Consultation responses for

Renovation of buildings

Residential, educational, office and hotel buildings

Version 2.0

Nordic Ecolabelling

1 Summary

During 2023 the criteria for Renovation have been revised.

The focus areas have been the product group definition (which renovations can be ecolabelled), surveying and planning prior to the renovation phase, alignment with the material requirements in the criteria for New Buildings 089, the building's energy use and alignment with the EU Taxonomy for green investments. The scope of the criteria was extended to include renovations of hotel buildings. The number of obligatory points is changed from 44 to 43.

The proposed criteria were sent for consultation and Nordic Ecolabelling received a total of 24 consultation comments: The chapter prior to the renovation phase was frequently commented. Many comments regarded the overall structure of the criteria – logical reading order and how they follow the renovation process. Comparisons were made with other ecolabels or industry standards, encouraging harmonisation with other standards. Three Swedish construction and renovation contractors have commented, but construction and renovation contractors from the other countries have not.

Specific requirements were commented in detail by authorities, specialists and industry associations mainly commenting their areas of special interest. Four consultation bodies opposed the criteria proposition, those were all Plastic/PVC industry associations opposing Nordic Ecolabelling's strict limitation on the use of PVC.

Most important changes due to the consultation.
The requirement numbers below refer to the updated criteria, while requirement numbers in parentheses refer to the consultation document:

- Chapter 4 (4) Prior to the renovation phase: the order of the requirements was restructured; two requirements were moved to this chapter from indoor environment. The difference between surveying and reporting was clarified in requirements, and it was clarified that materials remaining in the building must be part of the surveying and risk analyses. A threshold level for PFAS (100 ppm) was added in Appendix 1.
- O7 (-): New requirement on selective demolition based on text from requirements O5 (O3) and O10 (O13). A new part about flat glass recycling was added to the requirement.
- O10 (O13) Waste management: The requirement was restructured to have a clear waste management plan and report separately. Selective demolition was moved to O7.
- O13 (O7) Energy use of the building after renovation: The requirement part b) has been clarified.
- Chapter 10 (10) Indoor environment: Requirements O8 (O35) and O9 (O37) moved to chapter 4.
- O44 (-): A new requirement on planned changes and nonconformities. It is in principle handled by license agreements but is taken into the criteria based on experience from the criteria 089 New Buildings.

Editorial changes were also made to clarify the intent and documentation of the requirements.

2 About the consultation

The proposed criteria were sent for open consultation from the 13th of September to the 29th of October 2023.

The proposed criteria sent on consultation were developed by Nordic Ecolabelling in collaboration with representatives from research and industry within the fields of surveying, remediation and renovation of buildings and the environmental effects of the activities, as well as specialists within recycling, reuse, and waste handling.

The criteria proposition set out to facilitate alignment with the criteria for New Buildings 089. The EU taxonomy for renovation of existing buildings was evaluated. A new possibility for Nordic Swan ecolabelling of hotels and associated conference facilities was introduced. Focus was directed to four main areas: processes before the renovation phase, climate, circular economy and alignment with material requirements in the criteria for New buildings 089.

Nordic Ecolabelling announced the consultation on its Nordic and national websites and in newsletters. Official call for comments emails were sent to different types of stakeholders: licence holders, property developers, construction contractors, building material manufacturers and suppliers, recycling and waste handling contractors, authorities, research institutes and environmental organisations. The number of contacts on the send lists are showed in Table 1. Additional emails were sent on request by stakeholders and are not accounted for in the table.

Table 1: Call for comments, e-mails sent.

Country	Number of e-mails sent
Denmark	91
Sweden	86
Finland	154
Norway	410
Iceland	0
Totally	741

3 Compilation of received responses

In all, 24 responses were received. See Tables 2-7 below for details.

Table 2: Compilation of received responses.

Country	A. Only comments	B. Approve	C. Approve, with comments	D. Abstain from taking a position	E. Oppose the proposal, with comments	Totally
Denmark	3				1	4
Sweden	3		2	2	1	8
Finland	4		1		1	6
Norway	4				1	5
Iceland	1					1
Totally	15		3	2	4	24

Table 3: Danish consultation responses.

Consultation body	A. Only comments	B. Approve	C. Approve, with comments	D. Abstain from taking a position	E. Oppose the proposal, with comments
Energistyrelsen	1				
Københavns Kommune, Teknik- og Miljøforvaltningen, afdelingen for Klima og Byudvikling	1				
Miljøministeriet	1				
PVC Informationsrådet					1
Σ Danish responses:	3				1

Table 4: Swedish consultation responses.

Consultation body	A. Only comments	B. Approve	C. Approve, with comments	D. Abstain from taking a position	E. Oppose the proposal, with comments
ACC Glas och fasadkonsult				1	
NCC			1		
Peab Sverige AB				1	
PVC-Forum/IKEM					1
Ragn-Sells Recycling AB	1				
Svensk Ventilation	1				
VVS Fabrikanternas Råd	1				
Wästbygg			1		
Σ Swedish responses:	3		2	2	1

Table 5: Finnish consultation responses.

Consultation body	A. Only comments	B. Approve	C. Approve, with comments	D. Abstain from taking a position	E. Oppose the proposal, with comments
Finnish Plastics Industries Federation					1
Finnish Property Owners Rakli			1		
Scandinavian Copper Development Association	1				
Satakunnan ammattikorkeakoulu	1				
Teknologiateollisuus	1				
VTT	1				
Σ Finnish responses:	4				

Table 6: Norwegian consultation responses.

Consultation body	A. Only comments	B. Approve	C. Approve, with comments	D. Abstain from taking a position	E. Oppose the proposal, with comments
Norconsult	**1**				
Riksantikvaren	**1**				
SINTEF	1				
Statsbygg Forumet	1				
PVC Forum Norge					1
Σ Norwegian responses:	4				1

Table 7: Icelandic consultation responses.

	A. Only comments	B. Approve	C. Approve, with comments	D. Abstain from taking a position	E. Oppose the proposal, with comments
Steypustöðin ehf	1				
Σ Icelandic responses:	1				

4 Comments to the criteria in detail

Nordic Ecolabelling wishes to express a gratitude for the responses given to the proposed criteria.

In the following all consultation responses are listed and answered. The individual comments from consultation bodies are collected and grouped in this section. The comments are handled according to the numbers of the requirements in the consultation draft criteria. Some consultation bodies have commented on several areas in the draft and comments are then sorted and divided to the relevant sections. Nordic Ecolabelling has responded to the consultation comments for each requirement and /or section. In the answers it is stated whether changes have been made or not and the relevant justification.

4.1 General comments

Teknologiindustrin rf, Teknologiateollisuus ry

Nordiska miljömärket Svanen ber om yttranden gällande de föreslagna kriterierna för renovering. I de kriterier som har lagts på remiss ingår bostadshus, utbildningsbyggnader, kontorsbyggnader och hotell. Teknologiindustrin rf framför sitt tack för möjligheten att yttra sig och yttrar sig enligt följande:
I förslaget med kriterier för renovering ingår många av de krav som fanns i de kriterier för svanmärkningen som helt nyligen våren 2023 publicerades för nybyggen. I samband med att kriterierna för nybyggen hade lagts ut på remiss gav Teknologiindustrin sitt utlåtande och konstaterade då att målsättningarna, tryggande av energieffektivitet och låg klimatpåverkan samt stärkande av den cirkulära ekonomin och den biologiska mångfalden, är sådana målsättningar som bör förespråkas också för märket Svanen och detta gäller fortfarande.
Vi på Teknologindustrin anser att klimatförändringarna och miljöutmaningarna ska övervinnas globalt. Vi har förbundit oss att för vår del bidra till ett koldioxidneutralt samhälle med cirkulär ekonomi och strävar efter att skydda och öka den biologiska mångfalden. Som första bransch i Finland har vi fastställt ett branschspecifikt program för

cirkulär ekonomi. Vi publicerade dessutom redan 2020 ett branschövergripande program för biologisk mångfald, som vi kommer att uppdatera under 2024.
Målsättningarna för de kriterier som nu är på remiss är riktiga och bör förespråkas, men metoderna för att uppnå målen måste preciseras och delvis korrigeras.
Våra åsikter, som vi redan lyft fram i vårt yttrande om förslaget till kriterier för nybyggen, har inte förändrats. Eftersom både kriterierna för nybyggen och vårt yttrande om dem gavs relativt nyligen, upprepar vi inte här alla de punkter som vi har konstaterat i vårt yttrande. […see further comments on copper requirement O27]

VTT

Mission
Would it be possible to add a description at the start of the criteria about how the Nordic Swan Ecolabel improves the quality and value factors of (fully) renovated buildings? For example:
These criteria are used in topics related to environmental friendliness to

- pursue a level of quality above the building code's statutory minimum, or
- consider a greater number of factors than required by regulations and statutes.

Vision
What is the vision for using the criteria? Would it be possible to define a concrete objective?

- What is the target number of fully renovated and Ecolabel certified buildings by 2030, for example?

Criteria development
Future areas of the criteria, such as biodiversity considerations for projects, could be included already.

- This could be based on the RT biodiversity roadmap, for example, which identifies some qualitative areas for criteria.

Finnish Property Owners Rakli
"In general, to prepare the criteria:
In terms of the usability of the criteria set and the amount of work involved in using it, it would be essential to build criteria sets based on existing standards established in Finland.

In Finland, the national S1 indoor air classification and the M1 emission classification of construction products, which are based on EN standards, are widely used. In particular, their criteria and assessment methods should be taken into account to avoid overlaps and contradictions."

VVS Fabrikanternas Råd
"As previously noted, concerning measures to reduce energy consumption:
We believe these demands poses a risk of counterproductive and imprecise measures. Svanen should guide investments in a direction that leads to a reduced environmental impact and a significantly decreased energy consumption with maximum resource efficiency. Svanen should include incentives which encourage investments in energy generating solutions such as solar panels and heating pumps which effectively interacts with the property's technical installations. We suggest a system who focus on clearly defined goals, adapted for each building, and leave the decisions on how the goals are to be reached to the property owners.

Nordic Ecolabelling's comments
Nordic Ecolabelling thanks for the general comments to the criteria, all comments are considered and handled in the specific sections. This is further accounted for in the following sections.

4.2 Definition of the product group

4.2.1 What can carry the Nordic Swan Ecolabel?

VVS Fabrikanternas Råd
"In the introductory text on page 5 it says: According to the current referral, the renovation project must fulfil at least one of the following three options:

- The total cost of the renovation relating to the building envelope or the technical building systems is higher than 25% of the value of the building, excluding the value of the land upon which the building is situated.
- More than 25% of the surface of the building envelope undergoes renovation.
- Renovation leads to a reduction of primary energy demand (PED) of at least 30%.

We believe these demands poses a risk of imprecise measures. You can spend a considerable sum of money on large windows and/or a unique door, façade or roof material that ads nothing to improve the building's environmental impact or energy performance. It might even be the opposite.

We also question whether it is at all possible to value a property without taking its location into consideration. If production cost is used, minus investments to lift the building to new construction condition, it hampers the ability to lift properties on weak markets to Svanen standards. A method to calculate a buildings value, without regard to the building's location must be established. A fair method for calculating energy savings is also needed."

Peab Sverige AB
"What can carry the Nordic Swan Ecolabel
""The renovation project must fulfil at least one of the following three options"" - och sen följs det av fyra punkter. Den fjärde punkten ska nog inte vara en punkt.

Alternativ 1. Utmaning att bedöma kostnaden för renoveringskostnaden i tidigt skede, framförallt kostnaden för rivning. Följs detta upp sedan för att säkerställa att det som redogjordes för initialt stämmer med faktiskt utfall? Det får ju stora konsekvenser i så fall om t ex rivningen inte blev så dyr som befarat och man skulle hamna på t ex 23% och då inte kunna Svanenmärka trots att allt arbete är gjort. Man skulle kunna skriva ”the estimated total cost”.
Återkoppling från beställare i faktiskt renoveringsprojekt är att det inte heller är tydligt / lätt med värdering av fastigheten.

Alternativ 2.
- Formuleringen ger inget incitament att arbeta med att ta tillvara/renovera befintlig fasad, och blir problematisk om man har krav på att bevara fasaden.
- Vi har exempel på projekt där vi framförallt byter tak utvändigt, ofta troligt att man inte kommer upp i 25 % av klimatskalet.
- Hur klassas det att ex. renovera upp fönster, dvs. inte byta till nya. Inkluderas det i ”undergoes renovation”?
Alternativ 3.

- Svår att uppfylla i projekt med stora bevarandekrav där det inte finns möjlighet att göra förbättringar i klimatskalet. Det kan då utesluta vissa byggnader, beroende av hur de står sig i alternativ 1.

Det vore positivt om kunder till er som är fastighetsägare kunde bedöma hur stor andel av deras renoveringar uppfyller alternativ 1-3. För att bedöma hur stor andel av renoveringsprojekt som är möjliga att Svanenmärka utifrån angivna alternativ och hur många som inte blir målgrupp för eventuell Svanenmärkning.

Norconsult NO
Omfanget av produktgruppedefinisjonen:
Virker fornuftig. Energikravet kan være utfordrende for noen bygg, men fint at man har valgmuligheter.

Implementering av hoteller og konferansefasiliteter i kriteriene:
Fornuftig å ha med dette. Veldig relevant for hotell og Svanemerket er veldig salgbart for folk flest (mange kjenner til dette).

VTT Finland
Scope of renovations
Further consideration should be given to the definition of the scope of accepted renovations required to apply for the Ecolabel.
The criteria's current definition of "(full) renovation" favours professional housing owners and the renovations of city housing stock. Reconsideration would include Finnish housing companies, the majority of housing stock, under the Nordic Swan Ecolabel.
The long-term maintenance plans of housing company-owned buildings often distribute renovations across a number of years, according to the company's borrowing power. Could residential buildings be issued the Ecolabel in "stages" once they have completed a sufficient number of planned renovations in accordance with the criteria?

- Typical (partial) renovations of housing companies:
- facade renovations
- window renovations
- roof renovations
- technical energy efficiency renovations
- plumbing renovations
- electrical/cable renovations
- yard improvements/renovations.

