taxonomy. Products not covered by these requirements must be evaluated by the applicant for EU Taxonomy alignment. In addition, please note the following: Electronic equipment is not regulated in these criteria. • The applicant should be aware if any exemptions in annex III are relevant as they are not covered by these criteria.
7.1.5.2: Pollution prevention and control Building components and materials used in the construction that may come into contact with occupiers [(289)] emit less than 0,06 mg of formaldehyde per m3 of test chamber air upon testing in accordance with the conditions specified in Annex XVII to Regulation (EC) No 1907/2006 and less than 0,001 mg of other categories 1A and 1B carcinogenic volatile organic compounds per m3 of material or component, upon testing in accordance with CEN/EN 16516 [(290)] or ISO 16000-3:2011 [(291)] or other equivalent standardised test conditions and determination methods [(292)] [(289)] Applying to paints and varnishes, ceiling tiles, floor coverings, including associated adhesives and	These requirements are not covered by the Nordic Ecolabel criteria for new buildings. We do not require emission testing for individual building products but set chemical requirements on ingoing chemical substances. Annex XVII to Regulation (EC) No 1907/2006 refers to test conditions that are in line with EN 717. It is not clear to what extent EN 16516 can be used to verify the formaldehyde requirement in the EU Taxonomy. However, for wood-based panels one study comparing EN 717 and EN 16516 is available, please refer to O27 for further details. According to the Commission notice C/2023/267 question nr 118 the correct unit is “mg/m3 air”.

sealants, internal insulation and interior surface treatments, such as those to treat damp and mould. (290) CEN/TS 16516: 2013, Construction products - Assessment of release of dangerous substances - Determination of emissions into indoor air. (291) ISO 16000-3:2011, Indoor air — Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air — Active sampling method (version of 4.6.2021: https://www.iso.org/standard/51812.html). (292) The emissions thresholds for carcinogenic volatile organic compounds relate to a 28-day test period.	The are uncertainties related to the interpretation of which materials are specifically covered by the requirement. Nordic Ecolabelling does not interpret that it is in line the EU Taxonomy to test the building as a whole instead of testing the individual materials.
7.1.5.3: Pollution and prevention control Where the new construction is located on a potentially contaminated site (brownfield site), the site has been subject to an investigation for potential contaminants, for example using standard ISO 18400 (293).	Handling of brownfield sites is considered to be covered by national legislation in all Nordic countries. The applicant can ask for a confirmation by the authorities for the specific areas in question where this is relevant.
7.1.5.4: Pollution and prevention control Measures are taken to reduce noise, dust and pollutant emissions during construction or maintenance works.	Handling of noise, dust and pollutant emissions during construction or maintenance work is considered to be covered by national legislation on working environment and environment.
7.1.6.1: Protection and restoration of biodiversity and ecosystems The activity complies with the criteria set out in Appendix D to this Annex.	No Nordic Swan Ecolabel requirements cover Appendix D specifically. It is assessed that this will be handled by national legislation in the Nordic. When obtaining a building permit this issue should have been addressed and handled by the authorities. In conclusion, the applicant should ask for confirmation from the authorities that the requirements in appendix D is fulfilled.
7.1.6.2: Protection and restoration of biodiversity and ecosystems The new construction is not built on one of the following: (a) arable land and crop land with a moderate to high level of soil fertility and below ground biodiversity as referred to the EU LUCAS survey (294); (b) greenfield land of recognised high biodiversity value and land that serves as habitat of endangered species (flora and fauna) listed on the European Red List (295) or the IUCN Red List (296); (c) land matching the definition of forest as set out in national law used in the national greenhouse gas inventory, or where not available, is in accordance with the FAO definition of forest (297). (294) JRC ESDCA, LUCAS: Land Use and Coverage Area frame Survey version of 4.6.2021: https://esdac.jrc.ec.europa.eu/projects/lucas (295) IUCN, The IUCN European Red List of Threatened Species (version of 4.6.2021: https://www.iucn.org/regions/europe/our-work/biodiversity-conservation/European-red-list-threatened-species). (296) IUCN, The IUCN Red List of Threatened Species (version of 4.6.2021: https://www.iucnredlist.org). (297) Land spanning more than 0,5 hectares with trees higher than five meters and a canopy cover of more than 10%, or trees able to reach those thresholds in situ. It does not include land that is predominantly under agricultural or urban land use, FA O Global Resources Assessment 2020. Terms and definitions.	The requirement is covered by an option in the requirement “P20 Biodiversity measures and ecosystem services”. The requirement text is in close alignment with the EU taxonomy and requires that an evaluation report must be done by a biologist/ecologist/landscape architect or person with equivalent competence with experience within mapping biodiversity on building plots/sites. According to the Commission notice C/2023/267 question nr 112 and 113 it is stated that "any project involving new construction on arable land and crop land with a moderate to high level of soil fertility and below ground biodiversity is considered to do significant harm to biodiversity and ecosystems". Hence it could be interpreted that buildings can only fulfil this requirement if placed in areas already urbanized. However, according to question nr 127 if the relevant land soil fertility is still under research at EU level and below ground biodiversity maps have not yet been published: "if according to the applicable laws and spatial planning regime it would be allowed or permitted by the authorities to build on the parcel of land, this DNSH criterion is always met. So, the provisions here are most relevant in places with no clear zoning/planning law." And according to question nr. 126 "the building permit can be used as proof of compliance to show that new construction is not built on the land types in points (a), (b) and (c) of the criterion." In conclusion, it seems that the EU Taxonomy is still not clear on what areas are allowed to be built on in order to be compliant. Furthermore, the extent to which below ground biodiversity should be assessed is unclear.

(version of 4.6.2021: http://www.fao.org/3/I8661EN/i8661en.pdf).	In conclusion, it is assessed that the documentation required to verify P20 can be used as documentation to verify taxonomy alignment. But what level the EU commission will accept for alignment is not clear as no guidance has been provided. Please note that this is a point requirement, so it is up to the licence holder to include these points in the application for the building, in order to assess taxonomy alignment on this DNSH criteria.

3 General requirements

O1 Overall description of the building and the plot

A description of the building(s) and the immediate surroundings must be given, including information/description on the following:

a) The situation plan, general layouts and facade drawings.

b) Building type(s) and number of buildings. Buildings and constructions at the construction site that are not included in the application.

c) Number of storeys, number of square metres (NO: BRA, SE: BOA,LOA, FI: A (netto), DK: Brutto and Netto, IS: A (brutto)).

d) Commercial areas or other supplementary activities (canteen, gym etc.) in the building.

e) System to ensure that office buildings have individual metering of electricity for each rentable unit or each floor.

f) The carcass/load-bearing structure, facade, roof, foundation, heating system and ventilation system.

g) Number of residential units. For other building types: intended number of users of the building.

h) Any supplementary buildings such as garages, storerooms, bicycle storage rooms, waste sorting stations, etc.

i) Outdoor areas including playgrounds and courtyards: layout and materials.

j) Option catalogue for the tenant/owner to choose from various layouts, materials, or fittings.

✉ Situation plan, general layouts and facade drawings.

✉ Documented description of b) to j) above. The appendix *Template for overall description of the building* or corresponding documentation can be used.

O2 Points achieved

Projects must fulfil the minimum requirement for total points according to Table 1. Table 2 displays an overview of all point requirements and the minimum number of points that must be achieved for ecolabelled buildings.

Warehouse buildings:

The following point requirements are excluded from the calculation: P1, P2, P3 and P19.

The following points are mandatory:

- P5 Local renewable energy generation and energy recovery (2 points for solar PV in part a)
- P7 Assessment of risks in a changing climate (1 point)
- P8 Adaptation to a changing climate (1 point)
- P18 Design for disassembly and adaptability (1 point)

Table 1 Total minimum number of points

Building type	DK / NO / SE	FI	IS
Single-family houses, town houses and multifamily homes	28	26	25
Apartment buildings	25	23	22
Office buildings	25	23	22
Educational Buildings	24	22	21
Residential care facilities	24	22	21
Health centres and clinics	24	22	21
Hotels	24	22	21
Conference centres	24	22	21
Buildings for cultural activities	24	22	21
Wartehouse buildings Note: see mandatory points above	12	12	12

Table 2 Summary of all point requirements

Area	Requirements on the area
Energy and Climate 20 points available	P1 White goods of better energy class (2p)* P2 Water saving sanitary tapware (1p)* P3 Energy efficient and water saving sanitary tapware and technologies (2p)* P4 Management of electricity consumption and power peaks (2p) P5 Local renewable energy generation and energy recovery (3p) P6 Quality assurance of the climate calculation (2p) P7 Assessment of risks in a changing climate (1p) P8 Adaptation to a changing climate (1p) P9 Construction site fuel restrictions (2p) P10 Construction site machinery (2p) P11 Bicycle transport (2p)
Resource efficiency/Circular economy 18 points available	P12 Construction waste optimisation (3p) P13 Construction waste reduction (3p) P14 Producer take-back systems (2p) P15 Reused construction products and materials (4p) P16 Insulating materials made from renewable sources (2p) P17 Renewable carcass, facade or inner walls (2p) P18 Design for disassembly and adaptability (2p)
Ecolabelled products 14 points available	P19 Ecolabelled products (14p)* DK/SE/NO: Minimum 8 points FI: Minimum 6 points IS: Minimum 5 points
Biodiversity 6 points available	P20 Biodiversity measures and ecosystem services (6p)

Indoor environment 3 points available	P21 Quality assurance of acoustics (1p) P22 Solar shading and energy efficient cooling technologies (2p)
Innovation and green initiatives 3 points available	P23 Innovation and green initiatives (3p)
Total available points	**64**

** Point requirement not applicable for Warehouses buildings*

✉ Summary of the points that the licensee obtains. The appendix *Template for calculation of points* can be used. Documentation needed for each point requirement as described in the relevant requirement.

4 Energy and climate

4.1 Energy

O3 Energy demand of the building

The building's energy demand must be calculated in accordance with national building legislation, see the appendix Energy calculation. Upon completion of the construction work, an EPC (Energy Performance Certificate) as built must be handed in to verify the requirement. The calculated energy demand must at least correspond to:

Energy calculations for warehouses buildings must be performed using the buildings design temperature (≥ 15° C).

Denmark:
All building types: 10% better than BR18 or according to the Low energy class in BR18.

Faroe Islands:
Single-family houses and townhouses: 35% better than BK17.

Apartment buildings: 25% better than BK17.

Oil furnaces and boilers are not permitted as source of heating.

The air permeability of the building must not exceed 1 l/s.

For the building to be EU Taxonomy aligned, the energy demand must meet the requirement for DK, SE or FI.

For other building types please contact Nordic Ecolabelling.

Finland:
Residential buildings, office buildings, health centres/clinics and commercial areas: Energy class A according to the Ministry of the Environment's regulation for buildings' energy performance (1010/ 2017).

Educational buildings*: 30% better than the regulation limit of 100 kWh/m^2.

Residential care facilities, hotels or other accommodation: 20% better than the regulation limit of 160 kWh/m^2

Conference centres and buildings for cultural activities: 20% better than the regulation limit of 135 kWh/m^2

Warehouses buildings designed for ≥ 15º C: Energy class A according to the Ministry of the Environment's regulation for buildings' energy performance (1048/ 2017).

** The same requirement applies for sports halls when included in the licence (and for gymnastics halls if they are calculated separately).*

Iceland:
For all building types: 20% better than BRG #112/2012 with later additions. For the building to be EU Taxonomy compliant, the energy demand must meet the requirement for DK, SE or FI.

Norway:
For all building types, "energirammemetoden" in TEK17 must be applied.

Single-family houses, town houses and multifamily houses: 15% better than TEK17.

Educational buildings*: 15% better than TEK17.

Apartment buildings: 10% better than TEK17.

Office buildings: 15% better than TEK17.

Buildings for cultural activities: 15% better than TEK17

Warehouse buildings designed for > 15 º C: 15% better than TEK17.

Nursing homes: 10% better than TEK17.

Hotels or other establishments offering accommodation: 10% better than TEK17.

Conference centres: 10% better than TEK17

Commercial areas: 10% better than TEK17 (commercial building).

** The same requirement applies for sports halls when included in the licence (and for gymnastics halls if they are calculated separately).*

Regarding TEK 17 and § 14-5. Exceptions and requirements for special measures. Point (5). It is not possible to increase the level of energy frame in § 14-2 with renewable electricity production on the building or property. See requirement P5, points for renewable energy.

No exemptions are made for the energy requirements for log houses or small buildings < 70 m^2.

Sweden:
Residential buildings: EP_{pet} 15% better than BBR.

Premises (lokaler): EP_{pet} 20% better than BBR.

The version of BBR to be used is the version in the building permit.

No exemptions are made for the energy requirements for small buildings < 50 m^2.

For all building types:

The transitional periods set by the national authorities also apply to the fulfilment of Nordic Ecolabelling's energy requirements. If new national legislation and thresholds for a building's energy demand are introduced during the criteria's term of validity, Nordic Ecolabelling will perform a new assessment of the energy requirement and may adjust the requirement, including the percentage, in relation to the new regulations. The adjustment will be made after a national round of consultation.

For extensions to existing buildings, the energy requirement must be fulfilled by the extension. The energy calculation must be made for the extension and fulfil the requirements for new buildings.

✉ Energy calculation according to the national legislation (see specifications in the appendix *Energy calculation*). If the energy demand varies for different building configurations, it must be specified that each configuration in the application fulfils the requirements. Alternatively, the requirements must be fulfilled for the building configuration that has the greatest energy demand.

✉ EPC (Energy Performance Certificate) as built.

O4 Lighting management

A) Outdoor lighting

All building types

All outdoor lighting must have automatic demand control installed, that at least turns lighting off when there's sufficient daylight. The lighting control must be connected to the fixture and not only to/in the light source. This applies to lighting in all common areas, including shared courtyards, shared roof terraces and playgrounds, façade lighting, entrance areas and parking spaces.

All luminaires must be well shielded from the sky with <0.5% light above the horizontal line of the light fixture.

Lighting on private terraces and balconies is exempted from the requirement on automatic demand control.

Sign lighting is exempted from the requirement.

Warehouse Buildings: To ensure safe logistic work lighting can be controlled by manual light switches during work hours.

B) Indoor lighting

Residential buildings and residential care facilities

- Automatic demand control must be installed in all communal areas such as entrance halls, stairwells, laundry rooms, storage rooms, hobby rooms, meeting rooms, communal kitchens, communal living rooms and communal dining areas.

Educational buildings

- Automatic demand control must be installed in all rooms.
- In rooms with access to daylight, the artificial lighting must dim in response to daylight levels.

Office buildings, buildings for cultural activities, health centres and clinics

- Automatic demand control must be installed in all rooms.
- In rooms with access to daylight, the artificial lighting must dim in response to daylight levels.

Hotels

- Automatic demand control must be installed in all guest rooms. Key-card control is accepted.
- Automatic demand control must be installed in all common areas and corridors.

Conference facilities

- Automatic demand control must be installed in all common areas and corridors.
- In rooms with access to daylight, the artificial lighting must dim in response to daylight levels.

Warehouse buildings

- Automatic demand control must be installed in all rooms.

General exemptions

- Dormitories in preschools.
- Technical service areas including lifts Lighting for works of art.
- Workplace lighting, worktop lighting and lighting fitted into technical installations and equipment.
- Emergency lighting and lighting in bomb shelters.
- Rooms or spaces in residential care facilities, where lighting for safety reasons cannot switch off.
- Rooms or spaces in warehouse buildings where lighting for safety reasons needs be controlled by manually during work hours.
- For classrooms, rooms for group working and studying: The lighting should switch off automatically when the room is not in use. However, manual light switches can be used to control the lighting during use of the room.
- For auditoriums, concert halls, theatres, cinemas, exhibition halls, rooms for religious ceremonies: The lighting should switch off automatically when the room is not in use. However, manual light switches can be used to control the lighting during use of the room.
- For common areas in e.g., student housing, co-living apartments and residential care facilities: The lighting should switch off automatically when the room is not in use. However, manual light switches can be used to control the lighting during use of the room.

✉ Description of the automatic demand control for indoor and outdoor lighting in accordance with the requirement.

✉ Product sheet or other product information stating that the outdoor light fixtures are well shielded from the sky with <0.5% light above the horizontal line of the light fixture.

O5 Energy efficient white goods

Household appliances and professional kitchen appliances must fulfil the energy class requirements in accordance with Tables 3 and 4 below.

If new legislation comes into force during the validity period of the criteria, Nordic Ecolabelling will assess the requirement and an adjustment may be implemented.

Table 3 Requirements for household white goods

Product type	Until 2024-12-31* the following levels apply	Least level of energy label from 2025-01-01
Energy labelling according to Energy Label Regulation 2017/1369 (including supplements)		
Washing machine	C	B
Refrigerator	E	E
Freezer	E	E
Combined refrigerator and freezer	E	E
Refrigerator for mini kitchen (height ≤ 80 cm)	F	F
Drying cabinets	Must have an energy consumption of no more than 0.4 kWh/kg of laundry	Must have an energy consumption of no more than 0.4 kWh/kg of laundry
Combined wash and tumble dryer	E	D
Tumble dryers	D	C
Dishwasher	D	C
Energy label in accordance with the Energy Labelling Directive 2010/30/EC (including supplements)		
Tumble dryers	A++	A+++
Integrated oven	A	A+
Oven in free standing stove	A	A
Electric water heater installed in individual apartments or single-family houses	C	C

* 2024-12-31 is the last day to order white goods to the building project.

Table 4 Requirements for professional kitchen appliances

Product type	Requirement
Boiling pans	At least 90% energy efficiency according to EFCEM's Energy Efficiency Standard for boiling pans or equivalent. Boiling pans using induction technology or other technology with comparable energy efficiency is exempt from the EFCEM test.
Refrigerators	Class B or better**
Freezers	Class D or better**
Combined freezer/refrigerator cabinets	D or better**

** *Energy class according to Energy Labelling Directive 2010/30/EC (1094/2015/EU)*

Refrigerators and freezers with central cooling systems are not covered by the requirement.

✉ Household appliances: Overview of all household appliances installed in the Nordic Ecolabel building, which includes name, product type and energy label. For drying cabinets, additional documentation showing the drying cabinet's energy use.

✉ Product sheet or manual showing the energy class.

✉ For professional kitchen appliances: Overview of all products stating the type of product, product sheet, technical manual or similar document showing fulfilment of the requirement.

✉ For boiling pans: a) Results from tests performed in accordance with EFCEM's Energy Efficiency Standard for boiling pans or equivalent.
or b) Datasheet or similar documenting the induction heating technology. If boiling pan is not induction technology the producer must document energy efficiency comparable to induction.

P1 White goods of better energy class

Point requirement not applicable for Warehouse buildings.

Household white goods

If all products within a product type/category is one energy class higher than stated in Table 3 or Table 4 in O5, 1 point is given. A product type/category corresponds to a row in Table 3 or Table 4. Points are granted only for levels higher than the ordinary level of requirement O5, not for levels higher than the time limited exemption.

Professional white goods

In communal laundry rooms 1 point is offered if all machines in one product type/category fulfil the following:

- All professional washing machines are coupled to both hot and cold water.
- All professional tumble dryers are equipped with heat pumps.
- All professional drying cabinets are equipped with heat pumps.

A maximum of 2 points can be achieved.

✉ Overview of all white goods within a product type/category.

✉ Product sheets, product specifications, technical specifications or similar, stating model energy label/energy class.

P2 Water saving sanitary tapware

Point requirement not applicable for Warehouse buildings

One point is granted if all sanitary tapware in the building fulfils the maximum water usage in Table 5.

Table 5 Maximum water usage for sanitary tapware

Type/category of sanitary tapware	Maximum water usage*
Washbasin taps	6 l/min
Kitchen taps	6 l/min
Showers	8 l/min
WCs, suites, bowls and flushing cisterns	Maximum full flush volume: 6 l Average flush volume**: 3.5 l
Urinals	2 l/bowl/h Flushing urinals must have a maximum full flush volume of 1 l

** Technical specifications for water appliances should follow Appendix E, Annex 1 to the Commission Delegated Regulation (EU) 2021/2139.*

*** Average flush volume is calculated as:*
Residential buildings: (1 full flush + 2 half flushes)/3 < 3.5 l
Other buildings: (1 full flush + 3 half flushes)/4 < 3.5 l

Bath mixer taps and utility sinks are exempt from the requirement.

✉ Overview of the type/model/name of sanitary tapware and documentation of maximum water usage such as product datasheets or product label.