"The criteria now include Hotels and associated conference facilities, in addition to the building types included in the current criteria (generation 1): small houses, apartment buildings, buildings for schools and preschools and offices.
The scope of the product group definition."

The evaluation of construction and renovation projects may be confused by this term: Does this mean products within the building? This probably means the service products of the Ecolabel's issuer.

We consider this a good classification. Single-family houses, terraced houses, blocks, and assisted living facilities could be classified as well. In addition, the owners of buildings could be listed. Professional housing owners, housing companies, office and service building owners, and public building owners (municipalities and Senate Properties).
"Implementation of Hotels and conference facilities in the criteria."
This is a good direction.

Nordic Ecolabelling's comments
The purpose of defining a threshold for a certain magnitude of the scope of the renovation is to differentiate renovation from maintenance and less extensive renovation work. The definitions used here come from the EU directive 2010/31/EU.

No matter if a project fulfils the criteria for the product group definition the project must still fulfil the mandatory O-requirements, including the energy requirement.

The definition of value is defined more in detail in the background document and is also based on the EU directive 2010/31/EU.

The Product group definition will remain unchanged.

4.2.2 What is required to be Nordic Swan Ecolabelled?

No consultation input.

4.3 Comments to the chapters and the individual requirements

4.3.1 General comments chapter 1: What is subject to the requirements?

Steypustöðin ehf
"Page 10: Prefabrication – Chemical curing
Since precast concrete elements are mentioned it should be clarified that curing of concrete is not meant here"

VVS Fabrikanternas Råd
Exempted areas, materials and products
Control units for water, ventilation and heating needs to be clarified. It is too vaguely defined."

Peab Sverige AB
Exempted areas, materials and products
""Rust protection paint to restore railings and beams after welding and
when screw holes have been drilled or similar work.""
- Det finns ingen bra listad metallfärg (till t.ex. tak och pelare) samt rostskyddsprimer. Vill man bevara och renovera större delar så tolkar vi det som om att det inte faller under undantaget, detta kan bli ett problem i renoveringsprojekt.

Complete renovations where only the load bearing structure remains
If the construction regulations define a project as being a new-build project, the criteria for new production must be used. If the construction regulations define a project as a renovation project instead, the criteria for renovations must be used.
- Ovan är tydligt - är det ett renoverings- / ombyggnadsprojekt enligt svenskt regelverk så är det detta kriteriedokument som ska användas, annars är det kriteriedokumentet för nyproduktion.

Sen kommer nedan text - vad betyder den kopplat till ovan? Kan tolkas som att delar av detta kriteriedokument även ska gälla när man använder kriteriedokumentet för nyproduktion.
The requirements in the section on environmental survey/analysis and remediation for renovations must be met, regardless of how the rest of the renovation is defined (as new construction or renovation). "

Nordic Ecolabelling's comments

Chemical curing is already well-defined in the criteria*: 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.*

Based on the comments the following has been removed from the section "Complete renovations where only the load bearing structure remains": *Demolition is a substantial part of complete renovations and it is therefore reasonable that Nordic Ecolabelling sets requirements for environmental survey/analysis and remediation, regardless of definition. The requirements in the section on environmental survey/analysis and remediation for renovations must be met, regardless of how the rest of the renovation is defined (as new construction or renovation).* As no alignment of this issue is present in the criteria for New Buildings 089, this is not possible. In the next generation it will be evaluated if the two sets of criteria can be aligned better with regard to this.

4.3.2 General comments chapter 2: Alignment with the EU Taxonomy framework

Wästbygg

Make sure that the requirements in Svanen are aligned with the EU Taxonomy!

VVS Fabrikanternas Råd

"7.2.3.1: Sustainable use and protection of water and marine resources
Water flows defined by the taxonomy are 6 litres/min for taps in kitchens and sinks, 8 litres/min for showers and 6 litres with an average flush volume of 3.5 Liters for a WC. These The requirements are not covered by these criteria but we strongly suggest that points can be obtained when using both water and energy labelled sanitary fixtures.

When a renovation project includes a water system replacement, we want to point out that the use of water-saving fixtures may create problems that we, together with our member companies, Säker Vatten, RISE and KTH have investigated. A well-functioning, energy- and water-saving plumbing installation is not solely dependent on the WC or the mixer. The entire system should be adapted to meet requirements on waiting times for hot water and legionella. If the pipe systems dimensions are not adapted to lower water flows, we also get energy losses due to increased volumes of stagnant hot water. However, if we reduce the pipe dimensions for lower flows, we can expect, based on experience, that tenants may eventually replace mixers and shower heads to obtain higher flows than the installation is adapted for, creating new problems with falling water pressure and noise. Low water flows from the WC tends make it more difficult to obtain effective flushing. It is therefore very important to point out the complexity associated with water-saving solutions and that the problems are taken seriously, especially in a renovation project. Together with Säker Vatten, we have we have published recommended standard flows and dimensioning of tap- and wastewater systems to handle this dilemma. We expect the framework of Boverkets nya byggregler to make these recommendations a sk "Sektorsnorm".

7.1.5.1: Pollution and prevention control:
We need to mention the conflict between a products climate footprint and unwanted substances. The transition from today's brass to lead-free brass (below 0.1% g/kg) is a good example. The use of virgin raw materials will increase when most brass, previously recycled, ends up in landfills. Producing brass from virgin raw materials generates approx. 8.4 times higher climate impact compared to manufacturing through recycling, which corresponds to a climate saving of approx. 3.5 kg CO2eq/kg (T. Rydberg, IVL Swedish Environmental Institute, 2021). We must find a way to maintain a high recycling rate to be able to meet our sustainability goals. It is in line with the EU's waste directive,

the Circular Economy Action plan and the EU Green Deal. We would like to see a guidance from Svanen on how the goal conflict between material content and climate/environmental impact should be weighted when choosing products.

Svanen must also take the new Drinking Water Directive into account (DWD). This new directive specifies limit values of lead leaching into the drinking water, not the concentration of lead in the material. Otherwise, Svanen might end up approving a product that is not legal according to the new DWD, and the other way around. The new DWD will also severely limit the ability to recycle brass why we would like to know Svanens view on the mass balance approach to reduce the climate footprint."

NCC SE
Good incorporation of the EU taxonomy requirements

The criteria document as a whole: Well thought out manual.

VTT
OK, but challenging due to ambiguity. Would it be possible to also have special criteria by building type?
Should conversion projects include special criteria compared to cases where the purpose of use remains unchanged?

Nordic Ecolabelling's comments
Nordic Ecolabelling has chosen an approach where the criteria only consist of mandatory requirements so introducing point requirements is not an option in this case. We do not consider it reasonable to have mandatory requirements for water flow (7.2.3.1 in the EU taxonomy). The piping and sea wage systems in older buildings are often not designed for such water flows. If the system is not changed as a whole, it can cause problems in the technical installations leading to unnecessary replacement of existing well-functioning systems.

The new Drinking Water Directive is to be implemented in EU member states in January 2023. We do not consider it a task for the Nordic Swan Ecolabel to further control this.

4.3.3 General comments chapter 3: General requirements

No consultation input.

4.3.4 General comments chapter 4: Prior to the renovation phase

Miljøstyrelsen
Det bør indføres et passende sted, at midlertidige støjende og støvende aktiviteter, som fx. nedrivning, skal anmeldes efter miljøaktivitetsbekendtgørel-sen til kommunen senest 14 dage, før aktiviteten på stedet agtes påbegyndt. I Danmark henvises der til reglerne i § 68 m.fl. i Bekendtgørelse om affald (BEK nr 2512 af 10/12/2021).

Miljøministeriet
Generelt anvendes flere forskellige betegnelser for miljø- og sundheds-skadelige stoffer, fx 'hazardous substances', 'undesireble substances', 'harmful substances', og 'problematic (chemicial) substances'. 'Hazardous substances' er en meget bred definition, der kan opfattes som alle miljø- og sundhedsklassifi-cerede stoffer. Miljøministeriet anbefaler at finde en mere generel betegnelse og så under de enkelte kriterier indsnævre, hvad er omfattet. Eller anvende en mere generisk betegnelse for problematiske kemikalier.

Hvis der menes Særligt problematiske kemikalier, så bør REACH betegnelsen Substances of Very High Concern, SVHC, anvendes.

I den ny produktregulering (ESPR) anvendes Substances of Concern om en gruppe stoffer, der optræder på listen over stoffer, der har egenskaber, der kan definere affald som farligt affald.

Wästbygg
If another entreprenuer has done the demolition, is it not possible to assess the building according to Svanen then?

Peab Sverige AB
"Övergripande - kapitel 4.

Ett rörigt och ""hoppigt"" kapitel. Förslag på ordning i stora drag:
Förslag på ordning:
1. Inventering
2. Behov av åtgärd
3. Möjlighet att bevara/återbruka
""Follow-up""-kraven borde ligga i anslutning till grundkravet eller vara en del av detta. O2+O5 och O3+O6. Skulle kunna finnas en flexibilitet i att slå ihop redovisning. I vissa fall gör man ju en inventeringen som innefattar alla dessa punkter.

Förslag på ordning:
1. Inventering
2. Behov av åtgärd
3. Möjlighet att bevara/återbruka"

Satakunnan ammattikorkeakoulu, Satakunta University of Applied Sciences
Pätevyyttä käsiteltäviin kohtiin maininta, että täyttää kansalliset vaatimukset työn suorittajan pätevyyksistä (FISE)
In the chapters dealing with qualifications, there should be a mention that the employee's qualifications meet the national requirements (FISE).

Norconsult NO
Den overordnede strukturen i seksjonen «før byggefasen». Er den i tråd med praksis i bransjen?:
Oppfatter at denne er i tråd med praksis i bransjen. Hvis ikke er det i alle fall en kvalitet med Svanemerket.

VTT, Finland
The section prior to the renovation phase has been revised to have better direct correspondence with the practice in the market.
An "environmental survey" typically means something other than what is sought here. These matters are included in quality, environmental, and safety plans (including the harmful substance survey).
Usually, the terms "demolition survey" (purkuselvitys) and "demolition plan" (purkusuunnitelma) are used instead.

It should probably be noted whether these basic surveys are sufficient as-is for Ecolabel evaluation.

The overall structure of the section "prior to the renovation phase". Is it in line with the practice in the industry? Comment: A common practice for professional developers in Finnish renovation projects is to commission multiple surveys at the project planning stage. Some may be skipped in smaller (partial) renovations.

Nordic Ecolabelling's comments

The order of the requirements is adjusted according to the expected order of operations in renovation projects.
Nordic Ecolabelling do not consider it to be within the scope of this criteria to set requirements for noise and dust as it should already be handled in national legislations or guidelines.

Definitions related to hazardous waste and substances are corrected in the relevant requirements to make it clearer.

According to the requirements a renovation must also document the demolition phase, as well as construction phase. These two phases can be documented by two different entrepreneurs.

O1 Outline description of the renovation project

Satakunnan ammattikorkeakoulu, Satakunta University of Applied Sciences
"Olisi hyvä kiinnittää enemmän huomiota teknisiin ratkaisuihin ja niiden laatuun. Tekninen laatu mahdollistaa rakennukselle pidemmän elinkaaren.
Pätevyyttä käsiteltäviin kohtiin maininta, että täyttää kansalliset vaatimukset työn suorittajan pätevyyksistä (FISE)"

English translation:
It would be good to pay more attention to technical solutions and their quality. Technical quality enables a longer life cycle for the building.
In the chapters dealing with qualifications, there should be a mention that the employee's qualifications meet the national requirements (FISE).

Nordic Ecolabelling's comments

This requirement focuses on the overall scope of the renovation project. In chapter 11 Quality management of the demolition and construction process there are requirements that address the overall quality assurance of the project. In some specific requirements, competence level of e.g. an expert is defined. Nordic Ecolabelling considers these measures in combination with national legislation to be sufficient for this product group.

O2 Environmental survey and remediation plan

Miljøstyrelsen
I kriterie O2 Environmental survey and remediation plan, er angivet seks punkter, som skal indgå i saneringsplanen. Punkt 6 omhandler farlige stoffer og her er angivet, at der skal redegøres for "amounts". Dette bør specificeres yderligere. Er der tale om mængder af et givent farligt stof eller stofgruppe, eller mængder af det materiale/affald, som indeholder farlige stoffer? Under alle omstændigheder er det relevant at angive indhold og koncentration af det identificerede, farlige stof som koncentration af det pågældende materiale/affald i saneringsplanen under punktet. Endvidere bør navnet på det/de kemiske stoffer fremgå, og mængder/koncentration og placering bør opgøres separat for hvert stof.

Københavns Kommune, Teknik- og Miljøforvaltningen, afdelingen for Klima og Byudvikling
"Vi synes generelt det er godt, at Svanekravene til renoveringer revideres og har alene et forslag om, at Miljømærkesekretariatet tager fat i Landsbyggefonden for at sikre, at kravet til Miljøkortlægning ikke vil stå i vejen for at Almene renoveringer kan svanecertificeres.

Københavns Kommunen stiller krav om, at renoveringer i almene boliger, der opnår støtter fra Landsbyggefonden, skal certificering efter Svanen eller DGNB. Landsbyggefonden fastsætter således rammerne og støtten til renoveringssager, og vil

herunder være afgørende for om en almen renoveringssag, kan udføre den miljøkortlægning som jf. de reivderede kriterier, skal omfatte alle dele af bygningen, hvor der er mistanke om farlige stoffer/affald, også de bygningsdele der ikke er renoveret."

Wästbygg
Good to have a detailed survey before starting the renovation process, if possible. But might be too expensive to do a detailed survey on all the existing building material.

Peab Sverige AB
"O13 bör ingå i O2, alla relevanta provtagningar ska göras under materialinventeringen. Denna expert bedömer ålder mm och när det finns risk för farliga ämnen. Samtliga material som ska återbrukas kan inte provtas om det inte är relevant enligt ålder, typ av produkt etc.

I de föreslagna kriterierna ingår inventering av farliga ämnen, återbruksinventering och fuktinventering. Enligt PBL ska man även inventera material lämpliga för materialåtervinning - tex plastmattor som kan återvinnas, gips, isolering. Denna borde ingå i O2.

Punkt 5. Om man avlägsnar material/produkter med misstanke om farligt innehåll och hanterar det som FA borde inte extra provtagning och analys behövas.