P3 Energy efficient and water saving sanitary tapware and technologies

Point requirement not applicable for Warehouse buildings

Savings in water and energy used for tapping water is rewarded:

- Installation of water saving systems that reuse greywater or rainwater for toilet flushing gives 2 points.
- One point is given if all products within a product category fulfil the relevant energy class (according to SS 820000 or SS 820001) or have touchless operation, see Table 6.

Maximum 2 points are available.

Table 6 Energy labelled or water saving sanitary tapware

Type/category of sanitary tapware	Energy class according to SS 820000 and SS 820001	Points
Washbasin and mixer taps	A	1
Kitchen taps	B	1
Thermostatic mixers with shower*	B	1

** Points are only awarded for an installed hand shower. When there is both an overhead shower and a hand shower function points are only awarded with a verification by certification bodies, showing that both the overhead shower and the hand shower function meet the relevant energy class.*

Bath mixer taps, tapware in utility sinks in broom cupboards, two-handle shower mixers and sanitary fixtures for separate purposes that are not intended for household use are exempt from the requirement.

✉ Energy labelled taps or touchless taps: Overview of the type/model/name of sanitary tapware and the energy class label, certificate number and name of the standard.

✉ Description of the installation for reuse of greywater/rainwater.

P4 Management of electricity consumption and power peaks

Management of electricity consumption that contributes to reduction of power peaks in the electrical grid is rewarded. A maximum of 2 points can be achieved. The control system for relevant measure(s) must automatically consider the hourly/spot price for electricity or power peaks in the power grid. The following measures give one point each:

- Control of all individual or common electric water heaters
- Control of all electric car chargers
- Control of all electric space heating sources*

Control that takes place using devices such as smart plugs that are connected between the socket and the plug does not give points. In addition, the system must be able to communicate via the most common open communication protocols.

** Must include the possibility of lowering the consumption at night for all building types and in addition lowering the consumption during weekends in educational- and office buildings.*

✉ The installed system must be documented according to the requirement (product data sheet, description of the electrical system, etc).

P5 Local renewable energy generation, energy recovery and energy storage

Installed solar panels (photo-voltaic, PV), solar thermal collectors, systems for wastewater heat recovery and liquid-to-water heat pumps can give a maximum of 3 points. The installations must be situated on/in the building or in the immediate vicinity and at least fulfil the following measures for the building/project:

a) Solar PV panels showing an estimated electricity production of minimum:

- 5 kWh/m^2 /year gives 1 point.
- 10 kWh/m^2 /year gives 2 points.
- 15 kWh/m^2 /year gives 3 points.

Area to be used: DK: Netto, FI: A (Netto), IS: A (Netto), NO: BRA, SE: NTA

b) Solar collectors with an estimated energy generation of minimum:

- 20% of the energy for hot water per year gives 1 point
- 40% of the energy for hot water per year gives 2 points
- 60% of the energy for hot water per year gives 3 points

If solar collectors deliver surplus energy to increase the inlet temperature of a heat pump, one extra point is given.

c) Wastewater heat recovery installation gives 2 points. Heat must be recovered from >50% of the showers, or from the relevant appliances in e.g., a professional kitchen or a communal laundry room.

d) Liquid-to-water heat pumps that supply minimum 90% of the estimated heating need for hot water, space heating and ventilation. Points can only be achieved outside district heating areas. 1 point.

e) Battery storage system connected to the solar PV system. The system must also be connected to the national electricity grid. Capacity of the system must as a minimum be 25 % of the daily electricity production. 1 point.

✉ Description of the installation of the solar PV panels, its location and calculated annual energy generation relative to the heated floor area of the building.

✉ Description of the installation of solar thermal collectors, its location, calculated annual energy generation relative to the building's energy demand for hot water.

✉ Description of the installation for wastewater heat recovery and its location.

✉ Description of the installation of the liquid-to-water heat pump and the supplied energy delivered in relation to the total heating demand for hot water, space heating and ventilation.

✉ Battery system description, including documentation for capacity.

4.2 Climate

O6 Climate calculation of the building

Buildings ≥ 5000 m^2 useful internal floor area (as defined in the EU Taxonomy).
Compliance with the EU Taxonomy must be documented*. The climate calculation must be submitted to Nordic Ecolabelling and must also be disclosed to investors and clients on demand.

The following official national calculation tools must be used:

Denmark: Official calculation tool accepted in BR18.

Finland: Method for the whole life carbon assessment of buildings, Ministry of the Environment (2019:23).

Iceland and **Sweden**: Calculation tools that fulfil Level(s) common EU framework (https://susproc.jrc.ec.europa.eu/product-bureau/product-groups/412/documents), see indicator 1.2 user manual. Sweden: Until further notice, IVL's guidelines "Anvisningar för LCA-beräkning av byggprojekt" can be used. This might change if authorities or the EU Commission propose other methods.

Norway: Not relevant for the time being. Instead, the buildings must comply with the requirement in the section for buildings < 5000 m^2.

**The requirement does not apply in Norway before the Norwegian authorities have made an official interpretation of this part of the EU Taxonomy.*

Buildings < 5000 m^2 useful internal floor area (as defined in the EU Taxonomy)
In countries where the authorities have implemented a system for obligatory or voluntary climate calculation, this calculation must be submitted to Nordic Ecolabelling.

The following official national calculation tools must be used:

Denmark: Official calculation tool accepted in BR18.

Finland: Method for the whole life carbon assessment of buildings, Ministry of the Environment (2019:23) or other corresponding taxonomy compliant method. When the regulation for the climate assessment of the building comes into force, the calculation method shall comply with the regulation.

Iceland/Sweden: Calculation tools/method accepted in national building legislation.

Norway: Official calculation tool accepted in TEK17.

Threshold limits:
The climate calculation must document that the building or building project fulfils the following national threshold limits*:

Table 7 National threshold limits

Country	Threshold limit	
Denmark	01-01-2023 to 30-06-2025 < 10.5 kg CO2eq/m^2/year	
	From 01-07-2025 the threshold limits are set in accordance with the threshold limits for 2027 in BR18 (Will be tightened accordingly to the next coming threshold in BR18)** :	
	Single-family houses, town houses and multifamily houses	6,0 kg CO2eq/m2/year
	Apartment buildings	6,8 kg CO2eq/m2/year
	Office Buildings	6,8 kg CO2eq/m2/year
	Warehouse buildings	6,8 kg CO2eq/m2/year
	Educational buildings	7,2 kg CO2eq/m2/year
	Buildings for cultural activities	7,2 kg CO2eq/m2/year
	Hotels and conference centres	Please refer to BR18 for which 2027 threshold limit that is suitable.
	Other types of New construction (Please refer to BR18 to see what this category specifically includes)	7,2 kg CO2eq/m2/year
	Threshold limit for construction process (must be documented separately)	1,3 kg CO2eq/m2/year
Finland	No limit for the time being	
Iceland	No limit for the time being	
Norway	No limit for the time being	
Sweden	No limit for the time being	

** A limit value that is stricter than the authorities' obligatory requirements (where the authorities have introduced a limit value) will be determined by Nordic Ecolabelling after a national consultation. There will be a notification period before a requirement limit is introduced.*

*** The threshold limit is defined as the next obligatory threshold limit from the building legislation (BR18) and will be tightened accordingly. If the threshold limits in the building regulation (BR18) are changed, this requirement will be adjusted accordingly. The calculation must always be performed according to the current version of the calculation method and scope of the calculation.*

☒ Buildings ≥ 5000 m^2: Climate calculation that complies with the requirements of the EU Taxonomy. Documentation that the threshold limit is fulfilled.

☒ Buildings < 5000 m^2: Climate calculation according to the authorities' requirements for calculation methods. Documentation that the threshold limit is fulfilled.

P6 Quality assurance of the climate calculation

One point is awarded for each of the following quality measures a–d in the climate declaration/calculation* for the building. A maximum of 2 points can be achieved.

For projects that consist of several independent buildings, a calculation must be submitted for at least one of the (main) buildings in the project.

a) Quality of the climate declaration: The calculation and any of the used quality measures stated in this requirement must be verified by an external third-party specialist.

b) Completeness of the calculation: There must be performed a mass balance that compares the flow of resources into the building system to the flow of emissions, wastes, and by-products out of the building system. The completeness must be reported as the percentage deviation between dry mass inputs and dry mass outputs for the full building system and for individual unit processes representing mass flows summing to at least 90% of the total static mass of the building. This type of detailed calculation is not

available in the LCA softwares normally used in the construction sector. For advice on methods, please contact an LCA specialist.

c) Data quality: At least 50% of the total contribution to greenhouse gas emissions from the materials included in the calculation is based on product specific EPDs.

d) A calculation is performed in at least the two stated stages:

- The targeted, projected building
- The completed building, as built

** The climate declaration/calculation must be based on EN15978 and performed using either a national standard, a government-authorised method or according to Level (s) indicator 1.2..*[1]

☒ a) The climate declaration, a signed quality verification and description of education and/or experience of external third-party specialist.

☒ b) Documentation for the completeness of the calculation in accordance with bullet b).

☒ c) Product specific EPDs for the relevant materials and a verification that a minimum of 50% of the contribution to greenhouse gas emissions from the materials are covered by these EPDs.

☒ d) The climate declaration and documentation for the two-stage calculation for the projected building and the completed building.

P7 Assessment of risks in a changing climate

One point is granted for the following:

A climate risk and vulnerability analysis of the building and property must be performed, including the following parts a)-c):

a) Screening of which physical climate risks from Table 8 that may affect the performance of the building during its expected lifetime (minimum 50 years).

b) Assessment of the significance of the identified physical climate risks for the building and property.

c) Suggestions of climate adaptation measures that could be implemented to reduce the most significant identified physical climate risks.

The climate and vulnerability analysis must be based on RCP (Representative Concentration Pathways) scenarios from IPCC and consider the latest research in the field and correspond to a period of at least 50 years. Methods and source material used to carry out the mapping of potential climate risks, as well as the method used to evaluate identified risks should be presented. RCP8.5 should always be used, and if necessary further analyses should be made according to lower end scenarios.

Risk assessments should be performed using the highest available resolution and state- of the art climate projections across the existing future scenarios RCP2.6, RCP4.5, RCP6.0 and RCP8.5 according to IPCC.

[1] https://susproc.jrc.ec.europa.eu/product-bureau/product-groups/412/documents

Table 8 Classification of climate-related hazards

	Temperature related	Wind-related	Water-related	Solid mass-related
Chronic	Changing temperature (air, freshwater, marine water)	Changing wind patterns	Changing precipitation patterns and types (rain, hail, snow/ice)	Coastal erosion
	Heat Stress		Precipitation or hydrological variability	Soil degradation
	Temperature variability		Ocean acidification	Soil erosion
	Permafrost thawing		Saline intrusion	Solifluction
			Sea level rise	
			Water stress	
Acute	Heat wave	Cyclone, hurricane, typhoon	Drought	Avalanche
	Cold wave/frost	Storm (including blizzards, dust and sandstorms)	Heavy precipitation (rain, hail, snow/ice)	Landslide
	Wildfire	Tornado	Flood (coastal, fluvial, pluvial, ground water)	Subsidence
			Glacial lake outburst	

☒ Climate and vulnerability analysis covering all points in the requirement.

P8 Adaptation to a changing climate

One point is granted for the following:

Based on the climate risk and vulnerability analysis in P7, the most important identified climate adaptation measures must be implemented before the building is taken into use.

The adaptation measures must:

- Not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities.
- Promote nature-based solutions* or to the extent possible rely on blue or green infrastructure**.
- Be consistent with local, sectoral, regional or national strategies and plans.

** Solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions. https://ec.europa.eu/info/research-and-innovation/research-area/environment/nature-based-solutions_en*

*** Green infrastructure (GI) – Enhancing Europe's Natural Capital (COM(2013) 249 final.*

☒ Documentation describing climate adaptation measures that will be carried out to reduce significant climate risks for the project. It must be clearly described how the measures contribute to reducing the relevant climate risks.

O7 Cement and concrete

The climate impact originating from cement and concrete must be accounted for according to the national requirements below.

EPDs must be produced in accordance with ISO 15804/ EN 16757:2017 and ISO 14025 and must either be:

- third-party verified according to ISO 14025, or
- produced using a third-party reviewed EPD tool for cement or concrete according to ISO 14025.

The requirements for prefabricated elements can alternatively be met by using a minimum of 30% reused elements. The reused concrete must be assessed according to requirement O12.

Denmark:
Minimum 90% (weight or volume) of the ready-mix concrete used at the construction site and 90% (weight or volume) of the concrete elements must be documented by a product specific EPD. The EPD data must be used in the climate declaration in O6.

EPD-generator from Dansk Beton can be used.

Finland:
Minimum 70% (weight or volume) of the ready-mixed concrete used at the construction site must document compliance with the concrete class GWP.85* or better in BY Low Carbon Classification, Finish concrete association. (https://vahahiilinenbetoni.fi/in-english/)

Minimum 70% (weight or volume) of the concrete used in prefabricated elements** must document compliance with the concrete class GWP.85* or better in BY Low Carbon Classification, Finish concrete association. (https://vahahiilinenbetoni.fi/in-english/)

The Finnish Concrete Associations Low-carbon calculator can be used.

** Alternatively, other concrete classes within the system may be used and weighted together if it can be shown that it will give the same result in global warming potential (GWP).*

*** Prefabricated elements include Slabs between floors and roof slabs, walls between flats, outer or inner walls, lift shafts, stairs, facade elements and balconies.*

Iceland:
Minimum 90% (weight or volume) of the ready-mix concrete used at the construction site and 90% (weight or volume) of the concrete elements must be documented by a product specific EPD. The EPD data must be used in the climate declaration in O6.

For at least two types of concrete construction parts (foundations, load bearing systems, floor decks, wall elements, roof elements or facade elements) a minimum of 50% (weight or volume) of the binder used in the concrete must contain maximum 70% by weight of cement clinker.

Cement clinker is defined as the ratio of Portland cement clinker in the cement, in accordance with the definition in EN 197-1. Cement clinker is thus also included in the cement mix in the finished concrete. For concrete, the cement clinker ratio in the cement mix used in the concrete is calculated.

Norway:
Minimum 70% (weight or volume) of the ready-mixed concrete used at the construction site must comply with Low carbon concrete A* or better in the Norwegian Concrete Association's publication no. 37 Low carbon concrete (NB37).

Minimum 70% (weight or volume) of the concrete used in prefabricated elements** must document compliance with low carbon concrete A* or better in the Norwegian Concrete Association's publication no. 37 Low carbon concrete (NB37).

EPD generator provided through membership in Betongfokus and Betong Norge - Betongelementforeningen can be used.

** Alternatively, other concrete classes within the system may be used and weighted together if it can be shown that it will give the same result in global warming potential (GWP).*

*** Prefabricated elements include Slabs between floors and roof slabs, walls between flats, outer or inner walls, lift shafts, stairs, facade elements and balconies.*

Sweden:
Minimum 70% (weight or volume) of the ready-mixed concrete used at the construction site must comply with level 2* of "Vägledning Klimatförbättrad betong", published by Svensk Betong.

Minimum 70% (weight or volume) of the concrete used in prefabricated** elements must document compliance level 2* of "Vägledning Klimatförbättrad betong", published by Svensk Betong.

** Alternatively, other concrete classes within the system may be used and weighted together if it can be shown that it will give the same result in global warming potential (GWP).*

*** Prefabricated elements include Slabs between floors and roof slabs, walls between flats, outer or inner walls, lift shafts, stairs, facade elements and balconies.*

✉ FI/NO/SE: Product specific EPD from the concrete manufacturer showing that the relevant concrete products meet the requirement of the national concrete classification system for greenhouse gas emissions for the required strength class. Alternatively, a calculation showing that the same or better GWP is achieved using other than the specified level/class of concrete.

✉ DK/IS: Product specific EPD from the concrete manufacturer and confirmation that the specific data is used in the climate calculation in O6.

✉ IS: Overview of the concrete construction part types that fulfill <70% of cement clinker and a calculation showing that the construction parts constitute at least 50% of the need in the building.

✉ IS: Product data sheet, eBVD or EPD stating the cement clinker content for the cement/concrete construction parts.

✉ All countries: Total amount of delivered ready-mixed concrete and prefabricated elements and amount of delivered concrete that fulfils the required concrete class.

O8 Steel production

The requirement applies to the following construction materials/building parts:

- Facade panels in steel > 20% of the façade area (excluding window/door area)
- Load bearing constructions in steel > 20% by weight of the buildings loadbearing system
- Steel panels used for indoor ceiling or walls in warehouses, covering > 20% of the ceiling or wall area (excluding window/door area).

Steel rebars are not covered by this requirement.

☒ Calculation showing that facade panels, interior wall panels, ceiling panels and load bearing constructions consist of <20% steel, or:

The relevant building parts must fulfil one of the alternatives A-C:

A) High proportion of recycled content
A minimum of 75% by weight of the steel must be recycled.

Recycled is defined as both pre- and post-consumer, according to definitions in ISO 14021.

Fulfilment is shown through either:

- A signed agreement between the steel supplier and the applicant stating that the requirement is met, the declaration from the steel supplier can be based on purchase records/average data from several steel sub suppliers / manufacturers, or
- eBVD or EPD based on product-specific data/data from the steel producer´s own production stating the content of recycled steel in the product.

☒ Signed agreement as described above.

☒ eBVD or EPD as described above.

B) Reused steel parts
At least 50% of the façade panels or load-bearing steel construction must be reused building parts. Traceability back to the parts' most recent use in construction must be documented.

The reused steel parts must comply with requirement O12.

Reused steel products must be accounted for and the traceability back to the parts' most recent use in construction must be documented.

C) Virgin steel production

The requirement can be verified using either: Direct traceability through the supply chain or mass balance approach1F[2].

The requirement can be met by fulfilling one the three alternatives (1-3) below:

1. Steel produced from traditional methods

The steel origins from a steel producer who has:

- implemented at least 2 of the energy efficiency measures stated as BAT in the BREF document for iron and steel production (2013 or later version). The energy efficiency measures are listed in the appendix BAT-EAL for energy-efficiency (steel) , and
- an active sustainability strategy focusing on reducing energy consumption and greenhouse gas emissions. The strategy for reducing energy consumption and greenhouse gas emissions shall be quantitative and time-based and must be determined by the company management.

[2] In case of several potential steel producers, the supplier of the metal components can verify the requirement by using a mass balance approach if there is an account documenting the annual volumes purchased from the individuals steel producers. The volumes must correspond to volumes sold to the applicant (e.g., cannot sell a larger volume than the corresponding quantity purchased from the individual steel producers)

☒ Enclose latest sustainability strategy report or equivalent documentation from the steel producer showing fulfilment of the requirement. The steel producer can also present specific targets from annual business report with reference to specific numbers and assumptions. Average numbers from steel producers with several steel melting plants is accepted.

☒ Description of which energy efficiency measures stated as BAT have been implemented at the production site.

☒ Information on type of traceability used to document the requirement.

2. Responsible steel certified production site

A minimum of 50% by weight of the steel covered by the requirement comes from a production site that is certified according to the standard Responsible Steel2F[3], version 1.0, 2019 or later versions.

☒ Enclose valid Responsible Steel certificate from the steel producer.

☒ Information from the supplier/manufacturer of the constituent steel part about which metal parts are from certified metal production (purchase records).

☒ Information from the supplier/manufacturer of the constituent steel parts on the type of traceability used to document the requirement.

☒ Documentation from the applicant that the requirement for share of purchased steel from certified steel producers is fulfilled – e.g., invoices or other documentation from suppliers.

3. Steel production based on new technologies with reduced greenhouse gas emissions

The steel origins from steel production sites that have implemented one of the following technologies:

- direct electrolysis of iron ore
- blast furnace top gas recycling with carbon capture and storage
- direct smelting reduction processes
- hydrogen steelmaking in shaft furnaces using green H_2

☒ State the name of the steel producer and production site where the steel comes from, as well as a brief description of which technology is used.

☒ Information on type of traceability used to document the requirement.

O9 Aluminium production

The requirement applies to the following construction materials/building parts:

- Facade panels in aluminium > 20% of the façade area (excluding window/door area)
- Profiles for windows and doors in aluminium (external cladding of outer wood components for the sole purpose of weather proofing is exempted). A Nordic Swan Ecolabel window, patio door or exterior door will fulfil the requirement and must only verify the requirement with the product name

[3] Overview of certified steel producers, https://www.responsiblesteel.org/certification/issued-certificates/

and licence number. The requirement applies to doors and windows subject to EN 14351-1:2006.