Fråga från Svanen: Miljökartläggningens omfattning -är det rimligt att den även ska omfatta delar av byggnaden med misstanke om farliga ämnen/avfall som inte ska renoveras?
Svar: Nej det bör generellt fortsätta utföras inför renovering.**"**

Miljøministeriet
MIM: Der forventes udstedt bekendtgørelse, der stiller krav om selektiv nedrivning ved fuldstændig fjernelse af etageareal på 250 m2 eller derover fra 1. juli 2024 (dog med en overgangsperiode på et år). Der forventes b.la. krav om, at bygherre skal udarbejde en nedrivningsplan herunder en ressourcekortlægning, hvor bygherre tager stilling til, hvordan de nedrevne materialer og bygningsdele skal anvendes efter nedrivningen.

Det forventes også, at der stilles krav om, at nedrivningsplanen skal udfyldes af en såkaldt miljø- og ressourcekoordinator, som er udpeget af bygherre og som besidder de fornødne kompetencer til at kunne udfylde nedrivningsplanen.

I kriterie O2, Environmental survey and remediation plan, er angivet seks punkter, som skal indgå i saneringsplanen. Punkt 6 omhandler farlige stoffer og her angives, at der skal redegøres for ”Compliance with Appendix 1 and/or national threshold limits for hazardous waste”.

Referencen til national threshold limits for hazardous waste henviser muligvis til Appendix 1, hvor der også står i 3. linje af skemaet: ”Substances classified as hazardous waste according to national legislation and guidelines.”

Det er uvist, hvad der menes med henvisningen i pkt. 6 og teksten i 3. linje af Appendix 1 skemaet. Hvis der (for DKs vedkommende) refereres til reglerne for, hvornår affald - med et vist indhold af klassificerede stoffer - skal klassificeres som farligt (Bilag 3 ”Egenskaber, der gør affald farligt” i Affaldsbekendtgørelsen, BEK nr 2512 af 10/12/2021).

Disse regler er lovpligtige fsva. vurdering af om affald skal klassificeres som farligt affald, men anvendes ikke ved ’klassificering af produkter’! Det vurderes også svært, at klassificere produkter/artikler med udgangspunkt i bilag 3, som ikke indeholder

koncentrationsgrænser for specifikke stoffer, men koncentrationsgrænse for stoffer med 'visse' effektklassificeringer, hvis stoffet/stofferne forekommer i affald.

Såfremt Nordisk Miljømærkning ønsker at anvende affaldsbekendtgørelsens bilag 3 som værktøj til at vurdere farligheden af genbrugte produkter/artikler, så kunne det være mere relevant at anvende de gængse produktregler for kemikalier, kemiske blandinger og kemikalier i artikler (REACH, CLP, POP mm.). Dette må imidlertid også være forventet, at bygherren sørger for det (hvis denne afhænder byggedele som genbrugte produkter), ligesom at ved indkøb af produkter på 'brugtmarkedet', så overholder sælger reglerne for salg af genbrugte produkter

Det foreslås derfor, at kriterierne for genbrugte byggevarer (dele/artikler) skal overholde kravene i Appendix 1, grænseværdier, som må forventes at være skrappere for byggevarer/artikler end de lovpligtige kemikalieregler for salg, markedsføring og anvendelse af produkter/artikler.

Norconsult NO
Miljøkartleggingens omfang – er det rimelig at den også skal omfatte deler av bygget med mistanke om farlige stoffer/avfall som ikke er del av rehabiliteringen?:
På mange måter virker dette fornuftig. Ofte kan en rehabilitering blir mer omfattende enn først planlagt, så hvis man ikke er obs på dette fra første kartlegging kan man stå i fare for å rive helse- og miljøfarlige stoffer uten nødvendige sikringstiltak. Det andre argumentet for er at det vil føre til at byggeier får en oversikt over bygningsmassen, og dermed kan ta hensyn til dette ved senere ombygginger.
Argumenter mot er at selve kartleggingen kan bli en del dyrere hvis det bare skal bygges om en liten del. Kan det være et alternativ å legge inn en grense på omfang når dette inntreffer, f.eks. dersom halve bygningsmassen skal rehabiliteres, da skal hele bygget kartlegges (materialene med mistanke)? Ev. en annen type grense, slik at det ikke inntreffer de minste rehabiliteringene.

Statsbygg og Forum for miljøkartlegging
«Remediation plan» må endres til «environmental survey report»: Dette må endres jf. revidert TEK: miljøsaneringsrapport er erstattet med miljøkartleggingsrapport. Forslag til endring for at formulering skal være lik krav til rapportering av ombrukskomponenter i krav O3.

Omfang av kartlegging: Vi anbefaler å endre dette da det ikke er hensiktsmessig/blir altfor omfattende da det er miljøgifter i absolutt alle bygningsmaterialer. Vi anbefaler derfor å begrense til der man har mistanke om asbest og/eller PCB. Dvs. at dette vil kun være aktuelt for bygg fra før 1985.

Merking av bygningsdeler som inneholder asbest: Vi anbefaler en vesentlig endring i formulering her for ikke å skape unødig frykt blant brukere av bygget. For et tomt bygg kan det merkes med en gang, mens for bygg i drift anbefaler vi at det merkes rett før entreprenør skal igang med arbeidene.
Det bør og inn en setning om at driftsansvarlig for bygget må imidlertid få oversikt over hvor det finnes asbest (via rapporten), for å sikre at det ikke utføres noe vedlikeholdsarbeider eller spikres i vegger med asbestplater før arbeidene starter (kan være flere år mellom kartlegging og utførelse).

Kvalifikasjoner til miljøkartlegger: Vi foreslår en ytterligere stramming av kravet for bygg før 1985 som kan inneholde asbest og/eller PCB, da det stiller vesentlig mer kompetanse for å kartlegge på en god måte.
Å avgjøre kun basert på antall års erfaring kan være for snevert, men er en enkel måte dere kan gjennomføre en vurdering på i tillegg til å lese CV med utførte prosjekter. Enkelte kartleggere kan imidlertid være "dårlige" kartleggere selv med 5 års erfaring,

mens noen kan være dyktige med mindre enn 5 år. Vi anbefaler derfor sterkt at dere åpner opp for å kunne dokumentere tilstrekkelig kompetanse selv om de ikke har 5 års erfaring med asbest- og PCB-kartlegging. Kravet anbefales derfor supplert med en slik setning. Dette kan redegjøres for i en CV via generell tekst om kompetanse, samt referanseprosjekter/beskrivelse av utførte prosjekter, rolle de har hatt, kompleksiteten og størrelsen av prosjektet osv.

PCB målinger inneluft: Dersom det påvises PCB et rom, anbefaler vi at det også tas måling av inneluft før sanering for å kunne ha en "referanseverdi".

VTT
This requirement may be difficult to apply in practice.

Nordic Ecolabelling's comments
The title of the requirement is adjusted to correct the terminology: "hazardous material survey and report".
Multiple consultation responses have pointed out that it's too expensive to survey the whole building. This is therefore adjusted to only apply for buildings containing asbestos or PCB, where it's deemed the most necessary.

In the introduction to the six bullet points stating what must be included in the report, it's specified that the documentation must be presented for the different materials categorized as hazardous. There should therefore not be any confusion regarding what amounts that the report must account for.

National legislation regarding when a material is considered hazardous waste varies some in the Nordic countries. To specify where these legislations are to be found for every country, is not something Nordic Ecolabelling sees as relevant when we require a specific competence from the expert performing the surveying. Appendix 1 is a supplement to the national legislations and is considered stricter for some substances. All reused products, internally and externally, must comply with these two. It's also specified that analyses are only required if the surveyor is not sure of the content of hazardous substances.

A new threshold limit has been introduced for PFAS in generation 4 of the criteria. The level (100 ppm) is in line with the level set for new building products in O32. Nordic Ecolabelling is aware that a proposal has been made to ECHA by the countries Denmark, Germany, the Netherlands, Norway, and Sweden for a general threshold limit of 50 ppm for all products (https://echa.europa.eu/da/-/echa-publishes-pfas-restriction-proposal). Nordic Ecolabelling will follow this proposal closely to assess the possibility for implementation in the criteria New Buildings and Renovation.

The marking of asbestos is considered essential and is not removed.

The qualification of the surveyor is specified so that they have knowledge of the same type of building and complexity. This is to ensure they are suitable for the job at hand. As the education, courses, etc. varies in the Nordic countries further specification is difficult.

The requirement for reused products in O14 is aimed at external products, all internal reuse is covered by requirements prior to the renovation phase. A separate requirement for selective demolition is implemented to further encourage projects to consider their resources. It is therefore also removed from both O2 and O13.

O3 Mapping of components and materials suitable for reuse

VVS Fabrikanternas Råd
We want to highlight the necessity for Svanen to be aware of regulations that limit or stop reuse of some products and materials. The new drinking water directive will when its enforced, make most of today's products in contact with drinking water illegal, even if they might fulfil Svanens limit values of SVHC substances. It is also important to understand the lifespan of plumbing installations when assessing potential reuse and the fact that new products might be superior in terms of sustainability and energy consumption.

Peab Sverige AB
"Då detta handlar om renovering av en byggnad så borde återbruk på plats/bevarande dvs att spara och rekonditonera så mycket som möjligt värderas först. Det bör tydliggöras att högsta prio är att behålla och bevara och en inventering för detta bör ingå eller vara en separat del? Även detta görs bäst efter det att materialinventering och fuktinventering gjorts så man kan ta hänsyn till dessa i sin bedömning av vad som kan behållas/renoveras.

Återbruksinventering borde alltid göras efter inventering av farliga ämnen och fukt och ta med det som framkommit av dessa tex innehåller ett material farliga ämnen eller är fuktskadat så är det mindre lämpligt för återbruk.

Följande krav har vi inte sett i återbruksinventeringar och tror det blir svårt för dem som utför dessa att bedöma återstående livlängd och demonteringsmetod?
- Estimated remaining lifetime.
- Deconstruction method based on the intended use of the material.
- Selective demolition must be used to facilitate reuse by selective removal of materials.

Det skulle vara bra att tydliggöra redan i O3 att det finns en koppling till kravet i O6. Kopplingen åt andra hållet är tydligare.

Möjligt att kunna baka ihop detta krav med O2."

Miljøministeriet
Teksten "Before the demolition work takes place, the building must be mapped by an expert* to identify building parts and materials that are suitable for re-use. As a minimum the building parts and materials that will be removed du-ring the demolition must be accounted for**." kan med fordel ændres for at fremme direkte genbrug i renoveringsprojektet, eller korrekt håndtering af dele og materialer, dvs. genanvendelse, nyttiggørelse eller deponi (i følge de lokale regulativer).

E.g.: "Before the demolition work takes place, the building must be mapped by an expert* to identify how the building parts and materials will be utilised after demolition in order to maintain the value including which building parts or materials that are suitable for reuse or recycling. As a minimum the building parts and materials that will be removed during the demolition must be ac-counted for (reuse, recycling, recovery or landfill) **."

Miljøministeriet
Der henvises til kommentar ovenfor til kriterium 2 om genbrugte produkter og Appendix 1.

Herudover kunne det være relevant, at Nordisk Miljømærkning går mere i dybden i baggrundsteksten til Kriterium 3 og Appendix 1 fsva. begrundelsen og udvælgelsen af de kemiske stoffer og deres grænseværdier.

MIM og MST mener i øvrigt, at Nordisk Miljømærkning nu eller senest under næste revision bør være opmærksom på, om PFAS skal fremgå af Appendix 1. PFAS formodes at være anvendt hyppigere og hyppigere flere steder i bygnin-ger, enten som materiale eller som kemisk blanding (fx vådrumssikring/-membran).

Der henvises til kommentarer til Kriterium 2 og 3 fsva. kemikalier i genbrugte produkter.

Statsbygg og Forum for miljøkartlegging
Krav til innhold i rapport: Har dere kvalitetssikret at alt som står i TEK er ivaretatt her?

Nordic Ecolabelling's comments
The order of the requirements is adjusted, so that the mapping comes later in the chapter. All projects achieving a Nordic Swan Ecolabel must adhere to any legal requirements, this also applies to reused products. Products must have the quality and documentation according to national legislation, and throughout our requirements we ensure safe levels of hazardous substances. The knowledge of the expert that maps materials and components is therefore essential. The required documentation for potential reused materials is adjusted slightly to make it more manageable to document. Estimated lifetime is necessary to document, as it's also a requirement from the Norwegian TEK17. The requirement must at least be on the same level as TEK17 § 9-7.

Reuse locally on the same project is encouraged by having a separate follow-up requirement, where it is clearly stated that reuse must be considered in every project. Thereafter high material recycling is necessary to reach 70% in the waste management requirement.

Comments regarding PFAS are highly relevant, we have therefore chosen to implement a separate threshold limit for PFAS in Appendix 1.

The level (100 ppm) is in line with the level set for new building products in O33. Nordic Ecolabelling is aware that a proposal has been made to ECHA by the countries Denmark, Germany, the Netherlands, Norway, and Sweden for a general threshold limit of 50 ppm for all products (https://echa.europa.eu/da/-/echa-publishes-pfas-restriction-proposal). Nordic Ecolabelling will follow this proposal closely to assess the possibility for implementation in the criteria New Buildings and Renovation.

O4 Moisture survey

Peab Sverige AB
Möjligt att kunna baka ihop även detta krav med O2, och ha det indelat i tydliga delar.

Nordic Ecolabelling's comments
It is found reasonable to keep this as a separate requirement. O2 already contains many complexes processes for documentation.
It has been clarified that chemical products needed for the treatment of e.g. mould must fulfil the chemical requirements in chapter 11. However, an exemption is implemented:

- *Chemical products classified H400, H410 and H411 used for the treatment of mould and similar identified in O4 Moisture survey.*

O5 Follow-up of remediation plan

Peab Sverige AB
"Denna uppföljning kunde delvis integreras i avfallshanteringsplanen?
Planen bör kompletteras med uppgift om var man kan hitta kvitton/mottagningsbevis/transport dokument för omhändertaget FA.

Dokumentationskraven borde vara tydligare i kravtexten.