- Aluminium profiles in glass facade systems when the system covers more than 20% of the facade area (excluding window/door area). The requirement applies to glass facade systems subject to EN 13830.

Mouldings around doors and windows are exempt from the requirement.

Skylights and roof domes regulated by product standard EN 1873 and windows and exterior doors that are resistant to fire pursuant to standard EN 16034 are not included in the requirement.

The requirement can be met by documenting alternative A or B:

A) High proportion recycled aluminium

A minimum of 75% by weight of aluminium must be recycled*.

However, profiles for windows and doors must minimum contain 40% recycled aluminium.

**Recycled is defined as both pre- and post-consumed, cf. definition in ISO 14021.*

The requirement can be verified either by:

- A signed statement by the supplier or producer of aluminium stating that the requirement is met. The declaration from the supplier of aluminium can be based on purchase records/average data from several aluminium suppliers, or
- eBVD or EPD based on product-specific data or data from the aluminium producer´s own production that specifically states the content of recycled aluminium in the product, or
- Valid Hydro Circal certificate.

☒ Signed statement as described above, or

☒ eBVD or EPD as described above, or

☒ Valid Hydro Circal certificate.

B) Primary aluminium production

The requirement can be met by one of the four alternatives (1-4) below.

The requirement can be verified using either direct traceability through the supply chain or mass balance approach3F[4].

1. Aluminium production – active sustainability strategy

Aluminium origins from a primary aluminium producer with an active sustainability strategy focusing on reducing energy consumption and greenhouse gas emissions. The strategy for reducing energy consumption and greenhouse gas emissions shall be quantitative and time-based and must be determined by the company management.

[4] In case of several potential aluminium producers, the supplier of the metal components can verify the requirement by using a mass balance approach if there is an account documenting the annual volumes purchased from the individual aluminium producers. The volumes must correspond to volumes sold to the applicant (e.g., cannot sell a larger volume than the corresponding quantity purchased from the individual aluminium producers).

☒ Enclose latest sustainability strategy report or equivalent documentation from the producer of primary aluminium showing fulfilment of the requirement. The producer of primary aluminium can also present specific targets from annual business report with reference to specific numbers and assumptions. Average numbers from the producer of primary aluminium with several steel melting plants is accepted.

☒ Information on type of traceability used to document the requirement.

2. Aluminium production – low direct climate effecting emissions

Aluminium origins from a primary aluminium producer whose direct climate-affecting emissions from primary aluminium production does not exceed 1,5 tonnes of CO_{2e}/ton of aluminium produced.

☒ Declaration that the requirement is met, as well as calculation and indication of direct emissions in tonnes of CO2e/ton of aluminium produced.

☒ Information on type of traceability used to document the requirement.

3. Aluminium production – low electricity consumption for electrolysis

Aluminium origins from a primary aluminium producer whose electricity consumption for electrolysis does not exceed 15.3 MWh/ton produced aluminium.

☒ Declaration that the requirement is met, as well as calculation and indication of electricity consumption in MWh/ton produced aluminium.

☒ Information on type of traceability used to document the requirement.

4. Aluminium production – ASI certified site

A minimum of 50% by weight of aluminium origins from an ASI Performance standard4F[5] certified production site.

☒ Enclose valid ASI Performance certificate from the primary aluminium producer.

☒ Information from the supplier/manufacturer of the constituent aluminium part about which aluminium parts are from certified aluminium production (purchase records).

☒ Information from the supplier/manufacturer of the constituent aluminium parts on type of traceability used to document the requirement.

☒ Documentation from the applicant that the requirement for share of purchased aluminium from certified aluminium producers is fulfilled – e.g., invoices or other documentation from suppliers

P9 Construction site fuel restrictions

Points will be given when grid electricity, district heating, hydrogen or bio-based fuels* (liquid, gaseous or solid) is used for heating on the construction site within the timeframe from the start of foundation work to finished interior work. Heating for concrete setting, curing and drying, thawing, frost protection and heating of construction site cabins is included in the requirement.

Interior drying shall not begin until the building envelope is sealed. Temporary sealing is accepted.

Points are given in relation to the share of heating provided by grid electricity, district heating, hydrogen or biofuels*:

[5] https://aluminium-stewardship.org/asi-standards/asi-performance-standard (visited November 2022)

- >50% of total kWh: 1 point
- >90% of total kWh: 2 points

This requirement includes activities on the construction site. Prefabrication in e.g. module factories is not regarded.

** The use of biodiesel will not be given points in Finland due to the content of PFAD.*

✉ A description of the energy sources used for heating at the construction site.

✉ Total amount of heating (kWh) used on the construction site, share of heating provided by electricity, district heating, hydrogen or biofuels.

✉ A project plan with time schedule showing that interior heating of the building starts after the building envelope is sealed.

P10 Construction site machinery

During the timeframe from the start of groundworks to finished construction project, the use of construction machines and other heavy equipment powered by grid electricity, hydrogen or biofuels gives a maximum of 2 points, according to Table 9.

Table 9 Fossil- or emission-free hours worked by construction machines/heavy equipment

Fossil- or emission-free hours worked by construction machines/heavy equipment	
1 point	A minimum of 50% of the hours worked on the construction site by construction machines* are fossil-free**.
1 point	≥30% of the hours worked on the construction site by construction machines* are powered by grid electricity or hydrogen.
2 points	≥70% of the hours worked on the construction site by construction machines* are powered by grid electricity or hydrogen.

** Construction machines covered by this requirement are machines/heavy equipment ≥1 ton used on the construction site.*

*** Fossil-free, i.e., here defined as: bio-based fuels (HVO, FAME/RME, ED95, etc.), hydrogen and grid electricity. There's no requirement on the types of energy from which the grid electricity or hydrogen are produced. The use of biodiesel will not be given points in Finland due to the content of PFAD.*

Transport of materials, machinery and persons to and from the construction site, as well as waste handling, waste treatment and material production, are not included in this requirement.

✉ A list of all construction machines/heavy equipment ≥1 ton by brand and type. The list must provide information on the fuel/energy type used and worked hours for all machines.

P11 Bicycle transport

A maximum of 2 points are given when one or more of the following measures are taken to promote residential or occupational bicycle transportation.

Table 10 Possible points for residential buildings

Residential buildings	
An indoor bicycle workshop at least equipped with a workbench or rack, a pump and basic tools is available to all residents. Alternatively, a designated bicycle wash station gives a point.	1 point
At least 1.5 bicycle parking spaces per residential unit are provided and equipped with access to frame locks. Bicycle stands alone are not sufficient to achieve points.	1 point
At least 1.5 bicycle parking spaces per residential unit are provided and at least 50% of these are weather protected.	1 point

Communal cargo bike(s) with designated weather protected parking are available for the residents.	1 point
Weather protected bicycle parking for cargo bikes and bicycle trailers is available. Minimum 1 per 10 residential units.	1 point

Table 11 Possible points for educational buildings

Educational buildings	
Schools and higher education: One bicycle parking space per 4 students and staff is provided and equipped with access to frame locks. Preschools: One bicycle parking space per staff member is provided and equipped with access to frame locks. Bicycle stands alone are not sufficient to achieve points.	1 point
At least 50% of bicycle parking is weather protected. Minimum number of parking spaces according to alternative 1 must be fulfilled	1 point
Preschools: Weather protected bicycle parking for cargo bikes and bicycle trailers is available. Minimum 1 parking space per 20 children.	1 point
Facility for charging electric bikes is available as part of the bicycle parking facilities.	1 point

Table 12 Possible points for office buildings and warehouse buildings

Office buildings	
One bicycle parking space per 10 employees is provided in a locked room.	1 point
At least 50% of bicycle parking is weather protected. Minimum one bicycle parking space per 10 employees must be fulfilled.	1 point
Facility for charging electric bikes is available as part of the bicycle parking facilities.	1 point
Bikes are available for the employees in the office building for local transport. A minimum of 1 bike per 50 employees must be available.	1 point

Table 13 Possible points for buildings for residential care facilities, health centres and clinics

Residential care facilities and Health centres and clinics	
One bicycle parking space per staff member is provided and equipped with access to frame locks. Bicycle stands alone are not sufficient to achieve points.	1 point
At least 50% of bicycle parking is weather protected. Minimum number of parking spaces according to alternative 1 must be fulfilled	1 point
Facility for charging electric bikes is available as part of the bicycle parking facilities.	1 point

Table 14 Possible points for hotels and conference centres

Hotels and conference centres	
One bicycle parking space per staff member is provided and equipped with access to frame locks. Bicycle stands alone are not sufficient to achieve points.	1 point
At least 50% of bicycle parking is weather protected. Minimum number of parking spaces according to alternative 1 must be fulfilled	1 point
Facility for charging electric bikes is available as part of the bicycle parking facilities.	1 point
Bike rental service for the guests. Minimum one bike per 20 guests must be available.	1 point

Table 15 Possible points for buildings for cultural activities

Buildings for cultural activities	
One bicycle parking space per 10 visitors and staff is provided and equipped with access to frame locks. Bicycle stands alone are not sufficient to achieve points.	1 point
At least 50% of bicycle parking is weather protected. Minimum number of parking spaces according to alternative 1 must be fulfilled	1 point
Facility for charging electric bikes is available for the staff.	1 point

✉ Description of the specific measures in relation to the requirement.

5 Resource efficiency and circular economy

O10 Construction waste management

At least 70% by weight of the non-hazardous construction waste generated on the construction site*, must be prepared for reuse, recycling and other material recovery including backfilling operations using waste to substitute other materials, in accordance with the waste hierarchy and the EU Construction and Demolition Waste Management Protocol.

The percentage excludes naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Decision 2000/532/EC.

Untreated wood, wood treated with hazardous substances (wood classified as hazardous waste) and wood treated with non-hazardous substances, must always be sorted separately.

Unsorted/mixed construction waste cannot be counted as recycling/material recovery unless it is documented to be separated subsequently by the waste contractor.

Demolition waste must not be accounted for.

The waste management plan for the project must be sent to Nordic Ecolabelling before the construction of the building begins. The plan must contain information about waste fractions, chosen waste management company and the receivers** waste management companies intended treatment*** form of the fractions. The plan must be made in accordance with the EU Construction and Demolition Waste Management Protocol.

After finished project, a report with the following information must be sent to Nordic Ecolabelling:

1. The total amount of construction waste produced at the construction site.
2. The amounts of all waste fractions, the company name of the respective receiver(s)** and their intended treatment form.
3. Calculation of material recovery degree based on the bullets above.

** If the building is mainly constructed of modules/prefabricated building module elements with finished or nearly finished interior surfaces produced in a factory, then the factory must in addition comply with the requirement level on a yearly basis or be accounted for as a part of the total waste calculation. Prefabricated concrete elements do not need to be included.*

*** Receivers can be both treatment facilities that carry out material recovery or receivers of waste fractions that sort and distribute it to relevant treatment facilities. A company that only transports construction waste is not regarded as a receiver.*

**** Sweden: Non-hazardous wood that is sorted separately on the building site and in factories of modules/prefabricated elements can be calculated as prepared for reuse, recycling or other material recovery even if the intended use is incineration. Please see section 7.1.4.1 in the chapter "Alignment with the EU Taxonomy" for details on the interpretation of EU Taxonomy.*

✉ The waste management plan for the project must be delivered before the construction starts at the construction site.

✉ Report from the waste management company in accordance with the bullets 1-3 in the requirement.

P12 Construction waste optimisation

Points are granted when more than 75% by weight of the non-hazardous construction waste generated on the construction site*, is prepared for reuse, recycling and other material recovery according to O10.

The following levels are required to achieve points:

Table 16 Requirement for optimized preparation of waste according to O10

Waste prepared according to O10	Points
75% weight	1
80% weight	2
85% weight	3

** If the building is mainly constructed of modules/prefabricated building module elements with finished or nearly finished interior surfaces produced in a factory, then the factory must in addition comply with the requirement level on a yearly basis or be accounted for as a part of the total waste calculation. Prefabricated concrete elements do not need to be included.*

✉ Report(s) from the waste management company showing the amounts of the waste fractions collected in relation to the total volume of the project's construction waste. The intended treatment form of the waste fractions must be stated. Both construction site and module/prefabricated element factories must be accounted for.

P13 Construction waste reduction

Minimisation of the construction waste at the building site gives points according to table 17 below.

The entire construction phase from construction of the base plate to the finished building is included.

Table 17 Requirement for minimisation of construction waste

Waste per square meter floor area	Points
≤30 kg/m^2	1
≤25 kg/m^2	2
≤20 kg/m^2	3

Floor area is calculated as brutto area (BTA).

Naturally occurring material defined in EU waste category 17 05 04 – soil and stones and total hazardous waste are excluded when calculating the total amount of waste.

If the building is mainly constructed of modules/prefabricated building module elements with finished or nearly finished interior surfaces produced in a factory, yearly based data from the factory must be combined with the waste data from the building site.

✉ Report from the waste management company showing the total amount of construction waste from the construction site and/or module factory.

✉ Calculation of the construction waste generated per square metre.

P14 Producers take-back systems

Up to 2 points are given when a take-back systems from producer of building products/materials is used in the construction phase of the building. The take-back system must ensure that used material, scraps or cut-off are either reused or recycled by the producer.

One point is given for take back systems covering minimum one (1) category/type of construction material.

Two points are given for take back systems covering minimum three (3) categories/types of construction materials.

Take back systems can be organized directly by the producer or by a waste management company.

If the main part of the building is constructed in a module factory, the use of producer take-back systems in the factory will give points.

Take back systems covering untreated wood for temporary safety constructions is also rewarded. Both external services and internal reuse within the company are accepted.

Packaging material is not covered by the requirement.

✉ An agreement with the supplier/producer or documentation with specific details showing how the take-back system is implemented at the construction site or module production facility.

✉ Report/invoice from the receiver of the material handled in the take-back system.

O11 Waste sorting inside the building

Facilities for waste sorting must be available in the Nordic Swan Ecolabelled building. The number of sorting vessels is stated for each building type below.

Residential buildings and residential care facilities

- Sorting vessels for minimum four fractions in all residential units*.
- Communal kitchens: Sorting vessels for minimum four fractions must be installed in or in the vicinity of the kitchen (e.g., in homes for the elderly and student housing)

** Kitchenettes without cooking facilities such as oven and stove (e.g., homes for the elderly) are exempted from the requirement.*

Educational buildings

- Sorting vessels for minimum four fractions must be installed in or in the vicinity of the main kitchen and in all other permanent kitchen facilities.
- Sorting vessels for minimum two fractions must be installed in all classrooms and common rooms.

Office buildings, health centres and clinics

- Sorting vessels for minimum four fractions must be installed in canteen facilities.
- Sorting vessels for minimum two fractions must be installed in all kitchenettes.

Hotels

- Sorting vessels for minimum four fractions must be installed in the hotel kitchen.
- Sorting vessels for minimum three fractions must be installed in the dining facilities, conference facilities and reception.

Conference centres

- Sorting vessels for minimum three fractions must be installed in the kitchenettes.

Buildings for cultural activities

- Sorting vessels for minimum four fractions must be installed in kitchens, canteens and picnic rooms.
- Sorting vessels for minimum three fractions must be installed in the entrance area and in or in the vicinity of rooms where the visitors have access.

Warehouses

- There must be areas designated for waste sorting in the building.

✉ Description of sorting vessels for waste sorting. Documentation can be description, pictures, or datasheet.

✉ Documentation that there are designated areas for waste sorting in warehouse buildings.

O12 Hazardous substances in reused construction products and materials

When reused construction products, fittings and materials are used, a risk analysis documenting the presence of hazardous substances must be conducted by an expert*. Hazardous substances must be evaluated and documented according to all relevant national legislation and
the appendix *Hazardous substances in reused construction products*.

The risk analysis must, as a minimum, be based on the age of the building/construction, the renovation history of the building, the durability / lifetime of the materials, the state and cleansing of the material and knowledge and experience with the materials used at the time the building of origin was first constructed and renovated. This includes content of problematic substances in the material itself and in surrounding materials if substances found have migratory properties.

If the expert identifies any risk of undesirable substances (according to the appendix *Hazardous substances in reused construction products* and relevant national legislation), analyses must be performed by an accredited laboratory to verify the content in relation to relevant threshold limits in the appendix and national legislation. Nordic Ecolabelling always have the right to require laboratory analysis for reused products.

The following materials are considered safe to use and are therefore exempt from further documentation in this requirement: Outdoor concrete tiles, untreated wood for outdoor purposes, untreated interior doors in wood (no glass or insulation), interior walls in glass without framing and untreated wooden floors.

Reused materials must be documented in the logbook (O13).

** The expert conducting the risk analysis must be trained in documenting hazardous substances and have at least 3 years' experience in the field of environmental mapping/surveys of buildings. This can be either an internal or an external person.*

✉ Overview of the reused materials used.

✉ Risk analysis from expert that documents the presence of undesirable substances listed in the appendix *Hazardous substances in reused construction* products and relevant national legislation.

✉ Where relevant, an analysis report from an accredited laboratory on the substances listed in the appendix *Hazardous substances in reused construction* products and relevant national legislation.

✉ Documentation of the expert's competence, e.g. a CV.

P15 Reused construction products and materials

The following product categories of reused products give points. The minimum share of the total demand that must be covered by reused products to obtain points is shown in Table 18 below. Using spills or leftovers from new materials is not considered reuse. All materials/products must comply with requirement O12.

Maximum 4 points can be achieved.

Reused materials must be documented in the logbook (O13).

Table 18 Product categories of reused products

Product category	Minimum share of total demand	Points
Facade material (Wood, bricks, steel, aluminium, glass etc).	25%	2
	50%	3
Roof material	25%	2
	50%	3
Inner walls (Timber, bricks, aerated concrete, gypsum boards etc.)	25%	2
	50%	3
Floor slab/ floor framing (Timber, concrete elements, steel beams)	25%	2
	50%	3
Load-bearing walls (Timber, bricks, concrete elements etc.)	25%	2
	50%	3
Load-bearing roof structures (Timber, concrete elements etc.)	25%	2
	50%	3
Doors	50%	1
	75%	2
Flooring	25%	2
	50%	3
Lighting fixtures	50%	1
	75%	2
Suspended ceiling	50%	1
	75%	2
Untreated construction wood/timber for supplementary buildings	50%	1
	75%	2
Untreated construction wood/timber for temporary safety constructions	50%	1
	75%	2
Outdoor decking (stone, wood, tiles etc)	50%	1
	75%	2
Capillary break layer	50% of total need for sand/ aggregates must be taken from another construction site where it is surplus.	1

Concrete foundation	30% of total need for aggregates must be crushed concrete	1
Maximum points		**4**

On request, Nordic Ecolabelling will assess any other products and materials that are suggested for inclusion on a project basis.

✉ Calculation of the share of reused product in the relevant product category.

✉ Documentation for the purchase or acquisition of reused products.

P16 Insulating materials made from renewable sources

Points are given when a minimum of 90% of the total need for insulation in a construction part is covered by an insulation product with minimum 80% renewable material* see Table 19. Maximum 2 points can be achieved.

Table 19 Points for the use of renewable insulation

Construction part	Points
Outer walls	1
Roof	1
Foundation	1
Maximum points	**2**

** Paper wool insulation is considered as renewable material.*

All materials must comply with the requirements in O25.

Wood fibre must also comply with O29 and O30.

✉ Product sheet or other documentation from the manufacturer that states the share of renewable material in the insulation product.

✉ Drawings or other documentation that verifies the share of renewable insulation products used in the chosen construction part.

P17 Renewable loadbearing structure or facade

For buildings with timber / renewable construction in the carcass, facade or loadbearing walls, the following points are given:

Table 20 Points for the use of renewable carcass, facade or loadbearing walls

Construction part	Minimum share of wood in loadbearing structure (weight or volume)	Points
Floor framing	90%	1
Loadbearing walls	90%	1
Loadbearing roof structures	90%	1
Facade area (excluding windows and doors)	50%	1
Maximum points		**2**

The requirement does not apply to supplementary buildings. Maximum 2 points can be achieved.

WPC (Wood polymer composite) will not be given points.

✉ Description/drawings of the relevant building component.

✉ Calculation of timber/renewable material in relevant building component.

P18 Design for disassembly and adaptability

Two points are available, one for strategy and one for a DfD/A plan.

Strategy (1 point)

One point is given to projects where the applicant has implemented an internal strategy to ensure that design for disassembly and adaptability is always considered in the design process. The strategy must at least include:

a) Roles and responsibilities for DfD/A within the organisation.

b) Guidelines for identification of connections that can be reversible.

c) Guidelines for choice of materials and technologies.

d) Information structure for drawings, descriptions and instructions regarding disassembly of components and possibilities for adaptation of the building. It must be specified how the information is handed over to the building owner.

Reference can be made to ISO 20887, LEVEL(s) indicators 2.3 and 2.4 or other relevant standards or methodologies for the disassemblability or adaptability of buildings.

Design for disassembly and adaptability in the building (1 point)

One point is given for a plan for design for disassembly and adaptability of the building, in accordance with "7.1.4: Transition to a circular economy" in the EU taxonomy.

The plan must verify how the building designs and construction techniques support circularity. In particular it must be demonstrated, with reference to ISO 20887:2020 or other standards for assessing the disassembly or adaptability of buildings, how they are designed to be more resource efficient, adaptable, flexible and dismantlable to enable reuse and recycling. A relevant set of measures must be implemented to verify that the building is better compared to the average new built building.

✉ Strategy within design for disassembly and adaptability, covering a) to d).

✉ Plan for design for disassembly and adaptability of the building, description of the measures implemented.

6 Chemical products, construction products, construction goods and materials

This chapter consists of three sections of requirements:

1. Product list and logbook
2. Chemical products
3. Construction products, goods and materials.

Reference is made to the individual requirements, the section "Definitions" and the section “What is subject to the requirements?” for an explanation of what is included in the requirements.

Nordic Swan Ecolabel products automatically fulfil the requirements in this chapter.

6.1 Product information and logbook

O13 Logbook

The Nordic Swan Ecolabel building project must have a digital logbook (e.g., PDF, Word or Excel) that includes all the construction products, goods, materials and chemical products used in the construction of the project. Reused products must also be registered in the logbook.

The logbook may be created using a verified third-party logbook service after approval by Nordic Ecolabelling.

The logbook must as a minimum provide the following information:

- Product name
- Product type
- Name of producer
- The location of the product in the building(s)*

Before the construction begins the logbook must be initiated and account for materials and products used in the initial stages** of the building project. The logbook must always be updated with materials and products according to the current state of the construction. The final version of the logbook must be handed in when the building is handed over. There must be routines in place to ensure that the digital logbook is accessible to the owner of the building and to Nordic Ecolabelling.

Technical instruments and electrical installations should not be described in detail but must be represented on a system level. Products subject to general exemptions, as described in the section "What is subject to the requirements", are not necessary to include in the logbook.

The GTIN number or the ID number in a national product registry should be included in the information if available.

** Minimum level of description: ceiling, walls and floor, building's roof, facade, cellar, stairwell, slab, building's frame, terrace, bathroom, kitchen, balconies, garage, sports halls, garden, entrance hall, technical installation rooms, waste sorting room, laundry room, lift shaft.*

*** The initial stages are normally considered to be 'construction of the foundation' and 'sealing of the building envelope'. Depending on the size of the project, the construction techniques and whether parts of the building is constructed in a module factory the specific phases included must be approved by Nordic Ecolabelling. As a minimum the materials for the construction of the foundation must always be accounted for.*

☒ The digital logbook before the construction begins covering the initial stages of the project.

☒ Procedure for updating the logbook during the construction period (reference can be made to O40).

☒ The final digital logbook when the building is handed over.

☒ Description of how the logbook is made available to the building owner.

6.2 Chemical products

A chemical product is a substance or a mixture of two or more substances, in liquid, gaseous or solid form, which are used on a construction site or by a manufacturer of prefabricated building components.

Chemical products for both indoor and outdoor use are covered by the requirements. The requirements in the criteria document and accompanying appendices apply to all ingoing substances in the chemical product. Impurities are not regarded as ingoing substances and are exempt from the requirements. Ingoing substances and impurities are defined in the Definitions section.

For details on what is subject to the requirements, reference is made to the section "What is subject to the requirements?"

O14 Classification of chemical products

Chemical products must not be classified according to Table 21.

Table 21 Classification of the product

Classification of chemical products CLP Regulation 1272/2008		
Classification	**Hazard class and category**	**Hazard code**
Hazardous to the aquatic environment	Aquatic Acute 1 Aquatic Chronic 1 Aquatic Chronic 2	H400 H410 H411
Hazardous to the ozone layer	Ozone	H420
Acute toxicity	Acute Tox. 1 or 2 Acute Tox. 1 or 2 Acute Tox. 1 or 2 Acute Tox. 3 Acute Tox. 3 Acute Tox. 3	H300 H310 H330 H301 H311 H331
Specific target organ toxicity: single or repeated exposure	STOT SE 1 STOT RE 1	H370 H372
Carcinogenicity	Carc. 1A or 1B Carc. 2	H350 H351
Germ cell mutagenicity	Muta. 1A or 1B Muta. 2	H340 H341
Reproductive toxicity	Repr. 1A or 1B Repr. 2 Lact.	H360 H361 H362

The classifications in the table concern all classification variants. For example, H350 also covers classification H350i.

Exemptions:

- Chemical anchors classified H400, H410, and H411 due to dibenzoyl peroxide (CAS no. 94-36-0) are allowed.
- Hardener for acrylic floor coatings classified H400, H410, and H411 due to dibenzoyl peroxide (CAS no. 94-36-0) are allowed for use in professional kitchens. In Nordic countries with an authorisation system, the flooring contractor must be authorised.
- Biocide-containing wood primers classified H411 used for treatment of cut surfaces and end timbers are allowed.
- Naphtha-based primers and adhesives classified H411 for outdoor use.

- Naphtha-based adhesives classified H411 for cellular rubber insulation intended for cooling pipes and ventilation ducts indoors.
- Classifications H351 and H361 for intumescent steel paints in multi storey buildings due to melamine (CAS 108-78-1).
- Finland: Classifications H351 and H362 for spray polyurethane foams used in element factories and at construction sites for sealing of windows and balcony doors when temperature is below 5 ˚C. Exemption applies also for fire resistant polyurethane foam used in element factories and at construction site for sealing of façade insulations, elements, transits, and insulations in base floor with a crawl space.
- Finland: Two-component injection resin based on epoxy, classified H411, for repair of individual cracks in indoor concrete decks.

⇪ Declaration *Chemical products* from the manufacturer of the chemical product. The declaration is done by the manufacturer through the web portal SCDP.

✉ Safety data sheet in accordance with Annex II to REACH (Council Regulation (EC) no. 1907/2006) for all chemical products.

O15 CMR substances

Chemical products, used in the production of Nordic Swan Ecolabel buildings, must not contain any ingoing substances classified as carcinogenic, mutagenic or reprotoxic according to CLP Regulation 1272/2008, see Table 22 below.

Table 22 Non-approved classifications of ingoing substances in chemical products according to CLP Regulation 1272/2008.

Classification of ingoing substances CLP Regulation 1272/2008		
Classification	**Hazard class and category**	**Hazard code**
Carcinogenicity	Carc. 1A or 1B Carc. 2	H350 H351
Germ cell mutagenicity	Muta. 1A or 1B Muta. 2	H340 H341
Reproductive toxicity	Repr. 1A or 1B Repr. 2 Lact.	H360 H361 H362

The classifications in the table concern all classification variants. For example, H350 also covers classification H350i.

Exemptions:

- Glyoxal (CAS no 107-22-2) classified H341 ≤ 100 ppm (0.01% by weight) in the final product if the pH value in the final product is higher than pH 8.
- TiO_2 (CAS no 13463-67-7) classified H351 inhalation.
- Trimethylolpropane (CAS no 77-99-6) self-classified H361 up to ≤ 5000 ppm (0.5% by weight) in the final product.
- Dibutyltin (DBT) compounds and dioctyltin (DOT) compounds in sealing products ≤ 5000 ppm (0.5% by weight) in the final product.
- Biocide-containing wood primers containing substances classified H361d used for treatment of cut surfaces and end timbers are allowed.
- Sebacate compounds ≤ 5000 ppm (0.5% by weight) classified H361 used as stabilizers and UV-protection in SMP-based sealants, joints and adhesives. Time-limited exemption that applies until 2025-12-30.

- Classifications H351 and H361 for intumescent steel paints in multi storey buildings due to melamine (CAS 108-78-1).
- Respirable crystalline silica/quartz classified as H372/H350i with a maximum content of 1% in raw materials.
- Finland: 4,4´-methylenediphenyl diisocyanate, isomers and homologues (CAS no. 9016-87-9) classified as Carc. 2; H351 in spray polyurethane foams used in element factories and at construction site for sealing of windows and balcony doors when temperature is below 5 ˚C. Exemption applies also for fire resistant polyurethane foam used in element factories and at construction site for sealing of façade insulations, elements, transits, and insulations in base floor with a crawl space.
- Finland: Two-component injection resin based on epoxy, for repair of individual cracks in indoor concrete decks.

⇪ Declaration Chemical products from the manufacturer of the chemical product. The declaration is done by the manufacturer through the web portal SCDP.

✉ Safety data sheet in accordance with Annex II to REACH (Council Regulation (EC) no. 1907/2006) for all chemical products.

O16 Preservatives in indoor paint and indoor varnish

Only preservatives compliant with PT 6 (in-can) and PT 7 (dry-film) according to Regulation (EU)528/2012 (The Biocidal Products Regulation) can be used.

The amount of preservative/combination of preservatives is in indoor paint and indoor varnish is limited according to Table 23 and Table 24.

If the specific concentrations limit (SCL) is changed in accordance with CLP Regulation 1272/2008 Annex VI the limits below will also change accordingly.

For tinting systems, a worst-case calculation must be performed for the colour with most tinting paste and the base paint with highest content of preservative and isothiazolinone compounds.

Table 23 Concentration limits for preservatives totally

Product type	Preservatives total
Paints, varnishes, base paints with tinting paints etc. for indoor use.	900 ppm (0.09% w/w)
Wet room paint specifically	1600 ppm (0.16% w/w)

Table 24 Concentration limits for specific compounds

Preservatives	Concentration limit
Isothiazolinone compounds in total*	600 ppm (0.06% w/w)
BIT (CAS no. 2634-33-5)	500 ppm (0.05% w/w)
CIT/MIT (CAS no. 55965-84-9)	15 ppm (0.0015% w/w)
MIT (CAS no. 2682-20-4)	15 ppm (0.0015% w/w)
OIT (CAS no. 26530-20-1)	15 ppm (0.0015% w/w)

** Note that dithio-2,2'-bis-benzmethylamide (DTBMA) is to be included in the total amount of isothiazolinones.*

⇪ Declaration *Chemical products* from the manufacturer of the chemical product. The declaration is done by the manufacturer through the web portal SCDP.

O17 Preservatives in other chemical products intended for indoor use

Only preservatives compliant with PT 6 (in-can) and PT 7 (dry-film) according to Regulation (EU)528/2012 (The Biocidal Products Regulation) can be used.

The amount of preservative/combination of preservatives in other chemical products for indoor use is limited according to Table 25.

If the specific concentrations limit (SCL) is changed in accordance with CLP Regulation 1272/2008 Annex VI the limits below will also change accordingly.

Table 25 Concentration limits for preservatives in other chemical products for indoor use.

Preservatives	Concentration limit
Isothiazolinone compounds in total*	600 ppm (0.06%w/w)
BIT (CAS no. 2634-33-5)	500 ppm (0.05% w/w)
CIT/MIT (CAS no. 55965-84-9)	15 ppm (0.0015% w/w)
MIT (CAS no. 2682-20-4)	15 ppm (0.0015% w/w)
OIT (CAS no. 26530-20-1)	15 ppm (0.0015% w/w)
IPBC(CAS no. 55406-53-6)	2000 ppm (0.2% w/w)
Bronopol (CAS no. 52-51-7)	500 ppm (0.05% w/w)

** Note that dithio-2,2'-bis-benzmethylamide (DTBMA) is to be included in the total amount of isothiazolinones.*

⇪ Declaration *Chemical products* from the manufacturer of the chemical product. The declaration is done by the manufacturer through the web portal SCDP.

O18 Prohibited substances

The following substances must not be an ingoing substance in chemical products used in the production of Nordic Swan Ecolabel buildings:

- Substances categorised as Substances of Very High Concern (SVHC) and included on the EU Candidate List.
- Substances evaluated by the EU to be persistent, bioaccumulative, and toxic (PBT) or very persistent and very bioaccumulative (vPvB), in accordance with the criteria in Annex XIII of REACH.
- Endocrine disruptors: Substances on the EU member state initiative "Endocrine Disruptor Lists", List I, II and III, see the following links.
    - https://edlists.org/the-ed-lists/list-i-substances-identified-as-endocrine-disruptors-by-the-eu
    - https://edlists.org/the-ed-lists/list-ii-substances-under-eu-investigation-endocrine-disruption
    - https://edlists.org/the-ed-lists/list-iii-substances-identified-as-endocrine-disruptors-by-participating-national-authorities

A substance that is transferred to one of the corresponding sublists called "Substances no longer on list" and no longer appears on any of Lists I–III, is no longer excluded. The exception is those substances on sublist II which were evaluated under a regulation or directive that does not have provisions for identifying EDs (e.g., the Cosmetics Regulation, etc.). For those substances, ED properties may still have been confirmed or suspected. Nordic Ecolabelling will evaluate the circumstances case-by-case, based on the background information indicated in sublist II.

In addition, the following individual substances and substance groups are prohibited or restricted. There may be an overlap between the substances listed below and substances categorised above.

- Short-chain chlorinated paraffins (C10-C13) and medium-chain chlorinated paraffins (C14-C17).
- Perfluoroalkyl and polyfluoroalkyl substances (PFASs)
- Alkylphenols, alkylphenol ethoxylates (APEO) and other alkylphenol derivates (APD).
- Brominated flame retardants.
- Phthalates (Esters of phthalic acid (orthophthalic acid / phthalic acid /1,2-benzene dicarboxylic acid).
- Bisphenol A (CAS no. 80-05-7), bisphenol S (CAS no. 80-09-1) and bisphenol F(CAS no. 620-92-8).
- The heavy metals lead, cadmium, arsenic, chromium (VI), mercury and their compounds.
- Volatile aromatic hydrocarbons (VAH) >1% by weight.
- Organotin compounds.

Exemptions:

- 2,2-dibromo-2-cyanoacetamide (DBNPA, CAS. No 10222-01-2).
- Primers and adhesives for outdoor use may contain up to 20% by weight of VAH.
- Primers for waterproofing assembly (flat roofs, green roofs, courtyards, terraces, garage, basement walls and similar applications) may contain more than 20% by weight of volatile aromatic compounds due to xylene when it is demanded. Exemptions are accepted* for any of the following conditions if they are documented:
  - The product is used between October and April.
  - The product is used on basement walls.
  - When sufficient adhesion cannot be reached due to dense structure of the concrete or a humid or wet environment other time of the year. Must be documented with a tensile test.

  * The licence applicant applies in writing for a project-specific exemption to Nordic Ecolabelling. Decisions on approval from Nordic Ecolabelling must be awaited before using the products. The products used must fulfil O14, O15 and O18 except the general VAH restriction.
- Dibutyltin (DBT) compounds and dioctyltin (DOT) compounds in sealing products ≤ 5000 ppm (0.5% by weight) in the final product.

- Chemical products may contain up to 100 ppm (0.01 % by weight) Butylated hydroxytoluene (BHT, CAS no. 128-37-0) in the final product.
- Melamine (CAS 108-78-1) in intumescent steel paints in multi storey buildings.
- Finland: Bisphenols in two-component injection resin based on epoxy, for repair of individual cracks in indoor concrete decks.
- Finland: Spray polyurethane foams with ingoing reaction products of phosphoryl trichloride and 2-methyloxirane (CAS no. 1244733-77-4) used in element factories and at construction sites for sealing of windows and balcony doors when temperature is below 5 °C. Exemption applies also for fire resistant polyurethane foam used in element factories and at construction site for sealing of façade insulations, elements, transits, and insulations in base floor with a crawl space.

⇪ Declaration *Chemical products* from the manufacturer of the chemical product. The declaration is done by the manufacturer through the web portal SCDP.

✉ Safety data sheet in accordance with Annex II to REACH (Council Regulation (EC) no. 1907/2006) for all chemical products.

O19 Nanoparticles in chemical products

Nanomaterials/-particles (see Definitions) must not be added or be present in chemical products. Nanomaterials/-particles are defined according to the EU Commission Recommendation on the Definition of Nanomaterial (2022/C 229/01) (see Definitions).

The following are exempted from the requirement:

- Pigments*
- Naturally occurring inorganic fillers**
- Synthetic amorphous silica***
- Ground Calcium Carbonate (GCC) and precipitated Calcium Carbonate (PCC)
- Polymer dispersions

** This exemption does not apply to pigments added for other purposes than imparting colour. Nano-titanium dioxide is not considered to be a pigment and is therefore not exempted from the requirement.*

*** This exemption applies to fillers covered by Annex V, item 7 of REACH.*

**** This applies to unmodified synthetic amorphous silica. Chemically modified colloidal silica can be included in the products if the silica particles form aggregates in the final product. Any surface treatment of nanoparticles must fulfil requirement O14 (Classification of chemical products) and requirement O18 (Prohibited substances).*

⇪ Declaration *Chemical products* from the manufacturer of the chemical product. The declaration is done by the manufacturer through the web portal SCDP.

6.3 Construction products – restricted material

O20 Halogen free cables

All heavy current cables must be documented as halogen-free according to EN 60754-1 (halogen acid content < 5mg/g) and EN 60754-2 (pH> 4,3 and conductivity <10 µS/mm) or in accordance with EN 63355 or EN 50267-2-3.

For cables in the classes Bca, Cca and Dca: The cable can be documented as halogen-free by a DoP (declaration of performance) that clearly indicates compliance with the additional parameter a1 or a2.

The requirement does not include data, telephone, and TV cables. Cables that arrive at the construction site together with electric appliances, such as lifts, white goods, pumps, and fans are not subject to this requirement

Mandatory requirement O25 must also be met.

Norway: Until 31-12-2024 Norway is exempt from the requirement. Applicants must upon request be able to document that they have tried to request halogen-free cables.

⇪ Documentation from the manufacturer such as technical datasheet or DoP stating compliance with relevant standard. This is uploaded by the manufacturer through the web portal SCDP.

O21 Surface layers on floors, ceilings, walls, doors, and windows

Doors, windows and interior surface layers on floors, ceilings and walls may not contain chlorinated plastics (e.g. PVC). This includes watertight layers, wall film, acoustic dampening foams and other products used directly underneath the surface layer. Mouldings, skirtings and surface wall films are included.

The following are exempted from the requirement:

- Mouldings, skirting boards and baseboards in bathrooms, professional kitchens and stairwells.
- Floorings in professional kitchens with floor drain.
- Floorings in wet rooms with floor drain in educational buildings and residential care facilities (or similar buildings classified as residential buildings according to national legislation).
- Smaller plastic details ≤ 100 grams and outdoor glazing beads on windows and doors. Foil covering the whole product surface, is not seen as a small part.

Products covered by the exemption must fulfil O25.
Small plastic details like sealing collars or waterbars are not subject to this requirement.

✉ Documentation to show how the requirement is fulfilled, for example floor plans, product data sheets, construction product declarations or similar.

✉ For exemptions mentioned in the requirement: Declaration "Surface layers of chlorinated plastics" and Declaration "Prohibited substances" from the manufacturer of the product. For windows and doors, the declaration is done by the manufacturer through the web portal SCDP. For flooring and mouldings, the declaration is instead filled out by the manufacturer and supplemented to the documentation in the web portal NEP by the licence applicant.

O22 Durable wood

The requirement for durable wood is described in the sections below according to the type of wood treatment.

The use of preservative-treated*, chemically modified or thermally modified wood must be documented in drawings showing that the relevant use classes are fulfilled according to EN 335.

* E.g. pressure impregnated, vacuum impregnated. Surface treatment is not covered by the requirement.

Untreated wood with natural durability is not subject to any requirements.

Preservative-treated wood

The use of preservative-treated wood containing heavy metals and/or biocides is not permitted in the use classes below (use classes according to EN 335):

- Use class 1
- Use class 2
- Use class 3 (vertical structures in use class 3.2 such as cladding, fences, partition walls and acoustic barriers)

Exemptions:

- Windows and doors in Use class 3.1
- Horizontal structures in Use class 3.2
- Load bearing structures with specific demands on strength: Weather exposed structural timber or glulam which is strength classed in accordance with EN 338 or EN 14080
- Time limited exemption until 31-12-2025: Preservative treated wood, that would not be classified as hazardous waste and only contain organic PT8 biocides up to maximum 300 ppm and no heavy metals, is allowed on facades (including supplementary buildings). A chemical analysis performed by an accredited laboratory is required to document that the amount of organic PT8 biocides in the wood is below 300 ppm. The preservative treated wood must fulfil requirements for quality testing in accordance with UC 3.2.