Vad är relevant competence? Utbildningsintyg eller cv, läkarkontroller? "

Statsbygg og Forum for miljøkartlegging
Dette kravet er forvirrende innholdsmessig. Det ser ut til at dere sammenblander avfallsplan og sluttrapport. Vi anbefaler at dere lager et eget kapittel med avfallsplan etter kravene miljøkartlegging og ombrukskartlegging ettersom avfallsplanen dannes på bakgrunn av funn i disse - samt en ev. tilstandsvurdering. Vi misforstod innholdet i kravet da vi leste og gav kommentarer første gang.
Så kan dere heller rendyrke O13 Waste mangement til å være der dere omhandler sluttrapport.
Vi foreslår også endre tittel til å omfatte avfallsplanen og.
Kommentar til sluttrapport (som å egentlig er O13):
Tenker dere at en sluttrapport tilsvarende lovkravet i Norge dekker dette, eller er dere ute etter en skriftlig rapport? (anbefaler å sjekke ut en norsk sluttrapport; det er bare et veldig enkelt skjema...).
Vi anbefaler absolutt noe mer, men det bør være en bevisst hensikt med det. Hvis ønske er en mer omfattende rapport, burde det også inkludere et kap. om befaringen(e) som miljøkartlegger utførte osv. og analyseresultater for supplerende prøvetaking etc.

Anbefaler følgende tilføyelse i starten av kravet: Before the remediation/demolition work starts, a start-up meeting should be held. The main purpose of the meeting is to ensure the contractor has read and understood the environmental survey report. The person that has written the report, the remediation contractor the builder and a person from the projecting group should be present in the meeting. A meeting minutes should be written after the meeting.

Skal entreprenør kun beskrive hvordan farlig avfall håndteres, eller skal det også være avfall iht. vedlegg 1?

Remidiation/demolition: Bør man bruke ett begrep her? Har ikke brukt begge tidligere. Entreprenør gjør vel ikke primært en remediering, det er jo en renovering de utfører - som kan omfatte for eksempel asbestsanering. Vi anbefaler å ikke skrive remediering unntatt i de tilfellene man ev har behov for å konkretisere at det er snakk om en remediering.

Nye funn av farlig avfall under saneringsfasen bør flyttes til sluttrapport, O13.

“Description of an appropriate method of removal of the hazardous waste, including how it will be stored and transported”: Det må også skrives i krav om sluttrapport. Der bør det og føyes til en setning om at det må fremkomme tydelig og begrunnes ec avvik fra avfallshåndteringsplanen.

“Information to show that the remediation contractor has followed the procedures to safeguard human health and the environment, according to the reportremediation plan.” Må flyttes til sluttrapport, O13.

“Details of carrier(s) and receivers of the hazardous waste.”: Må omformuleres til hvilke mottak de tenker å levere avfallet til - både ordinært og farlig avfall. Det må også inn en setning om dette i sluttrapporten - og de må angi ev. avvik - om de har skiftet selskap osv.

Kompetansekrav: I Norge er dette knyttet til blant annet ansvarsrett som ansvarlig utførende iht. tiltaksklasse for prosjektet. Der er det krav til blant annet sanerere - som er ganske strenge mht. antalls års personlig erfaring.

Vi synes det bør presiseres noe ytterligere enn bare "showing relevant competence" ellers kan man risikere å få en entreprenør til å sanere asbest som gjør dette for første gang. Se på formuleringen i Norge og sjekk hva de andre landene har.
Kanskje kan dere stille strengere krav til entreprenør ifm. renovering av bygg før 1985 der det kan være asbest og PCB. I beste fall gjøres miljøkartlegging i god tid før anbudsprosessen for anskaffelse av entreprenør. Da vil man vite om det er asbest og/eller PCB i bygget og kan tydeliggjøre forventning om kompetanse knyttet til dette.

Nordic Ecolabelling's comments
Remediation of hazardous materials is considered such an important issue that it is a separate requirement and not handled in O13 "Waste management". This requirement is a direct follow up of the remediation report, and not to be confused with waste created during demolition and construction. The EU Taxonomy has requirements for waste handling, but it does not include hazardous waste. As the issue regarding remediation is important to ensure safe buildings for humans and the environment, it is kept as a separate requirement.

There is a documentation requirement regarding receipts from hazardous waste consignees/recipient of hazardous waste. This must be documented on request.

There are differences in how remediation companies can document their competence in the Nordic countries, therefore it's defined in general terms.

It's considered to detailed for our scope to include a requirement regarding a meeting between the remediation contractor and the surveyor of hazardous waste. New hazardous waste discovered in the demolition phase is considered covered by the national legislations.

O6 Follow-up of mapping of components and materials for reuse

Peab Sverige AB
"Återbruksinventeringen bör i ett tidigt skede ses över av Arkitekt och konstruktör som måste bedöma var och i vilken omfattning inventerade material kan designas in.

Uppföljningen bör resultera i en tydlig plan där det redogörs för:
1. vilka material/produkter som ska demonteras för återbruk i byggnaden och
2. vad som ska lämnas till återbruk till annat projekt , försäljning eller återbruksaktör.

Detta kriterie kunde med fördel döpas om till Återbruksplan. Sen kan man ha ett krav för att uppföljning ska ske av Återbruksplan, avfallshanteringsplan mm samt att förändringar löpande ska dokumenteras i planerna.

""Threshold limits"" - Istället för att hänvisa till O3 som i sin tur hänvisar till O2 som hänvisar till Appendix 1 så borde detta ligga i ursprungskravet O3."

NCC SE
This criteria is more suitable next to O3, since they are connected to each other, for example name this one O4 instead.

Riksantikvaren NO
Riksantikvaren mener det er positivt at Nordisk Miljømerking setter krav til kartlegging av mulige gjenbruksmaterialer i de reviderte kravene. Samtidig registrerer vi at det under avsnitt 06 Follow-up of mapping of components and materials for reuse står at "all identified components and materials from 03 must be considered for reuse in the project or elsewhere". I bakgrunnsdokumentet kommer det frem at det Nordic Ecolabelling ikke ønsker å stille krav til hvor stor andel av kartlagte materialer som skal gjenbrukes i

prosjektet. Vi vet at produksjon av materialer i bygg- og anleggsbransjen står for en stor andel av klima- og miljøbelastningen, og at gjenbruk av bygningsmaterialer er et viktig tiltak. Derfor bør det stilles tydeligere krav til at så mye som mulig av eksisterende bygningsmasse og materialer skal gjenbrukes på stedet. Dette gjenspeiler hierarkiet i avfallspyramiden, som illustrerer at det viktigste vi gjør i overgangen til en sirkulær økonomi, er å unngå at avfall produseres.

Vårt innspill er at materialer som tidlig i prosessen er kartlagt og vurdert egnet for gjenbruk som hovedregel bør gjenbrukes i rehabiliteringsprosjektet, dernest i andre prosjekter.

Statsbygg og Forum for miljøkartlegging
Iht. utviklingen innen ombruk de senere år, anses dette kravet å være "for svakt" og ikke bidra til økt ombruk i praksis - det burde en svanemerket renovering gjøre. Burde tydeliggjøre en mer konkret forventning av ombruk for å kunne bli et svanemerket prosjekt. Se til kravene som ligger i BREEEAM-NOR for Excellent eller Outstanding. Hvis det ikke kvantifiseres, bør det iallfall oppfordres vesentlig tydeligere til hva man bør gjøre for å forsøke å realisere mest mulig ombruk i prosjektet.

Nordic ecolabelling's comments
The distinction between mapping for reuse and plan for reuse has been clarified. Nordic Ecolabelling wants to encourage reuse, but as this field is still maturing, it is difficult to set a minimum requirement for all Nordic countries.

4.3.5 General comments chapter 5: Energy

Energistyrelsen
Energistyrelsen bemærker, at svanemærkningen kan blive påvirket af bygningsdirektivet, som for nuværende er i trilogforhandlinger, hvorfor der skal tages forbehold for udfaldet af trilogforhandlingerne.

Nordic Ecolabelling's comments
We are aware of this and follow it closely.

O7 The energy use of the building after renovation

Wästbygg
Not always easy to know what the energy use has been in the past. If you change from one building type to another (i.e. from office to housing) this might not be relevant or difficult to compare.

Energistyrelsen
"For alternativ 2 er kravet, at reduktionen af primær energibehov ikke kan komme fra installation af vedvarende energi. Hertil gøres der opmærksom på, at der i beregningen af energimærket kan medregnes et bidrag fra lokal VE-produktion.

Endvidere fremgår det, at der for alternativet skal ske en indledende vurdering af energibehovet og at resultatet valideres gennem et energimærke. Hertil gøres opmærksom på, at udstedelse af energimærker i DK foretages af virksomheder, der er certificeret til det, og ikke den enkelte ekspert (der dog registrerer og udarbejder mærkningen ud fra sine kvalifikationer).

For alternativ 3 gøres der opmærksom på, at der ift. valg af alternativ er flere muligheder for bevaringsværdige bygninger, da disse i DK godt kan energimærkes (og dermed anvende alternativ 2), mens fredede bygninger ikke kan energimærkes."

VVS Fabrikanternas Råd
"Correct me if I'm wrong, but as I interpret the suggested arrangement with the text on page five in mind, a building could theoretically receive a Svanen label by changing the roof and connect to the district heating network. None of these measures would reduce the buildings total energy consumption. It might even increase the environmental impact and the CO2 footprint.

Svanen should guide investments in a direction that leads to an improved environmental impact and reduced total energy consumption with maximum resource efficiency. If this for instance, can be done while preserving the existing roof, windows, doors or façade, it should be considered as a sign of sustainable material use and efficient money utilization. A significant source of CO2 is related to the production of building material. Therefore, Svanen should encourage renovations where existing products are not replaced. Svanen should also implement incentives which encourage investments in energy generating solutions such as solar panels and heating pumps. We suggest a system who focus on clearly defined goals on energy consumption and CO2 footprint, adapted for each building, and leave the decisions on how the goals are to be reached to the property owners. "

Peab Sverige AB
"Alt 1 = Nybyggnadskrav, är ofta väldigt svårt att uppfylla utifrån förutsättningarna i gamla hus. Kräver troligen nytt klimatskal vilket stjälper det mesta ekonomiskt.
Alt 2 – 30% besparing och energiklass E. Utmanande krav, men möjligt.
Alt 3 – Ej tydligt för oss vilka krav man hänvisar till i b."

Riksantikvaren NO
Energieffektivisering av eksisterende bygninger er et viktig tiltak for å redusere klimagassutslipp og for å effektivisere bruken av energi i samfunnet. Riksantikvaren mener det er riktig å stille krav til energieffektivisering ved rehabilitering av bygg. Samtidig må energitiltakene vurderes opp mot klima- og miljøkonsekvensene ved å tilføre store mengder nye materialer. I mange tilfeller vil små og mellomstore tiltak på bygningskroppen slik den er, ha stor effekt og samtidig best bevare de kulturhistoriske kvalitetene.

Når det gjelder bygninger i Alternative 3 – Protected buildings and buildings worthy of preservation vil vi gi innspill til presiseringer:

- Kirkeloven må ut av definisjonen. Denne ble opphevet i 2020.
- Det er viktig at definisjonen "worthy of protection" inkluderer historiske bygninger som enten er regulert til vern, som er inkludert i en kulturminneplan eller lokale lister, eller som blir vurdert verneverdig.
- Når det gjelder dokumentasjon på vernestatus, vil det i Norge være like relevant at dokumentasjonen kommer fra fylkeskommunen eller kommunen. Riksantikvaren har ansvar for et utvalg fredete bygninger og anlegg, mens fylkeskommunen har forvaltningsansvar for den største andelen fredete bygninger i Norge, samt kompetanse på vurdering av verneverdi for ikke-fredete bygninger og anlegg. Kommunene har ansvar for kulturmiljøforvaltningen i kommunene og har myndighet etter plan- og bygningsloven.

I mange tilfeller er det mulig å oppnå stor reduksjon i energiforbruket i fredete og verneverdige bygninger, men tiltakene må gjennomføres på en måte som ivaretar det bygningstekniske og de kulturhistoriske verdiene i bygningen. Eldre bygninger har en annen bygningsfysikk enn moderne bygg, og krever derfor fagpersoner med kompetanse på eldre bygninger for å vurdere egnede energieffektiviseringstiltak. Bruk av moderne materialer vil kunne føre til tekniske problemer, for eksempel råte. Derfor er det er viktig med tilpassede energiløsninger og riktig materialbruk.

Vårt innspill er at det ved rehabilitering av fredete og verneverdige bygninger bør gjennomføres tiltak som i så stor grad som mulig reduserer tilført energibehov uten at dette går på kompromiss med verneverdier. Riksantikvaren anbefaler å benytte Norsk Standard NS-EN 26883:2017 «Bevaring av kulturminner. Veiledning for forbedring av historiske bygningers energiytelse» for å kartlegge aktuelle energieffektiviseringstiltak for den enkelte bygningen.

Norconsult NO
Alternativt energikrav for fredede og verneverdige bygninger:
Virker ok, men gjelder rammekravet iht. TEK 17 for «vanlige» rehabiliteringer? Dette virker veldig ambisiøst dersom rehabiliteringen ikke er så stor. Et forslag kan f.eks. være å heller ha en prosentvis forbedring sammenlignet med tidligere situasjon.

VTT
In the Energy section new limits have been defined for the energy use of the building after renovation and an alternative requirement for protected/buildings worthy of preservation has been introduced. In addition, the requirements on lighting and white goods are now only activated when these are part of the renovation project. Suggestion for this criterion: Extra points could be awarded for these things, as they are easy to implement during partial renovations and especially full renovations.

The alternative energy requirement for protected buildings and buildings worthy of preservation. This requirement should be optional, and “compensation criteria” could be used to balance out the deviation from the criteria’s requirements.

For example, these could include:

- preservation of the authenticity of protected (listed) sites
- life cycle cost efficiency
- cultural values.

Nordic Ecolabelling’s comments
Nordic Ecolabelling believe that this requirement will lead to actual reduction in demand of the buildings where relevant. In addition, all other mandatory requirements in the criteria must be fulfilled, so we do not see an issue with very minimal renovations getting certified.

It has been clarified in the criteria that the expert accreditation in alternative 2 can also be linked to the company and not only the expert.