Preservative treated wood is not allowed for use in cultivation boxes.

For preservative-treated wood in allowed applications the wood must meet the requirement O25 on prohibited substances in construction products, construction goods and materials and meet the requirement of durability in Table 26 below.

Table 26 For preservative-treated wood the following documentation of durability applies.

Wood protection method	Use class as per EN 335	Required documentation of durability
Preservative-treated Wood in accordance with NTR	UC 3.1 (only allowed for windows and doors)	NTR B
	UC 3.2	NTR AB,NTR GRAN
	UC 4	NTR A

Preservative-treated wood not classified in accordance with NTR	UC 3.1 (only allowed for windows and doors)	All of the following must be tested by an accredited laboratory: -EN 113-1 excluding testing with Coriolus versicolor after separate accelerated ageing with EN 73 and EN 84 - EN 330
	UC 3.2	All of the following must be tested by by an accredited laboratory: - EN 113-1 excluding testing with Coriolus versicolor after separate accelerated ageing in line with EN 73 and EN 84. - EN 12037:2022 or EN 330
	UC 4	All of the following must be tested by an accredited laboratory: - EN 113-1 including testing with Coriolus versicolor after separate accelerated ageing in line with EN 73 and EN 84. - ENV 807 - EN 252 for at least five years in three locations, two of which are in a Nordic country.

Chemically modified or thermally modified wood for outdoor use

The use of chemically modified or thermally modified wood must meet the requirement of durability specified in Table 27, use classes in accordance with EN 335. Requirement O25 must be fulfilled by chemically modified wood.

Nordic Swan Ecolabelled chemically and thermally modified wood fulfils O25 and meets the durability requirements in Table 27.

Table 27 For chemically modified or thermally modified wood, the following documentation of durability applies.

Wood protection method	Use class as per EN 335	Required documentation of durability
Thermally and chemically modified wood classified in accordance with NTR	UC 3.1	NTR Bmod
	UC 3.2	NTR ABmod
	UC 4	NTR Amod
Thermally and chemically modified wood not classified in accordance with NTR	UC 3.2	All of the following must be tested by an accredited laboratory: - EN 113-2 excluding testing with Coriolus versicolor after separate accelerated ageing in line with EN 73 and EN 84. - EN 12037:2022
	UC 4	All of the following must be tested by an accredited laboratory: - EN 113-2 including testing with Coriolus versicolor after separate accelerated ageing in line with EN 73 and EN 84. - ENV 807 - EN 252 for at least five years in three locations, two of which are in a Nordic country.

✉ Description and drawings of the relevant constructions where preservative-treated, chemically modified or thermally modified wood is used, incl. use class according to EN 335.

✉ Documentation/certificate in accordance with Table 26 or Table 27. This is uploaded by the manufacturer through the web portal SCDP. Alternatively, product name and licence number for a Nordic Ecolabelled product.

⇪ Declaration *Prohibited substances* from the manufacturer of the preservative treated or chemically modified wood. The declaration is done by the manufacturer through the web portal SCDP.
Alternatively, product name and licence number for a Nordic Ecolabelled product.

O23 Copper

Copper is restricted in Nordic Swan Ecolabelled buildings in the following way:

A. Tap water pipes must not contain >1% weight of copper.

B. Roof and facade cladding materials and products for roofs and facades (roof drainage products, gutters, exhaust hoods, eaves nets, cover profiles and the like) must not contain more than 10% by weight of copper.

Exemptions:

- Visible pipelines in bathrooms.
- Water fittings connecting pipes, such as couplings or manifolds.
- Installation cabinets, such as manifold or water meter cabinets.
- Pipelines that due to national fire protection legislation must be made of copper and where alternatives are not available.
- Pipes through the wall for an outdoor tap.

Closed pipe systems such as heating or cooling circuits are not covered by the requirement.

⇪ Declaration *Copper* from applicant.

✉ If relevant, description of the use of copper in the project. Where relevant, supplementary documentation for roof and facade cladding, such as product data sheet, construction product declaration or information from producer.

O24 Plastic and rubber surfaces on playgrounds and outdoor areas

The use of impact attenuating ground cover materials with synthetic components is restricted on outdoor areas in connection with the Nordic Swan Ecolabelled building. It can only be used on areas that fulfil both of the following two conditions:

- The area is subject to accessibility requirements*, and
- The area is a fall zone according to EN 1176 and EN 1177 or is a small enclosed** multisport pitch being part of a school yard.

In addition, the conditions in a) to c) must be fulfilled when ground cover materials with synthetic/plastic components are used:

a) The synthetic ground cover materials must not contain material from recycled tyres (SBR).

b) Surfaces must not consist of material with loose infill of plastic or rubber granules.

c) Granule catchers or other systems for microplastic retention must be installed in drains adjacent to the materials.

** Due to legislation, municipal requirements, or requirements from the procurer.*

*** The enclosure must have openings accessible for persons with disabilities.*

Examples of plastic and rubber surfaces to which this requirement apply are artificial turf, mats, tiles or in situ cast surfaces made from plastic or rubber. Fibres, chips, or granules of renewable materials with a synthetic binding agent or cover are also subject to the requirement.

Materials in artificial turf, mats, tiles and granulate must be declared according to O25. Binding agents and glue used outdoors for installation are exempt from the chemical requirements.

✉ Situation plan showing the use of synthetic ground cover materials and accessible surfaces on playgrounds and outdoor areas.

✉ Drawings where the fall zone is defined according to EN 1176 and EN 1177.

✉ For multisport pitch in a school yard: Reference to accessibility requirements: legislation, requirements from municipality or procurer. Product sheet for the small enclosed multisport pitch.

✉ Product sheets or other documentation showing compliance with parts a), b) and c).

⇪ Declaration *Prohibited substances*. The declaration is done by the manufacturer through the web portal SCDP.

6.4 Construction products – ingoing substances and emissions

O25 Excluded substances in construction products, construction goods and materials

The requirement applies to the following product categories:

1. Sealing products, including membranes, tape and sealing collars on walls, foundation, and roofing, which are not classified as chemical products.
2. Thermal, acoustic and technical insulation.
3. Interior and exterior building panels. Does not include panels of solid wood, laminated timber, veneer, OSB, plywood, MDF/HDF, chipboard, HPL, CPL and compact laminates, which are regulated in requirement O27.
4. Heavy current cables and electrical conduits*.
5. Wood that is preservative-treated or chemically modified as protection from rot, blue stain and mould (see O22 for restrictions on use).
6. Wood plastic composite (WPC).
7. Plastic coverings for floors, ceilings, and walls for interior use.
8. Textile coverings for floors, ceilings, and walls.
9. Artificial turf, mats, tiles and granulate used in impact attenuating outdoor surfaces as defined in O24.

In the construction products and materials mentioned above, the following substances must not be an ingoing substance in the product. Ingoing substance means all substances in the construction product that are present in concentrations higher than 100 ppm (0.010 w%, 100 mg/kg).

- Substances on the REACH Candidate list of SVHC.
- Substances evaluated by the EU to be persistent, bioaccumulative, and toxic (PBT) or very persistent and very bioaccumulative (vPvB), in accordance with the criteria in Annex XIII of REACH.
- Substances classified as carcinogenic, mutagenic, or toxic for reproduction (CMR) Category 1A or 1B.
- Endocrine disruptors: Substances on the EU member state initiative "Endocrine Disruptor Lists", List I, II and III, see the following links:
    - https://edlists.org/the-ed-lists/list-i-substances-identified-as-endocrine-disruptors-by-the-eu
    - https://edlists.org/the-ed-lists/list-ii-substances-under-eu-investigation-endocrine-disruption
    - https://edlists.org/the-ed-lists/list-iii-substances-identified-as-endocrine-disruptors-by-participating-national-authorities

  A substance that is transferred to one of the corresponding sublists called "Substances no longer on list" and no longer appears on any of Lists I–III, is no longer excluded. The exception is those substances on sublist II that were evaluated under a regulation or directive that does not have provisions for identifying EDs (e.g., the Cosmetics Regulation, etc.). For those substances, ED properties may still have been confirmed or suspected. Nordic Ecolabelling will evaluate the circumstances case-by-case, based on the background information indicated in sublist III. In addition, the following individual substances and substance groups are prohibited or restricted. There may be an overlap between the substances listed below and substances categorised above.
- Short-chain chlorinated paraffins (C10-C13) and medium-chain chlorinated paraffins (C14-C17).
- Perfluoroalkyl and polyfluoroalkyl substances (PFASs).
- Alkylphenols, alkylphenol ethoxylates (APEO) and other alkylphenol derivates (APD).
- Brominated flame retardants.
- Phthalates (Esters of phthalic acid (orthophthalic acid / phthalic acid /1,2-benzene dicarboxylic acid).
- The heavy metals lead, cadmium, arsenic, chromium (VI), mercury and their compounds.
- Bisphenol A (CAS no. 80-05-7), bisphenol S (CAS no. 80-09-1) and bisphenol F(CAS no. 620-92-8).
- Boric acid, sodium perborate, perboric acid, sodium borate (borax) and any other boron compounds classed as carcinogenic, mutagenic or reprotoxic in category 1A/1B/2/Lact.
- Organotin compounds.

Exemptions:

- The material in (electrical) conduits* may contain brominated flame retardants provided that the following limits are fulfilled: Bromine content (Br) ≤0.15%, chlorine content (Cl) ≤0.15%, total content: bromine content (Br) + chlorine content (Cl) ≤0.2%. The content must be verified using ion chromatography (IC) according to the methods in EN 14582 or modified IC methods according to EN50642.
- Classification H360 due to 2-ethylhexanoic acid (CAS No. 149-57-5) is exempted in preservative treated wood if the pH value is 9.5 or higher in the wood preservative liquid and if the concentration is <1000 ppm (0.1%) in the finished preservative treated wood. See requirement O22 for restrictions.
- Classification H360 for propiconazole (CAS No. 60207-90-1) in preservative treated wood used in windows if the concentration is <500 ppm (0.05%) in the finished preservative treated wood. See requirement O22 for restrictions.

⇪ Declaration *Prohibited substances*. The declaration is done by the manufacturer of the construction product through the web portal SCDP.

✉ Construction product declaration or corresponding if available for the product.

O26 Antimicrobial surface treatments

The applicant must ensure that nanoparticles (see definitions) and biocide treatments are not used in production of the following goods and materials, with the purpose to create an antibacterial or antiviral surface or effect.

The requirement applies to the following construction products, construction goods or materials:

- Flooring and floor coverings.
- Wall coverings in ceramic material or stone.
- Kitchen and bathroom fittings such as worktops, splashbacks, cabinet fronts, kitchen sinks, mirrors, shower walls, sanitary appliances (WC, urinal, bath, shower, washbasin, sink, bidet etc.)
- White goods* (air filters and door gaskets are exempted).
- Ventilation filters and textile ducts/diffusers.
- Waste disposal units.

** The white goods covered by this requirement are the same types that are subject to requirements in O5 Energy efficient white goods.*

✉ Declaration *Antimicrobial surface treatments* from the applicant confirming compliance with the requirement concerning antibacterial/antiviral surfaces.

O27 Formaldehyde emissions

The requirement covers all wood-based or laminate panels and boards for indoor use, containing formaldehyde-based additives, such as building panels (raw or surface treated), panels in floors, panels in doors* or other fitments as well as mouldings, baseboards and frames. Permanently installed fittings, furniture and trimmings as well as loose fittings and furniture (e.g., wardrobes and lockers) that are included in the construction project are subject to this requirement.

The requirement does not apply to panels solely marketed as facade panels, solid wooden worktops or fixture details present in a very limited extent such as an individual hat or shoe shelf.

The average emission of formaldehyde must not exceed the limit values for the relevant test method according to Table 28.

** For Finland, apartment doors that are fire-protected according to EN16034 instead of the emission limit value in the table above must comply with M1.*

Table 28 Threshold limits for formaldehyde emissions.

Test method	EN 717-1	EN 16516
MDF	0.09 mg/m^3	0.14 mg/m^3**
Other panels/boards/mouldings/beams/columns (including glulam, CLT, particle boards, flaxboards, chipboards, fiberboards, OSB etc.)	0.07 mg/m^3	0.11 mg/m^3**
Other panels/mouldings/fitments than wood Including high pressure laminates (HPL), continuous pressure laminates (CPL) and compact laminates	N/A	0.03 mg/m^3

If the panel is covered by e.g., melamine or laminate, it is the complete product with covering that should be tested. If a fitment consists of more than one panel, the complete product can be tested, or the panels can be tested separately.

Analysis methods other than those stated in the above table can be used, provided that the correlation between the testing methods can be verified by an independent third party.

*** For wood-based boards a conversion factor of 1.6 can be used for conversion from EN 717-1 to EN 16516, according to Wilke and Jann[6].*

If legislation is introduced or tightened and becomes tighter than Nordic Ecolabelling's requirement levels for formaldehyde during the term of validity of these criteria, this requirement will be adjusted.

✉ Analysis report including measurement methods, measurement results and measurement frequency. It must be clearly stated which method has been used, who carried out the analyses and that the testing institution is an independent third party. Test methods other than those specified may be used if there is correlation between test methods and this can be confirmed by a competent third party.

6.5 Ecolabelled products

O28 Ecolabelled products

A minimum point score for ecolabelled products must be achieved in P19 according to Table 29.

Requirement not applicable for the warehouse buildings.

Table 29 Minimum point score for each country.

Country	Minimum points
DK/SE/NO	8
FI	6
IS	5

[6] Comparison of formaldehyde concentrations in emission test chambers using EN 717-1 and EN 16516, Indoor Air Conference 2018, July 22-27, Philadelphia, USA. Olaf Wilke, Oliver Jann.

✉ Confirmation that minimum point score is achieved in P19.

P19 Ecolabelled products

Requirement not applicable for Warehouse buildings

Using Nordic Swan Ecolabelled or EU Ecolabelled products qualify for points. Using ecolabelled products for more than 10% of the need of products in each product category will grant points according to Table 30. The sum is rounded off to the nearest whole number.

A maximum of 14 points can be achieved. A minimum point score must be achieved according O28.

Table 30 Product categories available for points.

Product category	**Points granted according to share of ecolabelled products in each product category**				
	>10%	**>30%**	**>50%**	**>70%**	**>90%**
Construction panels for outdoor use	0.2	0.6	1	1.4	2
Facade panels	0.2	0.6	1	1.4	2
Construction panels and panels for indoor use.	0.2	0.6	1	1.4	2
Mouldings for indoor use	0.1	0.3	0.5	0.7	1
Flooring (visible layer, excluding tiles)	0.3	0.9	1.5	2.1	3
Tiles (floors and walls)	0.1	0.3	0.5	0.7	1
Bathroom fittings (front, frames and countertops)	0.1	0.3	0.5	0.7	1
Wardrobes	0.2	0.6	1	1.4	2
Kitchens (front, frames and countertops)	0.3	0.9	1.5	2.1	3
Windows and window doors	0.3	0.9	1.5	2.1	3
Exterior doors	0.1	0.3	0.5	0.7	1
Interior doors	0.2	0.6	1	1.4	2
Outdoor furniture	0.2	0.6	1	1.4	2
Playground and park equipment	0.2	0.6	1	1.4	2
Stove/fireplace	0.1	0.3	0.5	0.7	1
Durable wood, including cladding and facade materials	0.2	0.6	1	1.4	2
Indoor paint	0.3	0.9	1.5	2.1	3
Indoor fillers for ceilings and walls	0.2	0.6	1	1.4	2
Screed for indoor use	0.2	0.6	1	1.4	2
Outdoor paint	0.2	0.6	1	1.4	2
Sealants	0.2	0.6	1	1.4	2
Adhesives for glass felt and wallpaper	0.1	0.3	0.5	0.7	1
Microdispers	0.1	0.3	0.5	0.7	1
Other chemical building products	0.1	0.3	0.5	0.7	1
Other products					Defined when relevant
Maximum points total					14

The most suitable unit can be used, as long as the unit is consistent within each product group. Units used can be for example m^2, litres, m^3 or kg.

✉ Completed calculation with relevant product information.

✉ Documentation for amounts and products in calculation such as invoices or estimates of relevant amounts.

7 Biodiversity and wood raw materials

O29 Prohibited and restricted tree species

This requirement applies to all wood-based products used in the construction of the Nordic Swan Ecolabelled building, supplementary buildings and outdoor areas. The requirement also applies to wood-based products used in construction but not incorporated in the building, such as wood in casting moulds.

Nordic Ecolabelling's list of restricted tree species* consists of virgin tree species listed on:

a) CITES (Appendices I, II and III)

b) IUCN red list, categorised as CR, EN and VU

c) Rainforest Foundation Norway's tree list

d) Siberian larch (originated in forests outside the EU)

Tree species listed on a) CITES (Appendices I, II and III) **are not permitted.**

Exemption applies for Eucalyptus and Acasia used in production of wood- and paper-based construction boards and panels (e.g. fiberboards, particle boards, MDF, OSB, HPL, LPL, CPL etc.). Fibre raw materials from eucalyptus/acacia must be a minimum of 70% certified, see requirement O30.

Tree species listed on either b), c) or d) **may be used** if they meet all the following requirements:

- The tree species do not originate from an area/region where it is IUCN red listed, categorised as CR, EN or VU.
- The tree species do not originate from an Intact Forest Landscape (IFL), defined in the World's IFL 2000 map in Google Earth http://www.intactforests.org/world.map.html.
- The tree species shall originate from an FSC or PEFC certified forest/plantation and shall be covered by a valid FSC/PEFC Chain of Custody certificate documented/controlled as FSC or PEFC 100% through the FSC transfer method or PEFC physical separation method.
- Tree species grown in plantations shall also originate from a FSC or PEFC certified forest/plantation established before 1994.

** The list of restricted tree species is located on the website: https://www.nordic-ecolabel.org/declare-items/pulp-and-paper/forestry-requirements/forestry-requirements-2020/*

The applicant makes a declaration for the whole project.

The supplier makes the declaration if the wood-based products are subject to declaration in the Supply Chain Declaration Portal.

⇪ Declaration *Prohibited and restricted tree species* that tree species listed in a–d are not used in the Nordic Swan Ecolabelled building.

If species from the lists b, c or d are used:

☒ If a tree species is listed in either b, c or d, the supplier is required to present a valid FSC/PEFC Chain of Custody certificate that covers the specific tree species and demonstrates that the wood is controlled as FSC or PEFC 100% through the FSC transfer method or PEFC physical separation method.

☒ If a tree species is listed in either b, c or d, the supplier is required to document full traceability back to the forest/certified forest unit, thereby demonstrating that:

- The tree species do not originate from an area/region where it is IUCN red listed, categorised as CR, EN or VU.
- The tree species do not originate from Intact Forest Landscape (IFL), defined in the World's IFL 2000 map in Google Earth http://www.intactforests.org/world.webmap.html.
- For plantations, the applicant/manufacturer/supplier is required to document that the tree species does not originate from FSC or PEFC certified plantations established after 1994.

O30 Wood and bamboo, traceability and certification

This requirement applies to the following construction elements of solid wood, glulam, LVL, bamboo, plywood, veneer or particle/fibre board used in the construction of the Nordic Swan Ecolabelled building and supplementary buildings:

- Frames, trusses, studs and joists used in the wooden structure of the building (roof, walls and floors)
- Underlay on roofs, walls and floors such as plywood, particle boards, MDF, OSB, tongue-and-groove and rafters
- Interior panels
- Exterior cladding and facade panels
- Timber for balcony, terrace, decking, veranda and fences
- Wooden floors

If the applicant wants to include other building parts than the above listed in the calculation of certified wood raw materials, e.g., windows, this includes the total volume of wood used in that building part throughout the building.

Nordic Swan Ecolabelled and EU Ecolabel products can be excluded from the calculation.

Name of tree species
The applicant/supplier must state the name (species name) of the wood raw material or bamboo used in Nordic Swan Ecolabelled buildings.

Chain of Custody certification
All the above-mentioned construction elements of wood raw materials and bamboo used in the Nordic Swan Ecolabel building must be covered by chain of custody certificates issued by FSC or PEFC.

The supplier of wood raw materials/bamboo materials must have valid Chain of Custody (CoC) certification under the FSC/PEFC schemes.

Suppliers who only deliver non-certified recycled material in the Nordic Swan Ecolabelled buildings are exempted from the requirement for Chain of Custody certification. For a definition of recycled material, see below*.