Protected buildings and buildings worthy of preservation must document how they fulfil relevant national requirements for the e.g. specific building parts. The text for bullet b) in alternative 3 has been clarified based on the comments:
b) The affected parts of the building must fulfil the relevant requirements in the national building legislation related to the energy performance of the building. Deviations from the general building legislation must be justified according to the classification as protected or worthy of preservation. This can e.g. be restrictions that limit / affect the technical solutions and possibilities in the project. Documentation used for the building permit can be used to verify this when relevant.

Both «fylkeskommunen eller kommunen» are considered relevant national authorities in bullet a) in alternative 3.

O8 Lighting management

Miljøstyrelsen
Miljøstyrelsen foreslår at der stilles flere krav til ny lysprodukter f.eks. ud fra GPP-kriterierne eller Ecodesign kravene.

- https://commission.europa.eu/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-and-requirements/energy-label-and-ecodesign/energy-efficient-products/lighting_en

- https://circabc.europa.eu/ui/group/44278090-3fae-4515-bcc2-44fd57c1d0d1/library/862af61d-a410-4baa-a7b9-22273623db57/details

Miljøministeriet
Hvis lysstofrør og armaturer som udgangspunkt bevares og genbruges i den renoverede bygning, bør ældre armaturer gennemgås med henblik på at identi-ficere og udskifte armaturer med PCB-holdige kondensatorer, se PCB-guide: https://edit.mst.dk/media/gzooomke/mst_pcb_guide_220118.pdf

Peab Sverige AB
"In rooms with access to daylight, the artificial lighting must dim in response to daylight levels.

I klassrum eller kontorslandskap är det stor skillnad på tillgång till naturligt dagsljus beroende av var du sitter i rummet och det blir viktigt var sensorerna placeras och hur de kalibreras och ställs in. Det är alltså avancerade system om man ska ta hänsyn till alla variabler och svåra att ställa in. Idag har vi också ofta solavskärmning i söder, öst och västlägen bland annat för att stänga ute värme och för avbländning."

Norconsult NO
At kravene til belysning og hvitevarer først aktiveres når disse er en del av rehabiliteringsprosjektet:
Virker fornuftig.

Nordic Ecolabelling's comments
Nordic Ecolabelling has decided to focus on lighting management and less on the specific lighting products. In theory a requirement could be set on the energy class of e.g. LED spots according to EU's New energy label schemes. Energistyrelsen in Denmark recommends a minimum of energy class D for LED products[1] , but when assessing the availability for standard products such as spots the availability in the market seems to be very limited. Furthermore, the individual spot units typically have an energy consumption of 4-5 W (typically energy class F) so in total we see a limited environmental potential for further improvement. The requirement is therefore kept in line with the approach suggested in the consultation and the approach in the criteria for New buildings 089.
It is considered that old light installation with potential PCB content is handled in O2.
Dimming of the light according to the daylight level limits unnecessary energy usage and is therefore considered an important measure. The requirement is therefore kept in line with the approach suggested in the consultation and the approach in the criteria for New buildings 089.

O9 Energy efficient white goods

Miljøstyrelsen
Miljøstyrelsen ser nogle udfordringer ved kravet, da kravet kan føre til en ud-skiftning/kassering af fungerende hvidevarer. Er man opmærksom på det, og er det det man ønsker?

Vi foreslår at man foretager vurderinger af, om den miljøgevinst, man opnår ved at udskifte eksisterende hvidevarer med mere energieffektive hvidevarer, opvejer de miljøpåvirkninger, der vil opstå ved produktion af de nye hvidevarer.

[1] https://sparenergi.dk/privat/spar-energi-i-hverdagen/spar-energi-paa-belysning

Miljøstyrelsen oplever, at der mangler en begrundelse for valget af de forskelli-ge energimærkningsniveauer for de forskellige hvidevarer. Vi foreslår at dette evt. begrundes i baggrundsafsnittet. Vi opfordrer samtidig til, at man kigger på GPP kriterierne samt Ecodesign kravene for de forskellige produkter ift. om der er grundlag for at være mere ambitiøse på området.

https://green-business.ec.europa.eu/green-public-procurement/gpp-criteria-and-requirements_en

https://commission.europa.eu/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-and-requirements/energy-label-and-ecodesign_en

Miljøministeriet
Der kan med fordel anlægges en totalomkostningstilgang for forventet energi-forbrug af eksisterende versus indkøb af ny produkt(er) + forventet energi- (og evt. vand-) forbrug for nye hårde hvidevarer sammenlignet henover en 10-årig periode (afhængigt af de eksisterende hårde hvidevarer, hvis levetid må for-ventes at være mindst 10 år for gængse køle-/fryseskabe, vaske- og opvaskema-skiner og 10-15 år for komfurer.

Peab Sverige AB
Samma behov av undantag som för nyproduktion.

NCC SE
The high requirements on white goods results in high costs for renovation projects. We would like to see the requirement levels like the revised requirements for new buildings Svanen 4.2 or even less, because these costs give low level of energy effeciency and results in higher rents for residents.

Norconsult NO
At kravene til belysning og hvitevarer først aktiveres når disse er en del av rehabiliteringsprosjektet:
Virker fornuftig.

Nordic Ecolabelling's comments
The requirement only applies to Household appliances and professional kitchen appliances installed as a part of the renovation project. Therefore, we do not see that this should lead to unnecessary replacement of white goods.

The background document has been updated with justification of the requirement levels. The required levels of the white goods are in line with the requirements in the criteria for New Buildings 089. This includes updating the requirement with the time limited exemption on some specific white goods that was decided in the criteria for New buildings 089 during the consultation period for Renovation of buildings.

4.3.6 General comments chapter 6: Climate

Finnish Property Owners Rakli
Have there already been emission limit values for certain materials (e.g. concrete) or has this become new to this set of criteria? What are the levels of those limit values and where did they come from? Are these limit values going to be updated with some cycle?

Miljøstyrelsen
Der kunne med fordel tilføjes et krav om en plan for, at der ikke købes for meget overskydende materiale ind under konstruktionen af bygningerne. Så dette ikke senere skal behandles for bygge- og anlægsaffald.

VTT
In the section of climate, new requirements for materials with a high climate impact such as concrete, steel and aluminum have been introduced. These are similar to the requirements in generation 4 of the criteria for New Buildings.
This section has a rather misleading title because all it really does is present the climate impacts of a few materials (whose impacts are great, of course). The text is competent, but it could be its own paragraph in the Rakennusmateriaalit section. “Climate impacts” or “climatic effects” is more of an umbrella concept that covers energy, resource efficiency, circular economy, and materials as referred to here.
The term could be left out entirely.

Nordic Ecolabelling’s comments
Requirements for concrete, steel and aluminium are new in this generation of the criteria but is already implemented in the criteria for New Buildings. The background for the limits and requirements can be seen in the background document.

It is not considered that a requirement with high steerability can be implemented for limiting unnecessary spillage of building materials. It will be reconsidered in the next revision.

The requirements for steel, aluminium and cement could be placed in different places in the criteria as VTT point out in the comment. The current placement is considered reasonable and will not be changed.

O10 Cement and concrete

Steypustöðin ehf
"Page: 27: Climate O10
The EPD´s of the concrete associations are generic EPD´s with wide variation of cement contents e.g. in Denmark 10-18% for C25 concrete leading to a wide variation of CO2 footprint. Ready-mix producers have to the specifications of the designers and the standards. This leads no a large number of mix-designs. It is not possible to generate EPD´s for every concrete type. Instead, generic EPD are created based on mean values. It would be better in my point of view to use verified calculations based on the producers specific data. This will lead to more competition to reduce the CO2 footprint.
It is not possible to publish EPD for every concrete type. The engineering and design of structures are leading to endless types of mix designs. Standard concrete types are very often not used. In Iceland there are no generic EPDs published by the concrete association. Verified calculations based on producer specific data should be allowed."

Nordic Ecolabelling’s comments
EPD’s 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.*

Compliance with this is evaluated nationally. Bullet two will provide some flexibility in relation to what documentation that can be accepted in each country.

Nordic Ecolabelling has had additional dialogue with the Icelandic concrete industry. Based on this it was decided to add a requirement for Iceland for cement/concrete that is in closely aligned with the cement/concrete requirement in the criteria for New Buildings 089. See specific requirement text below:

- *When the following concrete construction parts (foundations, load bearing systems, floor decks, wall elements, roof elements or facade elements) are newly casted 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.*

O11 Steel

No consultation input.

O12 Aluminium production

No consultation input.

4.3.7 General comments chapter 7: Resource efficiency and circular economy

No consultation input.

O13 Waste management

Wästbygg
""At least 70% by weight of the non-hazardous construction and demolition waste generated on the construction site must be prepared for reuse, recycling and other material recovery. "" This might be difficult when demolition waste is included!"

Ragn-Sells Recycling AB
Glass can be recycled again and again. The only limit is the degree of contamination. Windows without colour, films, lamination, fire protected properties or hazardous materials should be recycled into new float glass. The windows must be handled intact and secured on a pallet to ensure lowest amount of contamination. These windows can Ragn-Sells treat and transfer into a glass cullet, a raw material used in float glass production and thus decrease the CO2 footprint from glass production with 50%. Laminated glass should be downcycled and used either for container or glass wool production minimizing the need for use of escavating new raw materials.

Finnish Property Owners Rakli
For example, in point O13 the term "selective demolition" (“valikoiva purkaminen”) is mentioned: Would you clarify what is meant by the term "selective demolition"?

VVS Fabrikanternas Råd
Conditions for waste management is largely connected to our previous feedback on components and materials for reuse. It’s important to understand that the complexity of waste management, or reuse, will increase for our product segments in coming years.

Peab Sverige AB
"Inte rimligt att renoverings/ byggprojekten ska räkna in avfall från fabrik. Ej standard i branschen.

""Prepared for.."" - Peab tolkar detta krav som att det rör utsorteringsgraden/källsorteringsgraden i byggprojektet i enligthet med Byggföretagens tolkning. Hur är Svanens tolkning - det bör tydliggöras.

""Selektiv rivning ska användas"" - frågan är i vilken utsträckning, finns tid och pengar för att separera materialen från varandra, demontera och sortera. Naturvårdsverket har ett undantag för sammansatta konstruktioner, borde kanske finnas med även här?

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.
- I naturligt förekommande material bör även park och trädgårdsavfall ingå (är en inkonsekvens även i EU s list of waste att det inte ska exkluderas, det är också naturliga material som ej bör räknas in i byggnationens avfall)

Untreated wood, wood treated with hazardous substances (wood classified as hazardous waste) and wood treated with non-hazardous substances, must always be sorted separately.
- Varför särksilt skrivning för trä? Ingår i avfallslagstiftningen att trä ska sorteras ut, även EU borde även vara lika i Norge?

Unsorted/mixed construction waste cannot be counted as recycling/material recovery unless it is documented to be separated subsequently by the waste contractor.
- Blandat avfall som eftersorteras bör inte räknas in oavsett om det sorteras i efterhand. Lagstiftningens inriktning är att allt avfall ska källsorteras.

The plan must be made in accordance with the EU Construction and Demolition Waste Management Protocol.
- Det här blir inte tydligt, vad menar man exakt med att planen ska vara i överensstämmelse med EU CDW management protocol?

After finished project, a report documenting the requirement threshold limit (70%) and the following information must be sent to Nordic Ecolabelling: 3 bullet points
- Det behöver tydliggöras vad som avses vara 70% - är det källsorteringgraden eller materialåterviningsgraden? Det bör vara 70% källsorteringsgrad - spill som är sorterat i separata fraktioner per materialslag på byggarbetsplatsen och därmed förberett för att kunna materialåtervinnas i nästa steg. (Byggföretagens tolkning)
- 70% materialåtervinningsgrad inte är rimligt - idag ligger den på runt 30% i snitt för icke farligt byggavfall. Det är olika försutsättningar på olika håll i landet och rapporteringen enligt RoD koderna sker inte löpande i varje projekt. RoD kodernas återvinningskod behöver brytas ner så att materialåtervinning/cirkulär återvinning till nya material kan skiljas från tex återvinning av gips som konstruktionsmaterial på deponier.
Punkt 1 tydliggör gärna om det är totalt inkl Icke farligt avfall, farligt avfall och naturligt förekommande material schaktmassor/park o trädgårdsavfall
Punkt 2 Hur ska avfallsfraktionerna redovisas - standardisering av benämningar enligt Beast eller enligt EWC eller är det fritt val?
Punkt 3 vad avses med ""the bullets above""? Här bör det istället beskrivas mer exakt hur ""material recovery degree"" ska beräknas utifrån fraktioner i projekt.
- Om det är så att det enbart är materialåtervinningsgrad som ska redovisas enligt Svanen så bör även källsorteringsgrad redovisas.

Fråga från Svanen: Krav O13 Byggavfallshantering – Erforderlig andel i förhållande till både rivnings- och byggavfall.
Svar: 70 % källsorterat är ganska hög nivå för ett rivning/ombyggnadsprojekt. Se även kommentar ovan kopplat till tolkningen av ""prepared for"", om Svanens tolkning är annan än Byggföretagens är detta mycket svårt att uppfylla."

Norconsult NO
Krav O13 Byggavfallshåndtering – prosentandelen i forhold til både rivning og byggavfall: Mulig 70 % er ambisiøst og at bransjen ikke er der helt enda. Et forslag er 50 %, så kan 70 % f.eks. være poengkrav.

Statsbygg og Forum for miljøkartlegging
Følgende tekst bør legges til: If more hazarodous waste is found during the remediation/demolition and there is a need for supplementary sampling and analysis, the person that has written the report should be contacted and together with the contractor decide upon where and how many samples that should be taken. If possible, it is also strongly recommended that the person that has written the report at least makes one inspection during the remediation/demolition period, depending on the size of the project. This should also be agreed upon in the start-up meeting; how and who should decide when an inspection is suitable. A short summary of the inspection should be written.

Som tidligere nevnt, er dette kravet en sammenblanding av O5. Vi har foreslått i O5 hvordan vi anbefaler å strukturere dette for å få logikk og konsistens i kravene.