As an exemption to the above, a supplier (e.g., a joinery workshop) of the applicant that does not have FSC/PEFC CoC certification may also be approved. This is subject to a guarantee from the supplier that the wood raw materials are purchased from a CoC certified supplier of wood that can prove that the wood raw materials comply with the requirements stated here. The supplier must guarantee that the certified wood is sold to the applicant of the Nordic Swan Ecolabelled building. The applicant must have an agreement with the supplier which describes how the supplier guarantees that the certified timber will be delivered to the applicant. The agreement shall state that the supplier is obliged to report to the applicant when changing wood supplier.

Certified wood raw materials and bamboo
A minimum of 70% by weight of above-mentioned construction elements from wood raw materials and bamboo used in the Nordic Swan Ecolabelled building must originate from forests managed according to sustainable forest management principles issued by FSC or PEFC and meet the requirements set out by the FSC or PEFC Chain of Custody schemes or be recycled material*.

The remaining uncertified proportion of wood raw material must be covered by the FSC/PEFC control schemes regarding FSC controlled wood/PEFC controlled or be recycled material*.

Nordic Ecolabelling considers products from primary wood processing industries (sawdust, wood chips, bark, etc.) or residues from forestry (bark, branches, roots, etc.) as recycled material*.

** Recycled material is defined according to ISO 14021 in the categories of pre-consumer and post-consumer.*

☒ The names (species names) of the wood raw materials and bamboo that are used.

☒ Valid FSC/PEFC Chain of Custody certificate from all suppliers of wood-based products, covering all wood materials and bamboo used in the Nordic Swan Ecolabelled building. Alternatively, a link to the certificate holder's valid certificate information in the FSC/PEFC certificate database.

☒ Documentation alternative 1: A summary showing i) the total quantity of wood raw materials and ii) the total percentage of certified wood raw material or recycled material used in the project. Copy of invoice(s) which confirms the FSC/PEFC claims for each of the products and the FSC/PEFC certificate number of the immediate supplier to confirm the proportion of certified wood raw materials or recycled materials purchased for the project.

☒ Documentation alternative 2: An aggregated list from each supplier (compilation of all wood raw material deliveries to the project containing information on: CoC code, name of tree species, type of product items, FSC/PEFC claims for each product item, quantities of wood raw materials and percentage of certified/recycled wood and the invoice number (reference)) can be used as a basis for the summary. Nordic Ecolabelling may ask for copies of invoices to confirm the proportion of certified timber purchased for the Nordic Swan Ecolabelled building.

☒ If the applicant does not use a CoC certified supplier, the supplier shall present i) invoices for the wood raw materials in question from the CoC certified supplier and ii) a valid certificate which must be in accordance with the invoice(s). The invoice must state the volume of certified wood raw material and certification number. The applicant must have a documented agreement with the supplier which describes how the supplier guarantees that the specified, certified wood raw material on the invoice is delivered to the project. The agreement shall also state that the supplier is obliged to report any change in the source of the wood raw material. Nordic Ecolabelling may ask for further information.

O31 Assessment of biodiversity on the building plot

The biodiversity at the building plot/project area must be assessed and documented in an ecology report. The overall ecological quality of the building plot/project area must be assessed. All individual sub-areas of the project area must be accounted for.

The ecology report must be done by a biologist/ecologist/landscape architect or person with equivalent competence with experience in mapping biodiversity on building plots/sites. Whenever possible, the report must be completed before the preparation of the building site and the construction process begins.

The ecology report must describe the existing biodiversity (before tillage/construction has started) at the building plot/project area. See the appendix Ecology report for more guidance. The ecology report must include the following:

- Existing plant cover (trees, bushes, hedges, etc.), fauna and habitats on the building plot
- General terrain description, including neighbouring land/habitat
- Any types of nature or animal/plant species on the building plot or adjacent to the building plot (neighbouring land) that are of national management interest, for example protected, threatened or prioritised species
- Any invasive species

In addition, the ecology report must include recommendations for measures to preserve and/or improve the biodiversity on the site (reference can be made to O32).

Assessment/mapping that has already been made in connection with the preparation/planning of the project e.g., the municipality in connection with the approval of local plans/project plans or as part of the building permit, can be included in the documentation.

✉ Description of qualifications and experience of the expert who has carried out the analysis.

✉ Ecology report according to the requirement.

O32 Measures to preserve and improve biodiversity

Based on the output of the ecology report in O3**1** a description must be made of planned measures to preserve the existing biodiversity (such as old trees, natural ponds, and streams) and planned measures to improve the biodiversity at the building plot during and after the building/project is completed.

The following measures must as a minimum be included in the description and implemented on the building plot*:

- Elements with natural value that already exist on the building plot must, as far as possible, be protected in accordance with the recommendations in the ecology report.
- Invasive plant species that are prohibited from being imported and sold found on the building plot/project area must be removed or controlled**. Such species must also not be planted. This also applies to green roofs.
- National plant/tree*** species must be preferred planted on the building plot/project area.

** If the applicant does not own the building plot/project area, the applicant must have an active dialogue with the owner of the building site to implement the measures listed in this requirement.*

*** This mainly applies to species that are prohibited from being imported and sold. They are found in the following documents: Denmark: The Danish Environmental Protection Agency's list of invasive species. Finland: National list of invasive species. Norway: Regulation on invasive organisms Appendix 1. Sweden: Currently, the requirement applies to species on the EU list and the list of most problematic species that have not yet been regulated by law. This may be changed when the authorities prepare new lists. Iceland: Act 583/2000. All countries: Regulation (EU) 2016/1141.*

**** These are species that originated and developed in their surrounding habitat and have adapted to living in that particular environment. They are well adapted to the climate, light, and soil conditions that characterize their ecosystem.*

✉ Description of planned measures to preserve the existing biodiversity and planned measures to improve the biodiversity at the building plot/project area during and after the building/project is completed.

✉ If the applicant does not own the building site: Documentation of dialogue with the owner of the site regarding possible implementation of the measures listed in the requirement.

O33 Management plan for biodiversity

The applicant must deliver a management plan for the biodiversity on the property and must hand it over to future residents and/or caretakers. The following must, as a minimum, be included in the plan if it is considered relevant in the ecology report (requirement O31):

- Ecology report or summary of the report
- Instructions and recommendations to maintain the outdoor green areas and measures to preserve and increase biodiversity on the site
- Recommendation to plant native plant species with suggestions on which native species to plant
- Reference to overview/list of invasive plant species that should not be planted
- Description of good gardening practice and a recommended ban on the use of pesticides on green areas and guidance in which alternative methods of pest and weed control are recommended

✉ Management plan for biodiversity on the site and information about how it will be handed over to future residents and caretakers.

P20 Biodiversity measures and ecosystem services

Points are awarded for measures that preserve and promote biodiversity on the property.

A maximum of 6 points can be obtained from the measures in Table 31.

Table 31 Biodiversity measures

Measures	Points
Green roofs: The total green surface must be at least 50% of the possible available roof area (area underneath solar panels is exempted). If a green roof is combined with cultivation boxes, the cultivation boxes must be in addition to the 50%, alternatively the total green surface	1-2

(green roof + cultivation boxes) must be at least 75% of the total area. 1 point for extensive roofs and 2 points for intensive roofs. *	
Management of surface water: Local management of surface water (rain or melt water that flows over various surfaces such as grass, gravel, asphalt and roofs, or drainage water) that promotes biodiversity, i.e., the establishment of open waterways and ponds with natural banks, moisture habitats and rain beds.	2
System for collection of rainwater for irrigation	1
Permeable surfaces: At least 75% of the area of all paths, common areas/squares, and/or play grounds/-scapes on the site are permeable. Parking spaces are not included. Asphalt, tiles, concrete pavements and rubber mulch/turf are not considered permeable. Permeable grass reinforcement is accepted.	2
Urban gardening: Create opportunities for urban gardening, e.g. in cultivation boxes. Water outlets should be located nearby. There is no requirement for how large the area should be, but an overall assessment must be made by the biologist/ecologist/landscape architect or person with equivalent competence (requirement O31).	1
Gardens with rich biological diversity: Emphasis will be placed on increasing the proportion that is not monoculture, increasing the proportion of perennial beds, flower meadows, multi-layered vegetation and new habitats. The gardens should have edible plants, fruit trees and plants that benefit pollinators (bumblebees, butterflies, etc.). Trees, plantings and any green roofs must be planned so that it is easier for the insects to move around. There is no requirement for how large the area should be, but an overall assessment must be made by the biologist/ecologist/landscape architect or person with equivalent competence (requirement O31).	2
Habitats for insects, birds, mammals: Create habitats for local species of insects, birds, mammals or ponds for amphibians according to the biologist/ecologist/landscape architect or person with equivalent competence (requirement O31)recommendations.	1
Habitats/ecological corridors: Restore and link together existing surronding habitats/ ecological corridors and land features to support wildlife according to the biologist/ecologist/landscape architect or person with equivalent competence (requirement O31)recommendations.	1
Natural playscapes or nature-based playgrounds: Create natural playscapes or nature-based playgrounds according to the biologist/ecologist/landscape architect or person with equivalent competence (requirement O31) recommendations.	1
EU taxonomy DNSH 6.2: Evaluation report that concludes that the construction of the new building is not built on one of the following: 1) Arable land and crop land with a moderate to high leve l of soil fertility and below-ground biodiversity as referred to in the EU LUCAS survey. 2) Greenfield land of recognised high biodiversity value and land that serves as habitat of endangered species (flora and fauna) listed on the European Red List or the IUCN Red List. 3) Land matching the definition of forest as set out in national law used in the national greenhouse gas inventory, or where not available, in accordance with the FAO definition of forest. The evaluation report must be done by a biologist/ecologist/landscape architect or person with equivalent competence with experience within mapping biodiversity on building plots/sites.	1
Bird friendly glass railing: All glass railing used on terraces and balconies in the building/project is endowed with inherent properties that reduce bird collisions i.e., UV-patterned glass, window films, frit or acid-etched patterns on glass, opaque and translucent glass that is etched, stained, or frosted.	1
Light pollution: In addition to requirements for outdoor lighting in O4 Light management, a comprehensive plan for outdoor lighting is made by a lighting consultant. The plan should include measures to counteract light pollution and illuminate only the areas that are necessary for safety and security reasons on the plot.	1
Maximum points	**6**

** Extensive roofs have a thin layer of soil or mats of growth medium (often sedum roofs). Intensive roofs have a thicker soil mass that can support shrubs and small trees and thereby contributes to greater biological diversity.*

✉ Description of the measures that are implemented. Reference must be made to the recommendations in the ecology report when relevant.

✉ Documentation for the establishment of measures.

✉ A comprehensive plan for outdoor lighting and CV for the lighting consultant.

8 Indoor environment

O34 Acoustics (Educational and office buildings)

Calculated sound levels and design sound classes in the building project must comply with the limit values given for each type of building below. Compliance is verified through an acoustic plan showing calculated sound levels and designed sound classes.

The acoustic plan must be performed by an acoustic technician with a minimum of two years' experience in designing building acoustics.

Educational buildings

Denmark: Reverberation time, airborne sound insulation and noise from technical installations must fulfil the levels defined in BR18.

Finland: Building type specific guideline values given in the Ministry of the Environment's guide to the sound environment of a building, 2018 (based on Decree 796/2017) for weighed standardised level difference $D_{nT,w}$ and for weighted standardised impact sound pressure level $L'_{nT,w} + C_{I,50\text{-}2500}$ must be fulfilled. Noise class for reverberation time shall be class A1 according to SFS 5907:2022 or a corresponding later standard.

Iceland (according to IST 45):

- Schools: Sound class C for reverberation time.
- Preschools: Sound class B for one optional sound environment parameter. Other sound environment parameters must comply with class C.

Norway (according to NS 8175):

- Schools: according to national legislation.
- Preschools: Sound class B for one optional sound environment parameter. Other sound environment parameters must comply with class C.

Sweden: Buildings must fulfil the essential sound class requirements for all parameters assessed according to the valid national sound class standard SS 25268.

Rooms that are occupied temporarily (such as hallways, corridors, bathrooms and changing rooms) are exempt from the requirement. For safety reasons, each preschool section is viewed as one room in relation to the evaluation of the airborne sound insulation parameter.

Office buildings

Denmark: Reverberation time, airborne sound insulation, indoor noise from traffic, and noise from technical installations must fulfil the guideline levels given in

"Bygningsreglementets vejledning om lydforhold, vejledning for kontorbyggeri", BR18.

Finland: Building type specific guideline values given in the Ministry of the Environment's guide to the sound environment of a building, 2018 (based on Decree 796/2017) for weighed standardised level difference $D_{nT,w}$ and for weighted standardised impact sound pressure level $L'_{nT,w} + C_{I,50\text{-}2500}$ must be fulfilled. Noise class for reverberation time shall be class A1 according to SFS 5907:2022 or a corresponding later standard.

Iceland: Sound class B for one optional sound environment parameter. Other sound environment parameters must comply with class C (According to IST 45).

Norway: According to national legislation.

Sweden: Working spaces such as cellular offices, open floor plan offices, telephone booths and conference rooms must fulfil all additional requirements according to the valid national sound class standard SS 25268.

Rooms occupied temporarily (such as hallways, corridors, bathrooms and changing rooms) are exempt from the requirement.

✉ An acoustic plan that shows calculated sound levels and designed sound classes in the building project.

✉ A description of the acoustic technician's competence, such as a CV.

P21 Quality assurance of acoustics

For all building types, control measurements of any acoustic parameter in accordance with obligatory requirement O34 (or national legislative level for other building types than in O34) 1 point. Maximum 1 point can be achieved.

If deviations from the projected/calculated values are found, the relevant issues in the construction must be dealt with. Documentation must be sent to Nordic Ecolabelling.

The choice of relevant acoustic parameter(s) and the extent of the conducted measurements must be defined by the acoustic technician to ensure their relevance.

Measurement methods must be in accordance with national legislation, national standards, or national industry guidelines (e.g. Denmark: SBI-anvisning 217 Udførelse af bygningsakustiske målinger, Norway: NS-EN ISO 16283-1:2014).

✉ Results of the control measurements of relevant noise parameters, including description of measurement methods and reasoning for the controlled rooms/areas.

✉ Documentation of corrections to deviations from the projected values, if relevant.

O35 Daylight provision

Residential buildings, residential care facilities, educational buildings and office buildings

Daylight provision in the Nordic Ecolabelled building must be evaluated through computer simulations, using one of the two methods described in CEN 17037, Target daylight factor or Target illuminance.

At least 50% of the utilised area in a room must meet the target illuminance level or target daylight factor. For definitions and details about the methods and input values, see the appendix *Daylight provision*.

Building types not mentioned in the headings below are not subject to any requirements on daylight provision.

Hotels

All hotel rooms must have windows to the outside.

Hotels are not subject to the requirement on computer simulation of the daylight provision.

Health centres and clinics, buildings for cultural activities, conference centres, warehouse buildings and commercial areas:

No requirements besides national legislation.

Residential buildings and residential care facilities

The applicant shall demonstrate that the common living areas' daylight provision fulfils the requirement shown in Table 32. Common living areas are defined as spaces intended for gathering, dining, watching television, etc.

All residential units must fulfil the requirement, which is shown through simulations. If the residential building has communal areas functioning as common areas, these communal areas must fulfil the requirement.

Finland: All bedrooms must as a minimum have one window.

For apartment buildings or identical single-family houses, townhouses, or multi-family houses, simulations of a selection of the residential units (≥5 units) that risk not reaching the target levels are accepted. The selection should be justified.

Table 32 Minimum levels for each country's target illuminance level and daylight factor in residential buildings and residential care facilities.

Nation	Target illuminance level	Target daylight factor (DT)
Denmark	200 lux	1.4%
Sweden	120 lux	1.0%
Norway	120 lux	1.0%
Finland	120 lux	1.0%
Iceland	150 lux	1.3%

It is accepted that one apartment or ≤5% of the apartments in a building project only reaches 80% of the mandatory level if it can be documented by a daylight expert (minimum 3 years' experience with daylight simulations) that no further reasonable improvements can be done in the floor plan, exterior architectural elements, window sizes and glazing, interior and exterior colouring, and material changes.

Finland and Sweden: In building projects with challenges regarding daylight (such as dense urban areas) it is accepted that not all apartments reach the mandatory level if it can be documented by a daylight expert (minimum 3 years' experience with daylight simulations) that no further reasonable improvements can be done in the floor plan, exterior architectural elements, window sizes and glazing, interior and exterior colouring or material changes.

Screening for risk of overheating in residential buildings

In connection with the daylight simulations, rooms with risk of summertime overheating must be identified. Rooms with windows facing 45°-315° with either DT >4% or AF* >25% must be evaluated for risk of overheating. Note that residential care facilities are covered by O36, and therefore exempted from this screening.

If solar shading, solar film or other measures for lowering indoor temperature are prescribed, the prescribed measures must be implemented before the building is taken into use. See the appendix Daylight provision for limit values and evaluation methodologies accepted.

** Area factor* $AF = A_{glazing}/A_{floor}$

Educational buildings

The applicant shall demonstrate, through computer simulation, that the daylight provision achieved fulfils the requirement shown in Table 33. The areas affected by the requirement are areas intended to be occupied by students continuously, which include common rooms, playrooms, classrooms, rooms for continuous group working and studying, and in higher education also reading rooms.

Areas used only temporarily, for transient activity, or areas with specific lighting requirements are excluded, as shown in Table 34.

In pre-schools situated on the ground floor in apartment buildings where the daylight is restricted by the surroundings, common rooms/playrooms shall fulfil either the Daylight Factor and/or the Daylight Provision requirement in the relevant country's building code.

Office buildings

The applicant shall demonstrate, through computer simulation, that the daylight provision achieved for the workplace areas fulfils the requirement shown in Table 33. Areas used only temporarily, for transient activity, or areas with specific light requirements are excluded, as shown in Table 34.

Table 33 Minimum levels for illuminance and daylight factor for each country in educational buildings and offices

Nation	Target illuminance level	Target daylight factor (DT)
Denmark	300 lux	2.1%
Sweden	300 lux	2.5%
Norway	300 lux	2.4%
Finland	300 lux	2.2%
Iceland	300 lux	2.6%

Table 34 Areas used temporarily, for transient activity or with specific light requirements

Areas excluded from the simulations
Sports facilities and gymnasiums
Auditoriums
Music rooms
Rooms for temporary group working or meetings
Areas with special security needs, such as rooms for technical work or laboratories
Rooms for health care, dental care, etc.
Offices and staff rooms for temporary use (e.g. for teachers, medical staff, museum attendants, warehouse staff)
Conference rooms
Canteens
Libraries
Professional kitchens
Rooms for vocational education and training such as workshops, kitchens, etc.
Bathrooms

Changing rooms
Lobbies, stairways and corridors
Other rooms with special needs that may be exempted from this requirement need to be approved by Nordic Ecolabelling

- ✉ Description of the selection of the simulated units (worst-case units for each project) in residential buildings. Description of the selection of common areas in educational buildings or the workplace areas in office buildings.
- ✉ Floor plans of the evaluated rooms. Areas subject to the requirement should be marked.
- ✉ Floor plans showing that all hotel rooms have windows to the outside. Finland: Floor plans showing that all bedrooms in residential buildings have as a minimum one window.
- ✉ Situation plan for the building, showing obstructing elements that affect daylight provision. Vegetation should not be accounted as daylight obstruction within this requirement.
- ✉ Picture from the daylight model, showing shading objects corresponding to the situation plan.
- ✉ List of reflectance values used in the simulation. Documentation from the manufacturers of the surface materials showing reflectance values.
- ✉ Drawings or specifications confirming the LT of window glazing.
- ✉ Results of the computer simulation for either Method 1 or Method 2.
- ✉ Results of screening for DF>4% and AF>25%, and proof of compliance with temperature recommendations if relevant.
- ✉ If one or more apartments don't reach the limit values: Statement from the daylight expert and documentation of their competence, e.g. a CV.

O36 Thermal comfort and overheating

This requirement applies to educational buildings, office buildings, health centres and clinics and residential care facilities or similar buildings classified as residential buildings according to national legislation.

Rooms that risk overheating must be identified and evaluated for compliance according to Tables 35 and 36. This must be verified through dynamic simulations with a minimum one- hour resolution of the average operative temperature on a room basis during the months from April to October. Parameters for the simulation are given in the appendix *Parameters for thermal comfort simulations*.

Prescribed solar protection such as awnings, blinds, venetian blinds or solar film must be installed by the time of moving in.

Rooms not intended for habitation/occupancy, such as bathrooms, hallways, corridors, stairwells, and storage and maintenance rooms are exempt from the requirement.

Operative temperatures* can exceed the following values only for a limited number of hours per year, as given in Tables 35 and 36:

Table 35 Long-term operative temperatures

Long-term operative temperatures		Denmark	Finland	Iceland	Norway	Sweden
Office buildings, health centres and clinics	Temperature, °C	26	25	26	26	26
	Max time, h	100	150	100	50	100
Educational buildings	Temperature, °C	26	25	26	26	26
	Max time, h	100	150	100	50	100
Residential care facilities or similar	Temperature, °C	26	26	26	26	26
	Max time, h	100	150	100	50	100

Table 36 Short-term operative temperatures

Short-term operative temperatures*		All countries
Office buildings, health centres and clinics	Temperature, °C	28 (DK: 27)
	Max time, h, within the hours given in Table 35	25
Educational buildings	Temperature, °C	27
	Max time, h, within the hours given in Table 35	25
Residential care facilities or similar	Temperature, °C	27
	Max time, h, within the hours given in Table 35	25

** Instead of temperature simulations, PPD simulations can be used with the following thresholds: PPD<10% corresponds to 26°C, PPD<15% corresponds to 27°C and PPD<20% corresponds to 28°C. Simulations must be done in accordance with EN ISO 7730, and parameters in the appendix Parameters for thermal comfort simulation should be used.*

✉ Description/motivation of how the rooms that risk overheating was chosen.

✉ Calculations of the average operative indoor temperature for the chosen rooms, based on dynamic simulations.

✉ Drawings of the buildings indicating the chosen rooms.

P22 Solar shading and energy efficient cooling technologies

1 point is granted for each of the following technologies used to control the indoor temperature. Buildings with or without a mechanical cooling system can get points. The chosen measures must be presented in context with O36 if a simulation is done. Maximum 2 points are available.

- External solar shading, provided by architectural elements such as awnings, louvres etc., or solar shading provided by vegetation. At least all windows in occupied spaces facing 90°-270° must be accounted for.
- Cooling provided by free cooling from geothermal ground source.
- Automated night ventilation.
- Other cooling technologies that do not require the installation of a mechanical cooling system might be rewarded points after discussion with Nordic Ecolabelling.

✉ Description of the chosen technical solutions.

✉ Reference to thermal comfort simulation in O36.

O37 Radon (applies only in Finland)

Buildings in Finland must be constructed using radon-safe construction methods. This requirement is not applicable in other Nordic countries.

✉ Description of the radon-safe construction methods used.

9 Innovation and other green initiatives

P23 Innovation and other green initiatives

Points are given for innovative measures taken in the construction process or in direct relation to the Nordic Ecolabelled project. A maximum of 3 points can be achieved. The list below shows the measures that are awarded points.

a) A minimum of 90% of the main brick walls are built using lime mortar or other types of mortar that allow bricks to be easily disassembled. Documentation for disassemblability must be provided for mortar types other than lime mortar. 2 points.

b) Point foundation or ground screw foundation of minimum 50% of the foundation area of the Nordic Swan Ecolabelled building. 1 point.

c) Point foundation or ground screw foundation of minimum 75% of the foundation area of the Nordic Swan Ecolabelled building. 2 points.

d) Minimum 25% of the certified wood (according to O30) comes from forest managed according to the principles of close-to-nature forestry/ continuous-cover forestry*. 1 point.

e) Minimum 50% of the certified wood (according to O30) comes from forest managed according to the principles of close-to-nature forestry/continuous-cover forestry*. 2 points.

f) Communal laundry rooms that have installed cleaning technology that removes at least 50 weight% of microplastic** emitted into wastewater. 1 point.

g) Warehouse buildings: Establishing charge possibilities for heavy electric goods vehicles (weighing more than 3.5 tons). 2 points.

h) Other measures may be accepted after consideration by Nordic Ecolabelling.

** Forests that are managed according to the principles of close-to-nature forestry with forests of different ages. There are several models, but the common feature is that forestry is run without clear-cutting, with trees of different ages and local species. The forest must have an operating plan showing how it is managed and renewed, and that clear-cutting is not done. Invoices or other documentation which shows the wood used in the buidling can be traced directly to the forest.*

*** Microplastics: particles less than 5 mm of insoluble macromolecular plastic obtained by any of the following processes:*

a) Polymerization such as polyaddition or polycondensation or similar process using monomers or other starting materials.
b) Chemical change of natural or synthetic macromolecules.
c) Microbial fermentation

✉ a) Documentation of the mortar used, and the relative amount used in the project.

✉ b) & c) Documentation of the principle used for the point foundation or ground screw foundation.

✉ d) & e) Valid operating plan showing that the forest property is managed according to the principles of close-to-nature forestry.

✉ d) and e) Verification that the wood is covered by valid chain of Custody certificate issued by FSC or PEFC

✉ d) and e) Invoice or other documentation which shows that the specific wood used in the Nordic Swan Ecolabelled building can be traced back directly to the forest.

✉ f) Confirmation / datasheet from the supplier of the cleaning technology on installation and cleaning effectiveness regarding microplastics from laundering textiles.

✉ g) Description and/or drawings of system for charging of heavy electric vehicles.

10 Quality management of the construction process

O38 Air permeability

The applicant must have routines to test air permeability/airtightness based on the standard EN ISO 9972, or an alternative method referred to in national building legislation, to ensure the performance set at the design stage.

The routines must include defect analysis and corrective measures in cases where the projected air permeability is not achieved. The tests and follow-ups based on the routines must be documented in the contractor's self-monitoring system (O42).

Warehouse buildings must be tested, regardless to what extent they are heated.

In countries where the building legislation does not require measurement of all buildings/units, sampling testing can be used in apartment buildings and town houses. At least 10% of the total number of residential units must be measured, and the units tested must be representative of the building. Both measurements of individual apartments and entire staircases are approved methods. When air permeability is measured on a random sample basis, there must be a routine to ensure that other apartments have equivalent air permeability. In projects that comprise more than one building, apartments from each building need to be measured.

For all other building types, the air permeability must be tested on the entire building.

✉ Routine(s) to measure air permeability, comprising measurement method, corrective measures, and error analysis when the measured value deviates from the designed value.

✉ Results of the air permeability tests and comparison with the air permeability value used in the energy calculation (O3) must be declared to Nordic Ecolabelling upon request.

O39 Moisture prevention

Moisture prevention in the building must be documented in line with sections A to C.

Proof of adherence to relevant national industry standards can be used as part of the documentation.

A. Plan for moisture prevention

A plan for moisture prevention must be submitted to Nordic Ecolabelling before construction work begins. The project-specific plan for moisture prevention must include the following:

- List of relevant moisture-sensitive materials and constructions.
- Weather protection of materials/elements during transport and storage.
- Plan for closure of the building and weather protection of relevant constructions.
- Description of procedures and methods for drying out the building.
- Description of how it is ensured that subcontractors adhere to the applicant's moisture prevention plan.
- Description of the requirements set for manufacturers of prefabricated elements/modules in relation to moisture prevention during manufacturing, transport and installation.
- Description of design and quality measures in water and sewage installations, reducing the risk of damage by drip leakage during the building's use phase.

B. Plan for moisture measurements

A plan for moisture measurements must be made according to the following:

- Moisture measurements must be performed for all relevant materials and constructions in the building, according to national legislation or official guidelines. The relevant structures and materials must be listed in the plan.
- In concrete-based materials covered by moisture-sensitive materials (e.g., parquet) the relative humidity must be verified by borehole/specimen measurements.
- Measured values must be below requirements from the manufacturer of surface materials (e.g., linoleum, parquet, etc.) or official national industry guidelines. Relevant target values must be stated.
- Measurement results must be documented and be available to Nordic Ecolabelling upon request.

C. Coordinator for moisture management

A moisture coordinator must monitor adherence to the moisture prevention plan. The coordinator must be educated in moisture prevention in buildings and have at least two years' experience in construction site moisture management/control or moisture damage investigations.

✉ A. Plan for moisture prevention.

✉ B. Plan for moisture measurements.

✉ B. Monitoring reports and measurement results must be available to Nordic Ecolabelling upon request.

✉ C. Competence description of the moisture coordinator such as CV.

O40 Compliance with material and chemical requirements

The licensee must ensure fulfilment of all material and chemical requirements. A routine must be established for the whole construction process, including:

- Division of responsibilities for the material requirements (O7-O9 and O13–O27) in the design phase, construction phase(s) and procurement.
- Instructions for subcontractors, e.g., via agreements and control plans.
- Procedure for construction site inspections that covers:
    - Frequency of internal inspections/rounds during the construction period
    - Extent of the internal inspections (minimum: material storage, active construction site and area for construction waste).
    - Documentation for internal inspections: inspected materials and their compliance with material requirements in the criteria must be documented, e.g., in the self-inspection system or inspection reports.

✉ Routines that as a minimum document the bullets above.

✉ Inspection reports must be documented and be available to Nordic Ecolabelling upon request

O41 Information for those involved in the construction process

Employees involved in the construction process, including supervisors, site managers, project leaders, procurement manager, subcontractors etc., must have the relevant knowledge to be able to ensure fulfilment of the requirements in conjunction with the project design and construction of a Nordic Swan Ecolabelled building.
The routines for the training and information programme must include at least the following:

- Content and scope of the training/information, depending on the participant's role.
- Frequency of the training/information.
- Division of responsibilities.

The applicant must ensure that training and information are available in relevant languages.

✉ Routine in the quality management system and training programme.

✉ List of participants that have completed the training programme must be available.

O42 The contractor's self-monitoring system

To ensure compliance with the building legislation the contractor must have a documented robust quality self-monitoring system during the entire construction period. As a minimum, the self-monitoring system must include:

- Overview of the chain of responsibility for the control measures
- System for management of documents, including archiving and revised versions of drawings

- System for checks on deliveries at the time of receipt
- System for process control, defining control levels and frequency of control for subcontractors, consultants and the construction site management
- The licence holders' procedures for control of the quality of the prefabricated elements and compliance with the requirements of the Nordic Swan Ecolabel
- Procedure for the final inspection (municipality and internal inspection) and handover of the building

Nordic Ecolabelling must have access to the quality self-monitoring system throughout the entire construction process. This can be handled in the contractor's digital quality assurance system or manually at audits.

✉ Routines describing the self-monitoring system according to the requirement.

O43 Planned changes and non-conformities

Planned changes and unforeseen non-conformities affecting Nordic Ecolabelling's requirements must be reported to Nordic Ecolabelling immediately. This must be done in accordance with the licensee's commitment.

✉ Routine(s) describing how planned changes and unforeseen non-conformities will be handled.

✉ In the event of changes or unforeseen nonconformities: Written report on the change or non-conformity.

Regulations for the Nordic Ecolabelling of services

To easily identify Nordic Swan Ecolabel services, the licence number and a descriptive sub text shall always accompany the Nordic Swan Ecolabel.

The descriptive sub text for 089 New buildings is: Residential, educational and office buildings.

More information on graphical guidelines, regulations and fees can be found at Rules for Nordic Ecolabelling - svanen.se

Follow-up inspections

Nordic Ecolabelling may decide to check whether the building fulfils Nordic Ecolabelling requirements during the licence period. This may involve a site visit, random sampling, or similar test.

The licence may be revoked if it is evident that the building does not meet the requirements.

Criteria version history

Nordic Ecolabelling adopted version 4.0 of the criteria for 089 Nordic Swan Ecolabelled New buildings on 15 February 2023.

The criteria are valid until 15 May 2026.

On the 28th of February 2023 the Nordic Criteria Management Group decided to allow exemptions for the use of injection resins for repairing concrete cracks in Finland. The affected requirements are O14, O15 and O18.

On the 28th of March 2023 the Nordic Criteria Management Group decided to adjust the limit values for Finland and Norway in O35. An exemption for load bearing structures was added to O22.

On the 25th of April 2023 the Nordic Criteria Management group decided to update the exemption in O19 for ground calcium carbonate and precipitated calcium carbonate. The exemption now includes both unmodified and modified calcium carbonate.

On the 23rd of May 2023 the Nordic Criteria Management group decided to add a time limited exemption to O22 for biocide treated wood with no heavy metals.

On the 20th of June 2023 the Nordic Criteria Management group decided to narrow the scope of construction waste statistics from production of prefabricated building components in O10 and O12. An alternative mode for fulfilment of O7 was introduced. A method for simulation of daylight in type houses was added to Appendix 12 (O35).

On the 27th of June 2023 the Nordic Criteria Management group decided to adjust the requirement level in O4 for luminaires shielded from the sky.

On the 27th of June 2023 an editorial change was made to update the interpretation of the EU-taxonomy's requirement on primary energy demand regarding Norway.

The new version of the criteria is 4.1.

On the 27th of June 2023 the Nordic Criteria Management group decided to introduce an exemption in O35 regarding rooms for temporary group working in educational buildings.

The 12th of September 2023 the Nordic Criteria Management group accepted a new point option for preschools in P11. The exemption in O14 and O15 for use of PU foam in Finland was extended to include balcony doors and flame-retardant PU foam. Appendix 6 has been updated accordingly.

On the 14th of September 2023, a time limited exemption in O5 was accepted by the Process Owner Forum.

Editorial changes and clarifications have been made in the table interpreting EU Taxonomy alignment in Chapter 2 (7.1.3.1 and 7.1.5.1), P1, P2, P15, O21, O22, O24 and P20.

The new version of the criteria is 4.2.

The 26th of September 2023 the Nordic Criteria Management group decided that all building types can collect points from P2.

The 17th of October 2023 the Nordic Criteria Management group decided that Nordic Swan Ecolabelled products can be excluded from the calculation in O30.

The 7th of November 2023 the Nordic Criteria management group clarified that the use of preservative treated wood is not allowed in cultivation boxes.

The 15th of November the Nordic Certification and Administration Group decided to implement a requirement on planned changes and unforeseen non-conformities. The new requirement is O43.

The 5th of December 2023 the Nordic Criteria Management group decided to introduce an exemption in O18 for the use of xylene containing primers and adhesives. A time-limited exemption in O15 for sebacate compounds in SMP-based sealants was introduced.

The 16th of January 2024 the Nordc Criteria Management group decided to extend the scope of the product group definition to include additional building types. As a consequence, requirements O1-O4, P11, O11, O21 O35 and O36 have been updated with requirements and alternatives for these building types and the definition Homes for the elderly has been removed.

The 30th of January 2024 the Nordic Criteria Management group decided on changes to the product groups in P19.

Editorial changes were made in the section “Exempted areas, materials and products”, O9, O21, O27, O34, P2, P7, P10, P14, P16, P17, the definition of heavy current cables, Appendix 9 and Appendix 12.

The new version of the criteria is 4.3.

The 23rd of April 2024 the Nordic Criteria Management group decided to exempt outdoor glazing beads from O21.

The 30th of April 2024 the Nordic Criteria Management group decided on an exemption for BHT in O18.

The 11th of June 2024 the Nordic Criteria Management group decided on adjustments of the acoustic requirement levels in O34 for Iceland and Norway.

The 25th of June 2024 the Nordic Criteria Management group decided to limit the scope of waste reporting from module factories in O10. Examples have been added to the background text. New exemptions for melamine in intumescent steel paints were added to O14, O15 and O18. An exemption for use of PU foam in Finland was implemented in O18.

O6 threshold limits for Denmark were updated.

Clarifications and editorial changes have been made in: What is subject to the requirements, Alignment with the EU taxonomy framework, O4, P3, P6, O9, P11, O15, O20, O22, O27, O30, O35, O36, O38, appendix 6, appendix 11.

The new version of the criteria is 4.4.

The 10th of September 2024 the Nordic Criteria Management group decided to introduce an exemption in O29 for eucalyptus and acacia in wood- and paper based construction boards.

The 8th of October 2024 the Nordic Criteria Management group decided to make further exemptions from the requirement level possible for residential buildings and residential care facilities in Finland and Sweden in O35. They also decided to lower the limit from 90% to 80% renewable material in P16.

The 10th of December 2024 the Nordic Criteria Management group decided to introduce new exemptions for respirable crystalline silica/quartz in O15 and DBNPA and BHT in O18.

Clarifications and editorial changes have been made in: O3, O5, O10, O14, O15, O18, O20, O21, O22, O26, O32, O35, P12, P13 and the appendix Daylight.

Some of the appendices have been moved to a separate document and got new naming. References throughout the criteria and background documents have been changed to match.

The new version of the criteria is 4.5.

The 22nd of April 2025 Nordic Ecolabelling decided to introduce two exemptions in O25 for the use of biocides in preservative treated wood. A definition of which types of preservative treated wood are subject to requirements in O22 and O25 was added in the definitions chapter.

The 3rd of June 2025 Nordic Ecolabelling introduced a new point option for battery storage in P5.

The 3rd of June 2025 Nordic Ecolabelling group extended the scope of the product group definition to include warehouse buildings. Several requirements have been adapted with specific options or requirements for warehouses. Requirements on other building types have not been affected. It is now possible to apply for Nordic Swan Ecolabelling of warehouse buildings.

The 24th of June 2025 Nordic Ecolabelling extended the scope of the product group definition to include buildings for cultural activities. Several requirements have been adapted with specific options or requirements for buildings for cultural activities. Requirements on other building types have not been affected. It is now possible to apply for Nordic Swan Ecolabelling of buildings for cultural activities.

Clarifications and editorial changes have been made in:
O3: An explanatory text "Regarding TEK17…" was added to the requirement for Norway.
O30: Removed the signature requirement on the aggregated list from the supplier (envelope text).
O35: In Table 34, "Offices for teachers and staff room" has been generalised to include more types of offices for temporary work or rooms to take breaks.
P15: Clarified that reused gypsum boards can give points in the category inner walls.
P19: Ecolabelled screed will give points.
P20: "Bird friendly glass facades" is changed to "bird friendly glass railing".
Table reference numbers have been updated following the introduction of a new Table 15.

The new version of the criteria is 4.6.

Next criteria revision

- Alignment with the EU Taxonomy.
- Review of the metal requirements.
- Evaluate the possibility to strengthen the design for disassembly requirements.
- Evaluate the potential for further implementation of reused materials and products.
- Inclusion of other building types such as hotels, shops etc.
- Effects of threshold limits for the climate calculations.
- Review of the threshold limit for construction waste management, and review of the alignment with the waste hierarchy.

11 Definitions

Definition	Description
Chemical products	A chemical product is a substance or a mixture of two or more substances, in liquid, gaseous or solid form, which are used on a construction site or by a manufacturer of prefabricated building components. Chemical products both for indoor and outdoor use are covered by the requirements. Nordic Ecolabelling does not set chemical requirements for cement or concrete, nor for metal alloys such as steel or brass.
Construction products	Products used in the construction of buildings, for example wall elements, flooring, power cables, doors, thermal insulation etc. In EU regulation No 305/2011, a construction product is defined as “any product or kit which is produced and placed on the market for incorporation in a permanent manner in construction works or parts thereof and the performance of which has an effect on the performance of the construction works with respect to the basic requirements for construction works”.
EPD	A product specific EPD according to the standard ISO 14025 and EN 15804 is a third-party verified document based on product category rules (PCR) and life cycle assessment (LCA). A daughter EPD is based on a third-party verified EPD but can be adapted to small variations in the composition of the product.
EU Taxonomy	In these criteria, references to the "EU Taxonomy" means the Delegated Act on the objective climate change mitigation (Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021). Specifically, reference is made to the activity 7.1 "Construction of new buildings".
Facade	The principal front of a building, that faces on to a street or open space.
Heavy current cables	Heavy current cables/Electricity cables for nominal voltage equivalent to or more than 50 V AC voltage or 120 V DC voltage. The definition does not include data, telephone, and TV cables. Cables that arrive at the construction site together with electric appliances, such as lifts, white goods, pumps, and fans are not subject to material requirements.
Impurities in chemical products	Residuals, pollutants, contaminants etc. from production, incl. production of raw materials that remain in the raw material/ingredient and/or in the chemical product in concentrations of less than 1000 ppm (0.100 w-%, 1000 mg/kg) in the chemical product. Examples of impurities are residues of the following: Residues or reagents incl. residues of monomers, catalysts, by-products, scavengers, and detergents for production equipment and carry-over from other or previous production lines.
Ingoing substances	Chemical products: All substances in the chemical product regardless of amount, including additives (e.g., preservatives and stabilizers) in the raw materials. Substances known to be released from ingoing substances (e.g., formaldehyde, arylamine, in situ-generated preservatives) are also regarded as ingoing substances. Construction products: All substances in the construction product that are present in concentrations higher than 100 ppm (0.010 w-%, 100 mg/kg).
Nanomaterial	Nanomaterials/-particles are defined according to the EU Commission Recommendation on the Definition of Nanomaterial (2022/C 229/01): 'Nanomaterial' means a natural, incidental or manufactured material consisting of solid particles that are present, either on their own or as identifiable constituent particles in aggregates or agglomerates, and where 50% or more of these particles in the number-based size distribution fulfil at least one of the following conditions: (a) one or more external dimensions of the particle are in the size range 1 nm to 100 nm; (b) the particle has an elongated shape, such as a rod, fibre or tube, where two external dimensions are smaller than 1 nm and the other dimension is larger than 100 nm; (c) the particle has a plate-like shape, where one external dimension is smaller than 1 nm and the other dimensions are larger than 100 nm.
NEP	Nordic Ecolabelling Portal is the web portal where the application for a Nordic Swan labelled building is submitted. Documentation for the requirements is uploaded or submitted in the portal by the applicant and reviewed by advisors at Nordic Ecolabelling.