Vi er ikke kjent med hvilken materialgjenvinningsgrad man faktisk klarer å oppnå i Norge per dags dato. Dersom betong tas med kan man klare en vesentlig høyere grad enn hvis ikke - men det er svært problematisk i Norge pga innhold av Cr6+.
Å formulere dette kravet er svært tidskrevende. Her bør dere antakelig ta inn noen eksperter, samt kontakte avfallsselskapene for å høre hvor stor andel av de ulike avfallsfraksjonene de faktisk klarer å materialgjenvinne og ev. kontakte noen entreprenører/prosjekter som har jobbet målrettet med å få høy materialgjenvinningsgrad for ev. å kunne sette en prosent - som faktisk er oppnåelig og realistisk for noen å oppnå, men fortsatt ambisiøs.
Vi har derfor ikke brukt tid på å forsøke å formulere dette kravet ytterligere om.

70% blir alt for strengt ift. Riving. Vi anbefaler sterkt at det skilles på renovering og nybygg. Vi anbefaler at det for nybygg heller stilles krav om maks 30 kg avfall/m2 da det vil være et vesentlig større miljømessig bidrag enn å stille krav til materialgjenvinning av avfallet generert.

Hvorfor skal bare avfallsplanen (waste management plan) sendes, men ikke feks miljøkartleggingsrapport osv? Burde det ikke være likt?

Konvolutt 1: Kan ikke se at dette står i selve kravteksten? Forstår heller ikke helt formuleringen: Will be used? Menes ikke hvordan det vil bli utført?

VTT, Finland
The new section on circular economy has new requirements on waste management and the reuse of construction products. The target of 70% is tough and appropriate. The related costs of sorting demolition should be monitored.

Requirement O13 Construction waste management – The required percentage in relation to both demolition and construction waste. This metric may be difficult to apply in practice. An alternative metric could be introduced in addition to the absolute percentage, e.g.

Nordic Ecolabelling's comments
Selective demolition is now explained in the definitions: In selective demolition the building is taken down in such a way that the materials of can be sorted correctly and subsequently used the "best possible". At the same time the materials which contain problematic amounts of environmentally harmful substances are sorted out and handled. "Best possible" means that the materials are used as close to their original function and thus as high up in the waste hierarchy as possible considering an overall assessment of costs and environmental effects. Demolition, where the building is first demolished and the materials are then sorted before disposal from the demolition site, is not considered selective demolition. Further details can be found in the report by Miljøstyrelsen

Denmark: Selektiv nedrivning i byggebranchen (https://www2.mst.dk/Udgiv/publikationer/2022/02/978-87-7038-359-2.pdf).

A separate requirement has been made for selective demolition (O8) to make it clearer what should be documented. In Sweden it is required that windows and window doors are sent for flat glass recycling. For the time being is it not considered possible to implement such a requirement on flat glass in the other countries.

Nordic Ecolabelling has clarified that the project must hand in waste management plan(s), as well as report after finished project. Projects must document both demolition and construction phase, as according to the EU taxonomy.

O14 Waste sorting inside the building

Satakunnan ammattikorkeakoulu, Satakunta University of Applied Sciences
Luokkahuoneissa ja yleisissä tiloissa tulee olla lajitteluastiat vähintään kahdelle jakeelle. Iso kustannus ylläpitokustannuksiin. Ohjataanko enemmän rakennuksen käyttöä kuin itse korjausrakentamista?

English translation: There must be sorting vessels for at least two fractions in the classrooms and common areas. This is a big expense for maintenance costs. This steers the use-phase of the building than the renovation phase?

Nordic Ecolabelling's comments
Two fractions in classrooms and common rooms are considered reasonable taking into consideration the waste that is produced in these areas. Furthermore, teaching children about waste management is essential for the future.

O15 Hazardous substances in reused construction products and materials

Miljøstyrelsen
I dokumentet anføres: "When an expert cannot verify the lack of harmful sub-stances in reused products, it is necessary to perform a laboratory analysis to ensure that any contaminated products will be taken out of the circular loop."
Hvordan skal proceduren hos laboratoriet være for denne type analyser? Hvor-dan skal der prøvetages, hvor mange prøver, hvilke kemikalier skal der testes, osv.

Miljøministeriet
Der henvises til kommentarer til Kriterium 2, 3 og 6 fsva. kemikalier i genbrugte produkter.

Peab Sverige AB
"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 Appendix 1. This requirement

is aimed at products, fittings and materials identified in the mapping of components and materials for reuse and from other projects.

- Bör ingå i O2 och där materialinventering och fuktinventerng blir viktiga förutsättningar för bedömning av vad som är lämligt att återbruka (o3)

Det är inte rimligt med analys av återbrukat ""nyare"" material. Exempelvis undertaksplattor, innerdörrar, inv partier, textilplattor. Ej relevant att kravställa att en expert gör en riskanalys på den typen av material.

Det borde vara ETT krav som behandlar återbrukat material. Det kan i sin tur delas upp i återbrukat inom projektet och övrigt återbrukat (O3 + O15)."

Statsbygg og Forum for miljøkartlegging

«When reused construction products, fittings and materials are used, a risk analysis documenting the presence of hazardous substances must be conducted by an expert*.": Er dette hensiktsmessig alltid uansett konsentrasjon? Vi synes ikke det så lenge kravet er at man ikke kan overskride grenseverdiene gitt i vedlegg 1. Ellers sier dere at det alltid skal utføres en risikovurdering; det synes vi blir for omfattende og ikke hensiktsmessig. En risikovurdering bør utføres dersom noen grenseverdier overskrides. Slik de øvrige kravene er formulert, kan alt ombrukes forutsatt at det er under farlig avfallsgrensen og grenseverdiene i vedlegg 1 - noe som vi tenker virker logisk. En risikovurdering utføres normalt dersom man ønsker å bruke noe som overskrider visse grenseverdier.
En risikovurdering kan si noe om helsefare og om man anefaler å "innkapsle" bygningskomponenten eller om den kan brukes slik den er.
Vi stiller spørsmål ved om dere bør ha med risikovurdering eller ikke.

"If the expert identifies any risk of undesirable substances (according to Appendix 1 and relevant national legislation concerning what concentrations is considered hazardous waste), analyses must be performed": Forstår ikke dette - det skal jo allerede være tatt analyser i miljøkartleggingen; det er jo de resultatene som danner grunnlag for å gjøre en risikovurdering. Vi tror dere her misforstår noe av teksten slik den tidligere var formulert. Akkreditert lab står ikke oppgitt andre steder i dokumentet, slik det gjorde i sist versjon i Bilag 3, punkt 2. Det bør det gjøre ifm. miljøkartleggingsrapporten. Det er også fjernet en setning om akkrediterte analysemetoder; vet ikke årsaken til at det er tatt bort, det er og uheldig, mener vi. Man bør bruke akkrediterte analyser i så stor grad som mulig. Det sikrer sikrere og mer sammenlignbare analyseresultater uavhengig av hvilken lab som utfører dem.

Kompetansekrav ekspert: Hva mener dere med å "dokumentere" miljøgifter?

Dere kan vurdere om prosjektene skal dokumentere hvor i bygningen de er bruk, for eksempel tegning.

"Risk analysis from expert that documents the presence of undesirable substances listed in Appendix 1 and relevant national legislation.": Synes denne formuleringen er rar og forstår ikke hensikten. Dokumentasjon av disse miljøgiftene kommer jo i miljøkartleggingsrapporten, og det kan ikke være hensikten med risikovurderingen. Risikovurderingens hensikt må være å angi om det foreligger noen risiko eller ikke knyttet til ombruk over visse grenseverdier.

"Where relevant, an analysis report from an accredited laboratory on the substances listed in Appendix 1 and relevant national legislation.": Som nevnt, litt merkelig å ha dette her. Analyser i denne forbindelse burde som nevnt ikke være relevant og det er et annet sted dette med akkreditert lab (og analyser bør stå - ev alle steder der analyser er relevant).

Nordic Ecolabelling's comments

This requirement is only for reused products from external sources, it's therefore a separate requirement. O2 is only for internal reuse. The expert documents through a risk assessment or analysis. A risk assessment is considered necessary to say that a material may be reused, also for newer products. There is always a need for a risk assessment, even if analysis is performed. Only a selection of substances will be analysed, so there is a need to address the other substances not analysed. There may

also be other considerations than harmful substances that must be brought to attention, such as the state of the product.

When analysing materials for harmful substances the expert will know how to sample. Analyses must be performed by accredited laboratory. The results are compared to threshold values in Appendix 1. Use of accredited laboratory is now repeated through the criteria, as suggested in the consultation.

There is no option of encapsulation for external reuse, this is only relevant for products retained in the building.

Reused products must be a part of the logbook, and here the project must state where it is used.

Consultation response based on reused products and chemicals are answered earlier in this document.

4.3.8 General comments chapter 8: Chemical products, construction products, construction goods and materials

Wästbygg
Not necessary to have all the chemical details in the criteria document. Better to only stress that all building materials and chemical products need to be listed in the HPP.

Wästbygg
Please sync this requirement with CSRD!

Nordic Ecolabelling's comments
The requirements that apply in the HPP/SCDP are defined in the criteria document and therefore all text must be here.

The Scope of CSRD and this criteria are not aligned. We set requirements where we find relevans, potential and steerability.

O16 Logbook

Statsbygg og Forum for miljøkartlegging
Kan ikke se at det spesifikt står noe her om at det må fremkomme i loggboken hvilke komponenter som er ombrukt og hvor slik dere skriver et sted at det skal gjøre. vi anbefaler at det fremkommer her.

Nordic Ecolabelling's comments
In the requirement O16 logbook the following is written:" Reused products must also be registered in the logbook."

O17 Classification of chemical products

No consultation input.

Nordic Ecolabelling's comments
It has been clarified that chemical products needed for the treatment of e.g. mould must fulfil the chemical requirements in chapter 11. An exemption is implemented as such products are classified Hazardous to the aquatic environment:

- *Chemical products classified H400, H410 and H411 used for the treatment of mould and similar identified in O4 Moisture survey.*

O18 CMR substances

No consultation input.

Nordic Ecolabelling's comments
It has been clarified that chemical products needed for the treatment of e.g. mould must fulfil the chemical requirements in chapter 11. An exemption is implemented as such products are classified Hazardous to the aquatic environment:

- *Chemical products classified H400, H410 and H411 used for the treatment of mould and similar identified in O4 Moisture survey.*

O19 Preservatives in indoor paint and indoor varnish

Miljøstyrelsen

I baggrundskommentaren til O19 og O20 om grænseværdier for konservering-smidler i maling, lak og andre kemiske blandinger til indendørs brug er angivet at "The requirement and the levels for highest permitted preservatives are part-ly harmonised with equivalent requirements in the criteria for Nordic Swan Ecolabel indoor paints and varnishes and for products for indoor use in the criteria for Nordic Swan Ecolabel chemical building sproducts respectively". Hvorfor er krav til indhold af konservering ved renovering kun delvist harmoni-seret med Svanemærkets krav til indendørs maling og lak? Hvordan afviger disse fra hinanden og hvad er årsagen til dette? Dette kunne med fordel have været uddybet i baggrundskommentaren, så det er tydeligt om beskyttelsesni-veauet sænkes i forbindelse med renovering.

Nordic Ecolabelling's comments
Two separate sets of threshold limits apply in this criteria, one for paints and varnishes and another for other products for indoor use. Each of them is harmonized with the corresponding threshold limits in the criteria for Nordic Swan Ecolabelled indoor paints and varnishes and the criteria for Nordic Swan Ecolabel chemical building products respectively. The text has been clarified in the background.

O20 Preservatives in other chemical products intended for indoor use

See O19 for relevant consultation input and Nordic Ecolabelling's comments.

O21 Prohibited substances

VVS Fabrikanternas Råd
"PFAS is mentioned but this is a huge group of substances with various uses and varied risks. There is an ongoing process to evaluate PFAS and find a way to phase out the use without creating too much unnecessary or worse problems. We would recommend Svanen to await the results of that ambition and align Svanens criteria with the rest of Europe.

Chromium VI is also mentioned where work is being done at EU-level. The alternative, Chromium III, has been proven to have severe health and environmental issues as well, mainly due to the use of Boric acid. There is a project planned with RISE to look at a better replacement for Chrome VI than Chrome III. ECHA have also begun to evaluate the possibility of downgrading Chrome VI from the Authorization list to the Restriction list. It is too early to know exactly what that means. As for PFAS, we recommend Svanen to await the results of ECHA and align Svanens criteria accordingly."

Nordic Ecolabelling's comments
Based on the precautionary principle Nordic Ecolabelling aims to limit the use of harmful and potentially harmful substances. The substances mentioned in the comments are covered by this and are therefore not allowed in Nordic Swan Ecolabelled renovations or New Buildings.

O22 Nanoparticles in chemical products

No consultations input.

O23 Epoxy relining

Peab Sverige AB
"Detta innebär idag dubbelt så stor kostnad.
Kan man ha olika krav för inkommande vattenledningar och avloppsledningar? "

NCC SE
The Sweden chemical agency report was not clear regarding the health risks of epoxy relining. Are the health risks for epoxy and the costs for alternative relining investigated? Has a cost/risk analysis been done?

Nordic Ecolabelling's comments
Based on the precautionary principle Nordic Ecolabelling aims to limit the use of harmful and potentially harmful substances. The substances used in relining covered by this requirement are covered by this and are therefore not allowed in Nordic Swan Ecolabelled renovations or New Buildings.

Nordic Swan Ecolabelled renovated buildings protect human health and the environment by ensuring that endocrine-disrupting bisphenol from epoxy cannot migrate to drinking water or through wastewater to sewage treatment plants from relined pipes. We are aware that this can lead to increasing costs in the projects.

O24 Halogen free cables

NCC SE

Does existing cables need to be replaced?

Nordic Ecolabelling's comments
Existing cables are covered by O2 and will only have to be replaced if it found relevant in this requirement.

O25 Surface layers on floors, ceilings, walls, doors, and windows

PVC-Forum/IKEM
PVC Informationsrådet
Finnish Plastics Industries Federation
PVC Forum Norge
Joint statement 27
October 2023
Criteria will enable consumers to choose the most responsibly produced PVC building products for renovation

The Nordic PVC Network is pleased to see that the Nordic Swan Ecolabel recognises the positive developments PVC has undergone in terms of sustainability. However, we find it peculiar that this progress does not immediately lead to the Swan setting criteria for PVC building products for renovation. As PVC is the most used plastic in building &

construction, and is regaining lost market shares, it would only be logical that such criteria are set. The argument is that establishing such criteria would be too complicated. Our message is that setting criteria for PVC does not have to be a complex task. In fact, it can be distilled into a few, but effective, guidelines.
Firstly, we can insist that the raw material for the PVC products must be produced in Europe with European PVC resin by companies that are part of VinylPlus, the European PVC industry's commitment to sustainable development. This ensures that the PVC production surpasses the strict environmental and health standards set by EU BAT reference documents.
Secondly, we can demand that the company selling the PVC products must partake in extended producer responsibility by joining a PVC collection and recycling system. This will ensure that PVC waste is managed responsibly and recycled into new products. Today, such a system exists in Denmark for rigid PVC in form of WUPPI. By enabling both rigid and flexible PVC products to be Swan labeled, manufacturers would be incentivised to establish collection and recycling systems for rigid PVC in the other Nordic countries, as well as for flexible PVC.
Lastly, regarding criteria for the products' content. We can simply state that PVC products should not contain substances of concern, i.e. classified phthalates, heavy metals, or any other substances of concern. This ensures that the products are easily mechanically recyclable without any harmful legacy additives at their end-of-life.
With these simple criteria, we can take a significant step towards making PVC more environmentally and health-wise acceptable without overcomplicating matters.
At the same time, such criteria will help consumers choose responsibly produced European PVC products over imported goods from China and elsewhere that do not follow the same strict regulation as in Europe. This is important as consumers' have changed their attitude towards PVC and increasingly buy imported PVC products, as has been documented by the Danish EPA (Miljøstyrelsen: Kortlægning af forsyning af PVC i Danmark, 2021).

The Nordic PVC Network is open to engaging in a constructive dialogue with the Nordic Swan Ecolabel on establishing pertinent criteria.
Signatories:
PVC Information Council Denmark
PVC Forum Norway
PVC Forum Sweden
Finnish Plastics Industries Federation

Nordic Ecolabelling's comments
The requirement in the criteria for renovation of buildings are aligned with the corresponding requirement in New Buildings 089. Nordic Ecolabelling does not find that the situation has changed in the market since the new criteria for New Buildings 089 was released in March 2023.

As mentioned in the background text for the requirement it is worth noticing that PVC products today can be produced in a much more circular way as additives such as phthalates and lead/cadmium-based stabilisers can be replaced by non-hazardous alternatives. Issues associated to PVC products end-of-use are being addressed, as both techniques to safely incinerate PVC waste and handle neutralisation residues in a responsible manner exist, while take-back, collection, identification, and separation processes to increase the amount of PVC which is recycled, already exist or are being developed. It will however require a relatively extensive list of requirements to regulate the PVC used in buildings according to this. Nordic Ecolabelling will follow the development closely but do not currently see the possibility to allow PVC more generally without overcomplicating the criteria for Renovation of buildings. Exemptions are made for areas or surfaces with specific needs for high durability or slip resistance (related to working environment legislation) and for smaller details.

Nordic Ecolabelling will follow the development closely and stay in contact with the Nordic PVC industry.

O26 Durable wood for outdoor use

No consultation input.

O27 Copper

VVS Fabrikanternas Råd

"According to the criteria, tap water pipes must not consist of copper, with the following exceptions:

- Visible pipes in bathrooms.
- Water fittings connecting pipes, such as couplings or manifolds.
- Installation cabinets, such as manifolds 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.

We are questioning the restrictions on copper introduced by Svanen. We see no reason for excluding visible pipes in general or closed pipe systems. Two impartial factual reviews have been published regarding copper, from the Swedish IVL and the Finnish Environment Agency SYKE. Both have stated that there is no reason to limit copper in buildings' plumbing installations at national or Nordic level:

• IVL, BASTA 2017: https://www.bastaonline.se/koppar-i-byggprodukter-ny-rapport/
• Finlands Miljöcentral 2020: https://www.syke.fi/sv-FI/Forskning__utveckling/Forsknings_och_utvecklingsprojekt/Projekt/Miljoeffektbedomning_av_rormaterial_som_anvands_i_byggnader

Banned copper products are made from almost 100 percent recycled copper. This gives copper a low climate footprint while maintaining high quality. The reason for limiting the use of copper is difficult to justify. "

Scandinavian Copper Development Association

Nordic Swan Ecolabel's key drivers are circular economy, life cycle perspective and UN Sustainable Development Goals. EU Fit for 55 goal is an extremely important driver for building sector. Copper is a suitable material for buildings to contribute positively to these aspects. Copper is a fully recycled and recyclable building material, with very low carbon footprint as it is produced out of 100 % recycled raw materials. It produces no waste when installed or demolished.

According to Nordic Ecolabelling, sewage sludge is "the primary reason why Nordic Ecolabelling wants to limit copper as a material in tap water pipes and as a roof and facade material". There is no evidence of negative environmental impacts of copper in sewage sludge.

Copper's environment and health properties have been evaluated according to EU's Existing Substances Directive and thereafter following requirements of REACH registration. No risks of using existing products have been identified. Copper is not a hazardous substance according to CLP. Copper is not nationally prioritized substance and does not belong to phase-out nor risk reduction substances. Copper is approved for drinking water use by WHO and EU, and by type approvals in Nordic countries, as well as in 4 MSi system for approval of materials in contact with drinking water. No other ecolabelling nor sustainability certifying body is restricting copper use.

SCDA would like to refer to the previous comments SCDA comments about Swan New Buildings criterion O29 and add scientific and statistical references to each correction of Nordic Ecolabelling‘s background document. Sources for referenced information are attached as links and marked with yellow.

SCDA has provided for Nordic Ecolabelling sources with unbiased scientific evidence and statistics primarily from Swedish authorities during past consultations of Swan criteria for new buildings and renovations. Also renowned Nordic governmental research institutes SYKE and IVL provided evaluations of the criteria. No evidence of caused harm has been proven.

As there is no evidence of proven negative environmental effect, measurable benefit from the restriction criteria can neither be reported. An environmental requirement without verifiable problem to solve nor verifiable benefit is in breach of “the basic concept of Green Public Procurement, which relies on having clear, verifiable, justifiable, and ambitious environmental criteria for products and services, based on a life-cycle approach and scientific evidence base.” Source: https://green-business.ec.europa.eu/green-public-procurement_en

Introduction

Copper concentrations in environment are determined by natural backgrounds. There is no evidence that diffuse emissions from copper drinking water tubes or roofs would cause elevated harmful levels of copper in water, sewage sludge or soil in Sweden as nowhere else either.

Sources:
Vattenmyndigheter: Samrådet om vattenförvaltning 2021, Status classification copper 2018 VISS water information system
Naturvårdsverket: Rening av Avloppsvatten i Sverige 2020
SCB: Utsläpp till vatten och slamproduktion 2018

Stockholm surroundings water quality; green = good status
Source: Stockholm City Miljöbarometer
https://miljobarometern.stockholm.se/miljogifter/koppar/koppar-i-ytvatten-biotillganglig-halt/compare:

Nordic Ecolabelling
background document claims:

“The largest sources of copper spreading into the environment are via tap water and road traffic. Sheet metal on the outside of buildings (roofs and facades) and contact cables for the railway are also relatively large sources. The primary recipients of the copper differ. For water mains, it is the sewage treatment plant, while the distribution of copper in road traffic primarily ends up in stormwater and soil. A predominant percentage (60–80%) of the copper entering the treatment plants originates from tap water pipes in properties.”

SCDA corrections:

All tap water and part of storm water run-off from roofs and facades end up in sewage treatment plants (STP). In Sweden copper emissions from all STPs have been estimated to be 3,4 % of annual diffuse copper emissions (without counting estimated emissions of antifouling paints into total). Source: SMED rapport 15 2005: Uppskattning av utsläpp för Cd, Hg, Cu och Zn på TRK-områden. This data is old but can give order of magnitude of the mentioned sources.

How big share of copper flow to sewage treatment plants is made up by leaching from water supply systems, has only been estimated in Sweden by Stockholms Miljöförvaltning. Latest estimate is ”more than 50%” thus according to this estimate components of water supplying systems could be source of 1,7 % of Sweden’s diffuse copper emissions. Source: https://miljobarometern.stockholm.se/miljogifter/koppar/koppar-i-rotslam/.

Release from water supply systems to sewage treatment plants in Stockholm has been estimated 3500 kg/a in 2013. Source: Ulf Mohlander/Miljöförvaltning 1992 and Sales department/Nibe; supporting information of Monitoring urban copper flows in Stockholm Sweden, Amneklev et.al. 2016.

Other sources to sewage treatment plants have not been estimated in Amneklev study. Neither how much of this estimated share is assumed to originate from copper tubes which are covered by criteria 027 in Nordic Ecolabelling criteria for new buildings or renovations.

“A large part of the copper that reaches the treatment plants via wastewater ends up in the sludge. Unfortunately, the general positive trend for reduced levels of metals in the sludge does not apply to copper and zinc. One reason is that copper is largely built into the infrastructure and it is therefore not as easy to reduce the supply of copper as it is for other metals that should be reduced in the cycle.”

A significant decrease in concentration of copper in sewage sludge took place already before 1991, and copper is safely under the limit value, red line in picture below. As an example, statistics from Henriksdal sewage treatment plant (STP):
Concentrations of copper in Swedish sewage sludges are and have always been on safe levels well under limit value 600 mg/l:

Copper and zinc in sludge from municipal sewage treatment plants 2000–2018. Median values for STP for 20 000–100 000 person equivalents. Source: Naturvårdsverket: Rening av Avloppsvatten i Sverige 2020

It is indeed well known that copper is captured in sewage sludge, and this can be considered as a good way for reintroducing copper to circulation by using it as fertilizer to agriculture or other green area building, not wasting a valuable resource even from diffuse emissions. It is safer and healthier than any other substance leaching out of water supply systems of any kind. Copper is by far the most thoroughly researched building material in the world by its health and environmental properties ECHA: Copper Voluntary Risk Assessment Reports. Copper is also added to agricultural fields as chemical supplement, manufactured on purpose for fertilizer use. Copper in sewage sludge replaces or complements the addition of chemical supplement.

“The Swedish Environmental Protection Agency states that the copper levels found in arable land do not show negative microbiological effects, but that the margin is small. Both the background content of copper and local factors varies across the country. To provide general protection against the effects of copper, it is therefore justified to have stricter requirements regarding copper for the return of sludge. The Swedish Environmental Protection Agency further states that the supply of copper must specifically be reduced for sludge to be recycled in a manner that is sustainable in the long term. This is important as increased recycling of phosphorus from sludge is desirable from a resource efficiency and recycling point of view. This is the primary reason why Nordic Ecolabelling wants to limit copper as a material in tap water pipes and as a roof and facade material.”

The information presented by Nordic Ecolabelling from Swedish EPA is based on a 10-year-old report (NV 6580 2013), and science has proven thereafter that the precautionary principle to restrict copper on agricultural fields has been counterproductive. No threat that has been described in that EPA report has realized. No evidence of microbiological effects has been seen. No need has risen for stricter limit values for copper.

On the contrary, according to Jordbruksverkets gödslingsråd 2021 long term trend requires growing attention to copper deficiency in agriculture which is an increasing problem in Sweden. In Jorbrukverket's fertilizing instructions higher amounts of copper are recommended than for sludge, from 500 to 1000 g/ha/year.

The latest Government report about handling of sewage sludge in Sweden, Hållbar slamhantering SOU 2020:3 recognizes copper as essential nutrient and does not address any need to reduce copper in sludge nor in agriculture.

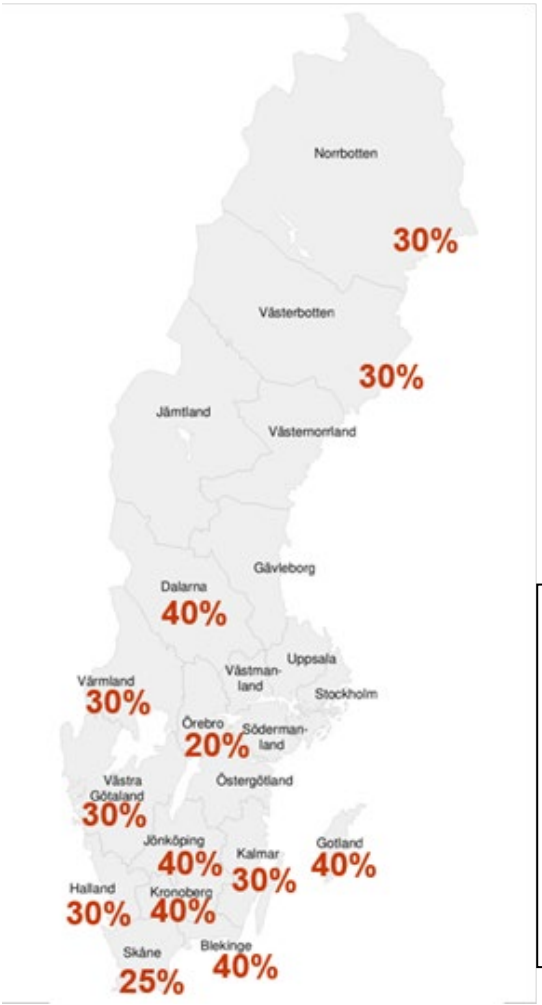
Copper is an essential trace element in agriculture, not a limiting factor for spreading sewage sludge to agricultural fields. Limit for fertilizing with sludge containing copper in Sweden is 40 mg/kg in agricultural soil. Sources: SNFS 1994:2 - Konsoliderad Kungörelse med föreskrifter om skydd för miljön, särskilt marken, när avloppsslam används i jordbruket, SLU Jan Eriksson 2021, Tillståndet i svensk åkermark och gröda : data från 2011-2017

In Sweden there are 3,7 % of agricultural fields containing over 40 mg/kg copper, primarily around Stockholm and Uppsala. Source: SLU, Mark och grödoinventeringen Sludge can be used on all other fields in Sweden, which makes 96,3 % of agricultural fields.