Post-consumer/commercial recycled material	"Post-consumer" is defined as material generated by households or commercial, industrial or institutional facilities in their role as end-users of a product that can no longer be used for its intended purpose. This includes materials from the distribution chain.
Pre-consumer/commercial recycled material	Material that is reclaimed from the waste stream during a manufacturing process. Production waste (scrap, rework, regrind) that can be returned directly to the same process in which it was generated is not counted as recycled pre-consumer material. Nordic Ecolabelling defines rework, regrind or scrap, that cannot be reused directly in the same process, but requires reprocessing (e.g., sorting, reclamation, and granulation) before it can be reused, to be pre-consumer material. This is regardless of whether it is produced in-house or externally.
Preservative treated wood	Wood that has been pressure impregnated, or vacuum impregnated with a wood preservative liquid. Wood that is surface treated (e.g. flow coated, spray coated, or dip coated) with wood preservative is not considered as preservative treated in these criteria. Note that this definition of preservative treated wood differs from how the term is used in various industries.
Recycled material	Recycled material is defined according to ISO14021 in the categories of pre-consumer and post-consumer and includes both mechanical and chemical recycling.
Reused material	Reuse of a material means using it again for the same purpose for which it was originally made. The original product is usually not altered in any significant way before being used again. These criteria also include use of a certain material again, but in a manner different to what it was originally intended for. The original product is left mostly intact, utilising its shape, form and material for a different purpose.
SCDP	Supply Chain Declaration Portal is the web portal where manufacturers of building products, building materials and chemical building products declare their items to show compliance with the material requirements in chapters 4, 6 and 7. Most of the material requirements are documented through SCDP. Visit https://www.supply-chain-declarations.org/new-buildings-089/ for information about declarations and which products should be declared.
Supplementary buildings	Supplementary buildings are refuse depots, bicycle sheds, garages (both as a separate structure or connected to the building) and similar constructions.
Take back systems	An initiative organized by the manufacturer or retailer, to collect used products or materials from the construction sites and module manufacturers and reintroduce them to the original processing and manufacturing cycle. A company may implement this program in collaboration with end-of-life logistics and material processing firms.
Technical service areas	Technical service areas are fan rooms, substations, lift shafts, machine rooms, electrical rooms, and other areas to which unauthorised persons do not have access. The following are not service areas: all living areas and communal areas such as dressing rooms, shower rooms, stairways, entrance areas, storerooms, corridors in basements/galleries, pram rooms and bicycle rooms. Installation shafts.

Appendix Template for overall description of the building

Applicant	
Builder	
Project name	
Date	

Number of buildings	**Number of storeys**	**Building type(s)**	**Number of apartments / Intended number of occupants**	**Area of the building (m2)**

Buildings at the construction site that are not included in the application.	[Describe here]
Carcass/loadbearing structure	[Describe here]
Facades	[Describe here facade material(s)]
Roof	[Describe here roof materials]
Foundations	[Describe here foundations]
Heating system	[Describe here heating system]
Office buildings: Individual measurement of electricity for each rentable unit or each floor as a minimum	[Describe here]
Ventilation system (centralised or de-centralised ventilation)	[Describe here ventilation system]
Garage (attached or detached)	[Describe here garage, if included in the building]
Storerooms, bicycle storage rooms (attached or detached)	[Describe here storehouse(s)]
Waste sorting station, other supplementary buildings	[Describe here]
Outdoor areas	[Describe here the outdoor areas on the site when the building is finished]
Options for various layouts, materials or fittings	[Describe whether options are available, and the types of options]

Appendix Template for calculation of points

The table below can be used to verify the requirement O2: “Points achieved”.

Areas and requirements	Project’s points	Maximum points
Energy and climate		
P1 White goods of better energy class		2
P2 Water saving sanitary tapware		1
P3 Energy efficient or water saving sanitary tapware		2
P4 Management of electricity demand and power peaks		2
P5 Local renewable energy generation and energy recovery		3
P6 Quality assurance of the climate calculation		2
P7 Assessment of risks in a changing climate		1
P8 Adaptation to a changing climate		1
P9 Construction site fuel restrictions		2
P10 Construction site machinery		2
P11 Bicycle transport		2
Points for climate and energy		20
Resource efficiency and circular economy		
P12 Construction waste optimisation		3
P13 Construction waste reduction		3
P14 Producer take-back systems		2
P15 Reused construction materials		4
P16 Insulating materials from renewable sources		2
P17 Renewable carcass, facade or inner walls		2
P18 Design for disassembly and adaptability		2
Points for resource efficiency and circular economy		18

Ecolabelled products		
P19 Ecolabelled products Minimum point score defined in O28: DK/SE/NO: 8 points FI: 6 points IS:5 points		14
Points for ecolabelled products		14
Biodiversity		
P20 Biodiversity measures and ecosystem services		6
Points for biodiversity		6
Indoor environment		
P121 Quality assurance of acoustics		1
P22 Solar shading and energy efficient cooling technologies		2
Points for indoor environment		3
Innovation and green initiatives		
P23 Innovation and green initiatives (4p)		3
Points for innovation and green initiatives		3
Total points		**64**

Appendix Energy calculation

Information about the energy calculation for verification of requirement O3.

Denmark: BE18 or equivalent.

Norway: NS 3031.

Finland: Ministry of the Environment's regulation for buildings' energy performance or equivalent. See detailed information in the Finnish translation of the criteria.

Iceland: Calculations shall be made in accordance with BRG # 112 and prepared using a dynamic energy calculation tool for energy calculations of buildings.

Sweden: The version of BBR stated in the building permit must be followed. Valid regulation BEN and national practice SVEBY must be adhered to. Nordic Ecolabelling does not set requirements for specific simulation software, but to achieve energy calculations of good quality the following applies:

- The calculation must be made using dynamic energy calculation software, i.e., software that takes account of variations in e.g., temperature over time. Examples of dynamic energy calculation software are IDA ICE, VIP+ and BV2. Other software that uses a dynamic simulation can be accepted after consultation with Nordic Ecolabelling.
- For small houses (småhus) with a wooden carcass, using the calculation tool TMF Energi is acceptable.
- The energy calculation tool must be adapted to the type of building.
- Standard values may not be used for thermal bridges. Thermal bridges at connection points such as outer wall-window; outer wall-eaves; outer wall, between joists and external walls-ground slabs must instead be calculated according to the Swedish standard SS EN ISO 10211:2017 Thermal bridges in building construction – Heat flows and surface temperatures – Detailed calculations.
- Data concerning U values and g values for the chosen windows and window frames must be used.
- Air gaps with facade trim are not included in the calculation of the outer wall's U value.
- Cold roof space resistance must follow Table 3 of SS-EN ISO 6946 Building components and building elements – Thermal resistance and thermal transmittance – Calculation method.
- User input data must be taken from the current edition of BEN, alternatively Sveby User Related Input Data for homes, or relevant parts of Sveby User Related Input Data for offices.
- No deductions may be made for domestic hot water consumption with individual measurement.
- If a room is optional, it must not be included to raise the number of occupants and the corresponding heat contribution.

- COP for heat pump and effectiveness of heat exchangers should be based on the annual value with relative humidity taken into account.
- When calculating the building's energy use for verification of the building's primary energy number according to BBR, appropriate margins must be applied so that requirement O3 is met even when the energy use is measured and normalised. 10% or the methodology used in the report SBUF 13106 can be used as a guideline, but the person performing the energy calculation may use other values when relevant. The choice of margins should be clearly stated and motivated in the report.

Appendix BAT-EAL for energy efficiency (steel)

See requirement O8

Measures for efficient energy consumption in steel production

Blast furnaces	BAT is to maintain a smooth, continuous operation of the blast furnace at a steady state to minimise releases and to reduce the likelihood of burden slips. BAT is to use the extracted blast furnace gas as a fuel. BAT is to recover the energy of top blast furnace gas pressure where sufficient top gas pressure and low alkali concentrations are present.
BOF	BAT is to collect, clean and buffer BOF gas for subsequent use as a fuel. BAT is to reduce energy consumption by using ladle-lid systems. BAT is to optimise the process and reduce energy consumption by using a direct tapping process after blowing BAT is to reduce energy consumption by using continuous near net shape strip casting, if the quality and the product mix of the produced steel grades justify it.

https://eippcb.jrc.ec.europa.eu/sites/default/files/2019-11/IS_Adopted_03_2012.pdf

Appendix Hazardous substances in reused construction products

- Content of the following substances must not exceed the given threshold limits below.
- The level of substances must, in addition, always comply with the national threshold limits given in the national legislation and guidelines.
- Substances not specified in the following list but regulated in national legislation must also be documented if relevant to the material.

Substance	Limit	Example of materials/products
Asbestos	0 mg/kg	Facade and roof panels, electrical conduits, insulation materials
CFC, chlorofluorocarbons	100 mg/kg	Insulation materials and foams
Substances classified as hazardous waste according to national legislation and guidelines.	According to national legislation and guidelines	
Cadmium, arsenic, copper, chromium, lead, mercury and their compounds	100 mg/kg	PVC/plastic, products with paint layer
phthalates DEHP, BBP, DBP and DIBP	1.000 mg/kg	PVC/plastic/rubber
Halogenated flame retardants	100 mg/kg	Rubber/plastic
Chlorinated paraffins Short-chained chlorinated paraffins (SCCPs, C10-C13) and medium-chained chlorinated paraffins (MCCPs, C14-C17)	100 mg/kg	Rubber/plastic/products with paint layer
Nonyl- and octylphenols	1.000 mg/kg	Flooring and products with paint layers
PCBs (polychlorinated biphenyls)	0.1 mg/kg internal and 1 mg/kg external*	Flooring, products with paint layers, concrete

** Measured inside the material or in a finish, depending on where the concentration was deemed to be the highest. The limit is the one used in the Danish regulation "Restproduktbekendtgørelsen" from December 2016.*

Appendix Ecology report

The scope of the biodiversity mapping must be adapted to the size and condition of the building site. The analysis must emphasise multi-functionality and describe which ecology is needed on the site to maintain the ecosystem.

National methods for mapping and evaluating biodiversity (e.g., Naturvärdes-inventering, Ester Boverket in Sweden) can be used but must be adapted to the type of biodiversity found on building plots. For example, all sites of importance for biodiversity must be registered (i.e., any method requirements for minimum area are disregarded), red-listed and invasive species must be mapped in the entire area, and elements with ecological value that may not be covered by the national mapping instructions must also be registered. For example, large old trees.

Information from public databases must be used as much as possible. The surveyor can otherwise use data collected during an inspection of the site at one or more appropriate times during the year, when different plant and animal species are present. The content of the report must be representative of the biodiversity as it is on the building site, before the initial work begins.

Recommendations for measures to preserve and/or improve the biodiversity on the site (reference can be made to O32) must be given based on the outputs of mapping and evaluation of biodiversity at the building plot/project area.

Examples of measures that can be evaluated in the report:

- Planting of trees
- Green roofs, walls and noise walls.
- Creation of rain beds, open waterways with natural banks and moisture biotopes for surface water management. Must be assessed in collaboration with the developer’s professionals for water and sewerage and landscape architects.
- Restore and link together existing habitats and land features which could support wildlife. Retain within the building plot/project area existing tracts of habitat to save ecological strips that already exist.
- Compensate for damage to natural habitats by recreating similar features and restoring, to support wildlife and relocating habitats and/or species whenever necessary.
- Create possibility for urban cultivation, e.g., in cultivation boxes. The placement in relation to the building must be considered.
- Compost for garden waste.
- Planting of national tree-/plant species that benefit the wildlife, insects, pollinators (bumblebees, honeybees, etc.) and planting of edible plants.
- Create habitats for native species of insects, birds, bats and flying squirrels and ponds for amphibians.

Appendix Daylight provision

Daylight provision* must be documented according to EN 17037 Daylight in buildings, Annex B. The following two methods can be used:

Method 1: A calculation method based on daylight factor and cumulative daylight availability data. At least 50% of the utilised area** in a room must meet the target daylight factor (DT)*** given in requirement O35.

Method 2: A calculation method based on the direct prediction of illuminance levels using hourly climate data of diffuse skylight and direct sunlight. At least 50% of the utilised area in a room must meet the target illuminance given in requirement O35.

Furniture should not be included in the simulation. Built-in wardrobes and tall kitchen cabinets may be taken into account so that the measuring plane is placed outside these. Reflectance values provided by the manufacturer of the surface material may be used. Default values must be used when the specific surface reflectance value of the material is unknown. Glazing on balconies can be excluded from the simulation in cases where it is possible to open and pull the glass panes aside.

Transient areas and spaces adjacent to the evaluated room must be included in the simulations but can be excluded from the room area subject to requirement fulfilment. For apartments with open floor plans and optional walls, the simulations should account for walls built in the default layout.

Table 37 Values of reflectance for different surfaces according to EN 17037.

Surface	Default values
Ceiling	0.7
Interior walls	0.5
Floor	0.2
Window frames****	0.5
Surroundings	0.2
Exterior ground	0.2

** Daylight provision is defined as the level of illuminance achieved across a fraction of a reference plane for a fraction of daylight hours within a space.*

*** Utilised area is the fraction of the space of a room intended to be occupied, please see the standard EN 17037:2018 for further reference.*

**** Target daylight factor (DT) is defined as the ratio of the light level inside a structure to the light level outside the structure, for a given illuminance level on the inside.*

***** Not represented in EN 17037.*

Standardised building designs

When modelling daylight provision for a standardised building design, the specific geometry of surrounding obstructions is unknown. A generic method for modelling surrounding obstructions for such situations is given in figure A below. When constructing a building that has been evaluated according to this method, the applicant must show that the actual building location and surrounding does not differ significantly from the conditions in figure A.

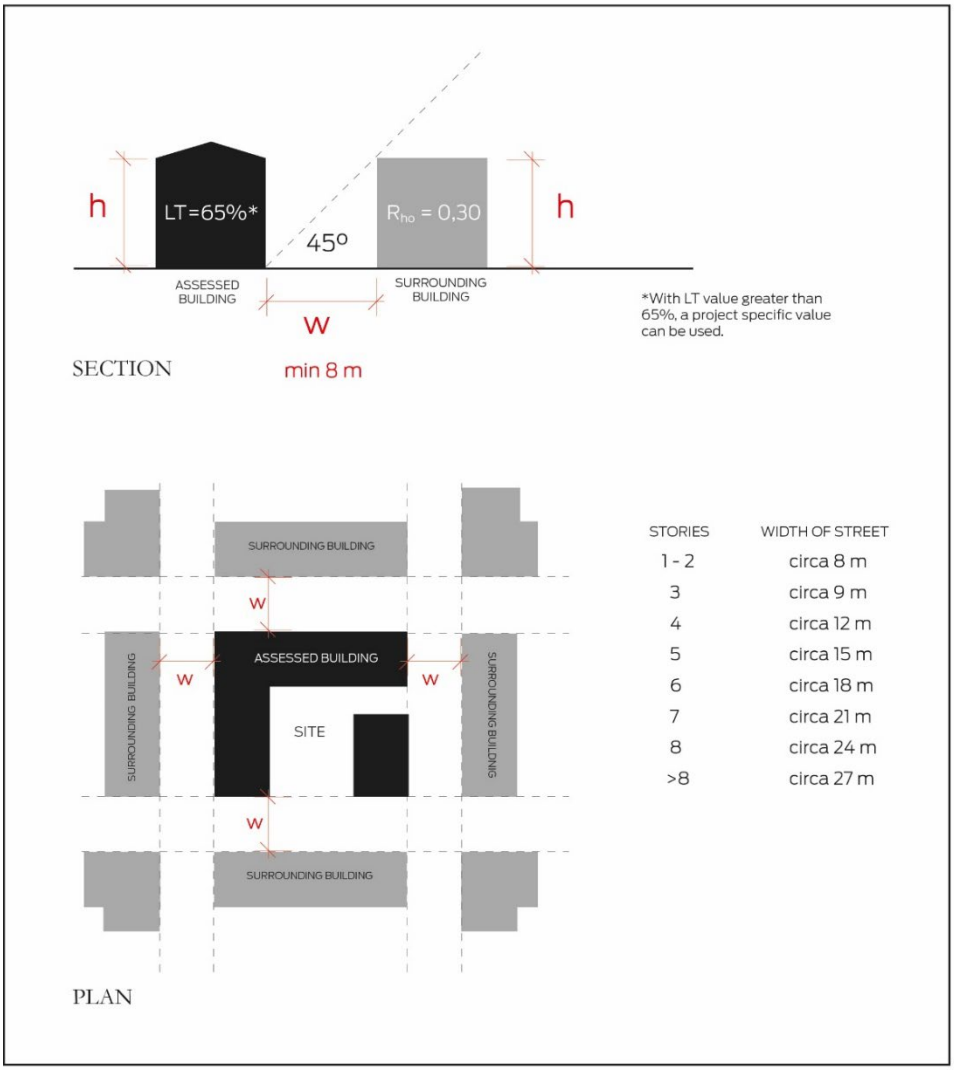

Figure A: Handling of surrounding buildings for classification of generic building designs.

Residential buildings: Rooms with risk of overheating

For all residential buildings (except residential buildings subject to O36) rooms with windows facing 45°-315° with either DF >4% or AF* >25% must be evaluated for risk of overheating.

This can be done through one of three methods:

- Dynamic simulations of the average operative temperature on a room basis, as described in O36, with temperature limits chosen according to national legislation or authority guidelines.

- Using Feby's methodology for solar gain SVL**, showing that SVL≤40 W/m^2.
- Using a calculation method or calculator provided by national authorities or legislation, if available. The result should comply with legislative or authority given temperature limits***.

* Area factor $AF = A_{glazing}/A_{floor}$

** $SVL = 800 * g * A_{glazing}/A_{floor}$(1) *for rooms with windows in one direction,*

and

$SVL = (560 * g_1 * A_{glazing,1} + 560 * g_2 * A_{glazing,2})/A_{floor}$ (2) *for rooms with windows in two directions.*

If equation (1) results in a greater value for the most exposed window direction, this value is used instead of the result from equation (2). The calculation must be carried out according to the methodology in Feby 18. Maximum solar radiation (800 W/m^2) can be replaced with a simulated value. Calculation of maximum solar radiation is performed with climate data for clear skies. The solar factor g is given by window manufacturers or calculated for the combination of glazing and solar shading equipment.

*** *For certain types of residential buildings where no maximum temperature is defined, maximum temperature for another residential building type may be used.*

Appendix Parameters for thermal comfort simulations

Parameters to be set for the dynamic simulation of thermal comfort according to requirement O36.

Parameters for the dynamic simulation

Climate files	SE: Climate files based on SMHI normal period 1991-2020, DK: DRY 2013, NO: according to NS 3031, FI: Ministry of the Environment's regulation for buildings' energy performance 1010/ 2017 appendix 1 or newer, IS: none for the time being.
Climate zone	Climate zone corresponding to the building location. For Finland this location is Helsinki.
Internal heat loads	100% of internal heat loads coming from equipment, lighting and occupants. The intended number of occupants according to the planned use of the room should be used. Number of occupants defined in legislation or authority guidelines can be used.
Air velocity	0.15 m/s
Clothing coefficient (clo)	0.5
Metabolic rate (met)	1.2
Window openings	≤15% or a value that corresponds to national legislation or national authority recommendations on child safety.
Solar shading and blinds	Drawn or scheduled
Other parameters	According to ISO 7730