Swedish agricultural area is 2 600 000 hectares. 25 % of it, which makes 650 000 hectares has insufficiently copper in soil for farming plants to grow and has to be fertilized with copper. Source: SLU, Mark och grödoinventeringen On these 650 000 hectares which have insufficiently of copper, 500 000 tons of sewage sludge would be easily consumed according to Swedish regulation. in Sweden 200 000 tons of sewage sludge per year is produced. Table: Yara:

Län	Areal med Cu-behov, %	Län	Areal med Cu-behov, %
Blekinge	40	Norrbotten	30
Kronoberg	40	Skåne	25
Gotland	40	Örebro	20
Jönköping	40	Östergötland	5
Dalarna	40	Södermanland	5
Halland	30	Stockholm	5
Kalmar	30	Västmanland	5
Västra Götaland	30	Uppsala	5
Värmland	30	Jämtland	5
Västerbotten	30	Västernorrland	5

Det fattas ofta koppar i svenska åkerjordar. Tabellen visar hur stor del av arealen som ligger under gränsvärdet för kopparbrist, dvs lägre än 7 mg Cu/kg jord. (Källa: SLU, Mark- och grödoinventeringen.)

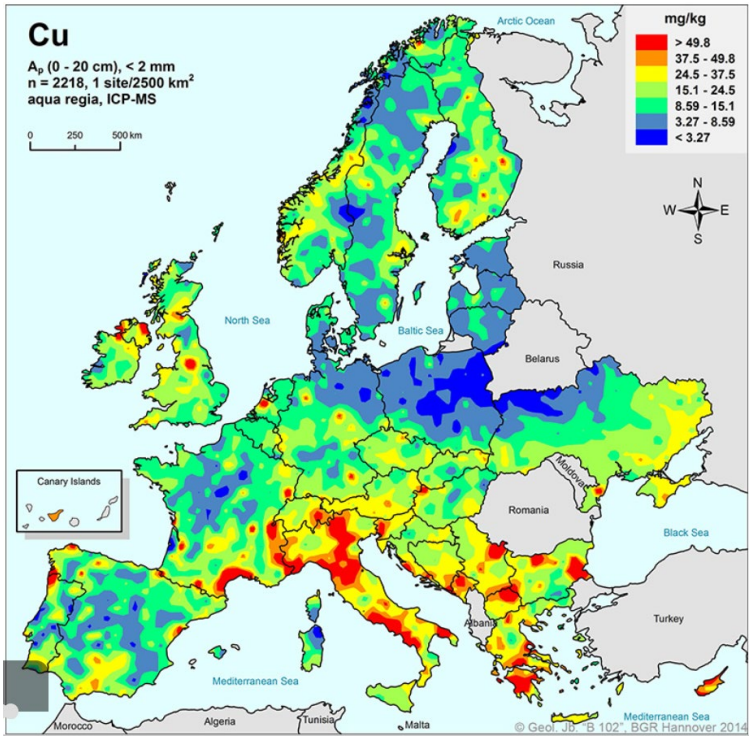


Counties which have insufficient copper in soil for growth, < 7 mg/kg DM

Percentage of copper-deficient areas in the county

"A study carried out by SYKES23 on behalf of the Finnish Ministry of Employment and Economic Affairs concludes that the negative effects of the supply of copper to the environment through sludge returned to agricultural land are not a general Nordic problem. This is correct. However, the problem is not limited to the Stockholm area, which is incorrectly pointed out in the investigation. On the contrary, copper is a limiting factor for returning sludge to arable land in large parts of Sweden. Nordic Ecolabelling has concluded that it is not relevant to write geographically adapted requirements. Therefore, a general Nordic restriction requirement remains in the criteria."

While red and orange colours on the map below indicate Swedish upper limit to spread sludge on agricultural fields and dark and light blue indicate too low levels of copper for agriculture, it is easy to see that Nordic Ecolabelling's worries about Sweden are exaggerated.



Source: https://www.luke.fi/ruokafakta/sv/allman-information/jordmanskvaliteten/
Chemistry of Europe's Agricultural Soils. Part A
Data DVD Reimann, C., Birke, M., Demetriades, A., Filzmoser, P. & O'Connor, P. (eds.)
Geol. Jb., B 102; © 2014, BGR, Hannover, Germany.

Teknologiindustrin rf, Teknologiateollisuus ry, Finland

[…] Vi vill dock separat lyfta fram en viktig fråga som vi hoppas kommer att få särskild uppmärksamhet vid den fortsatta beredningen av förslaget till kriterier. Både i de tidigare kriterierna för nybyggnation och i det aktuella förslaget om kriterier för renovering som det här yttrandet gäller har användningen av koppar begränsats. Teknologiindustrin uttrycker sin oro över att de många yttranden om kopparförbudet i de tidigare utlåtandena om nybyggnation samt Finlands miljömärkningsnämnds enhälliga beslut att föreslå att kopparförbudet ska avlägsnas inte beaktades i de slutliga kriterierna för nybyggnation. I det förslag om kriterier för renovering som nu är på remiss har koppar fortfarande begränsats för rör och tak. Vi anser att det inte finns grunder för detta.
Till detta har avvikande åsikter framförts och önskemål har framställts att koppar ska godkännas för användning i lägenhetsbyggnader samt därmed jämförbara byggnader.
Till följd av de avvikande åsikterna har arbets- och näringsministeriet i Finland lyft fram behovet av en opartisk utredning för jämförelse av miljökonsekvenserna. Syftet med utredningen var att få opartisk information som underlag för rekommendationerna om materialet i Svanenmärkta ledningar för hushållsvatten. Finlands miljöcentral genomförde utredningen. Finlands miljöcentral samlade in omfattande information om produktionen av olika material för rör (koppar, plast och komposit) och hur användningen av dem påverkar
hälsan och miljön. Dessutom samlades information in om hur återvinningsbara de är. Undersökningen avgränsades till bostadsbruk och vattenledningar som dragits i byggnader avsedda för detta. Enligt den här utredningen kunde man inte hitta några tydliga skillnader i miljöpåverkan mellan olika rörmaterial. Det visade sig inte heller att något av rörmaterialen orsakade negativa hälsoeffekter.
De rörmaterial som används i byggnader har gett upphov till diskussion om materialens potentiella miljöpåverkan och vissa sakkunniga har uttryckt oro över miljöpåverkan från den koppar som löser sig i vatten från kopparrör, men man kunde inte hitta någon tydlig grund för detta.

I rapporten konstateras mycket entydigt att den mängd koppar som löstes upp från kopparrören var ringa och att inga halter som överskrider rekommendationerna har kunnat observeras i vattendragen. I undersökningen gjordes det en utvärdering av hur skadlig koppar är i vattenmiljön och hur detta påverkar jordbruksmark när avloppsslam används som gödningsmedel. I undersökningen konstateras det att påverkan på vattenmiljön av den koppar som upplöses i vattenrören inte kan anses vara betydande. Enligt undersökningen kan negativa effekter endast uppstå i sådana områden där kopparhalten redan är naturligt hög. I de nordiska länderna finns det några sådana områden. Detta utgör dock en ytterst liten del av den totala
odlade marken. Det enklaste är att sluta använda avloppsslam som gödningsmedel i dessa områden. Enligt utredningen finns det ingen grund för ett förbud mot användningen av kopparrör med hänvisning till denna orsak.
I rapporten konstateras det också att skillnaderna i klimatpåverkan vid produktionen av olika rörmaterial inte är särskilt stora och att det inte finns någon tydlig rangordning mellan de olika rörmaterialen.
Koppar som tillverkas i Finland av råvara som återvunnits till 100 procent är ett helt återvunnet och återvinningsbart byggmaterial med ytterst litet oldioxidavtryck. Det producerar inte avfall vid varken installation eller rivning. Enligt utredningen har rör tillverkade av olika material en specifik användningsplats och ett beprövat användningsändamål. Exempelvis styva koppar- eller kompositrör lämpar sig bäst som stigrör i flervåningshus. I studien framkom det inga klara grunder för att något av de undersökta rörmaterialen skulle vara sämre än ett annat i fråga om påverkan av de Teknologiindustrin rf 3 (3) observerade effekterna (koldioxidavtryck, hälsa, toxicitet). Enligt undersökningen och forskningsresultaten finns det inte skäl att förbjuda användningen av koppar.
Teknologiindustrin anser att det inte finns utrymme för tolkning i resultaten av studien. De är mycket entydiga och kan därför inte ignoreras. Det finns därför ingen grund för förslaget om kopparförbud i de föreslagna kriterierna och i detta avseende bör förslaget ändras.

Nordic Ecolabelling's comments

The requirement for copper in the criteria for renovation of buildings are aligned with the corresponding requirement in New Buildings 089. Nordic Ecolabelling does not find that the situation has changed since the new criteria for New Buildings 089 was released in March 2023.

The largest sources of copper spreading into the environment are via tap water. and road traffic. Sheet metal on the outside of buildings (roofs and facades) and contact cables for the railway are also relatively large sources. The primary recipients of the copper differ. For water mains, it is the sewage treatment plant, while the distribution of copper in road traffic primarily ends up in stormwater and soil. A predominant percentage (60–80%) of the copper entering the treatment plants originate from tap water pipes in properties.

The Swedish Environmental Protection Agency states that the copper levels found in arable land do not show negative microbiological effects, but that the margin is small. Both the background content of copper and local factors varies across the country. To provide general protection against the effects of copper, it is, therefore. justified to have stricter requirements regarding copper for the return of sludge.

The Swedish Environmental Protection Agency further states that the supply of copper must specifically be reduced for sludge to be recycled in a manner that is sustainable in the long term. This is important as increased recycling of phosphorus from sludge is desirable from a resource efficiency and recycling. point of view. This is the primary reason why Nordic Ecolabelling wants to limit. copper as a material in tap water pipes and as a roof and facade material.

The requirement is not changed after consultation.

O28 Plastic and rubber surfaces on playgrounds and outdoor areas

No consultation input.

O29 Excluded substances in construction products, construction goods and materials

No consultation input.

O30 Antimicrobial surface treatments

Svensk Ventilation

Svensk Ventilation endorse this requirement, as it´s already part of the market, we belive it´s a good requirement.

VVS Fabrikanternas Råd

"According to the current referral, “the applicant must ensure that nanoparticles 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”.

We are not aware of such treatments on worktops, kitchen sinks, shower walls or sanitary appliances among our member companies. We support the general precautionary principle applied but that also opens for a changed stance if scientific research can demonstrate that previous concerns were unfounded. "

Peab Sverige AB

Vad ska redovisas för detta krav om ytterligare information efterfrågas? För att underlätta för handläggare, licensinnehavare och leverantörer vore det positivt om det tydliggörs vad för typ av dokument som kan ligga till grund för redovisning, t ex intyg i stil med bilagan för O23 i kriteriegeneration 3 för nyproduktion. Då kan leverantör fylla i och signerar en sådan för relevanta produkter och då kan licensinnehavare känna sig trygg med att signera bilagan. Annars får alla sitta och hitta på något eget.

Nordic Ecolabelling’s comments

The Appendix (7) mentioned in the requirement can be used for documentation of the requirement.

O31 Formaldehyde emissions

No consultation input.

O32 Ecolabelled products

Wästbygg

Better to have a requirement that is based on volume instead of items!

Peab Sverige AB

"Lyft upp texten ""* A maximum of 4 product categories must be accounted for regardless of the total number of product categories used."" till innan tabellen. Vad betyder denna egentligen, att det är max 4 produktkategorier som måste uppfylla krav på 50% av antal produkter? I så fall är det nog tydligare att skriva ""Half of the product categories identified in 1), a maximum of four categories, must fulfil..."""

Hur ska återbrukade produkter hanteras - är de exkluderade från nr1?

Svårt att avgöra hur utmanande denna kommer att kunna vara för ett renoveringsprojekt.

Om det är ""number of products"" som gäller behöver denna text skrivas om, amount är inte relevant: ** The products and amounts used can be documented by e.g., invoices and
documentation/calculations of the amounts of products needed in the project"

NCC SE
Unclear requirement. Needs to be clarified.

Riksantikvaren NO
Under punkt 8.5, 032 Ecolabelled products foreslås det krav til bruk av miljømerkede produkter i rehabiliteringsprosjekter.

I Bakgrunnsdokumentet, under punkt 8, Alternativ 3, står det at rehabilitering og bruk av fredete og verneverdige bygninger kan ha store miljømessige fordeler. Riksantikvaren har lenge trukket frem de miljømessige fordelene ved den tradisjonelle byggeskikken. Et svært viktig poeng er at eldre bygninger er bygget for å kunne repareres, og at det trengs lite utskifting av større bygningsdeler. Det som må skiftes ut er gjerne lokale materialer som enkelt lar seg gjenbruke eller resirkulere. Den siste tiden har Riksantikvaren fokusert særlig på miljøfordelene ved å velge ren linoljemaling uten løsningsmidler i stedet for maling som inneholder plast. Vi vet at plastmaling står for utslipp av mikroplast i naturen, mens man unngår dette med ren linoljemaling.

Vi ser at punkt 8.5, 032 åpner for at ikke alle produktkategorier behøver å være miljømerket for å inngå i et rehabiliteringsprosjekt som ønsker å oppnå Nordisk miljømerking. Slik vi leser forslaget, er det dermed mulig å velge materialer som ikke har miljømerking og likevel oppnå Nordisk miljømerking på det totale rehabiliteringsprosjektet. Ved rehabilitering av eldre bygninger anbefaler Riksantikvaren ren linoljemaling fordi det er en fordel for både huset og miljøet. Linoljemaling er per i dag et produkt som ikke har Nordisk miljømerking. Vi mener det er viktig og nødvendig å opprettholde prinsippet i punkt 8.5, 032 slik at det er mulig å bruke produkter som ikke har Nordisk miljømerking i rehabiliteringsprosjekter. Det kan for eksempel være mindre produsenter som ikke har anledning til å søke om og holde på en Nordisk miljømerking. Samtidig ønsker vi å fremheve at det er store miljømessige fordeler med å bruke ren linoljemaling. Det er svært synd og misvisende hvis ren linoljemaling fremstår som et dårlig miljøvalg i et rehabiliteringsprosjekt fordi det ikke har Nordisk miljømerking. Riksantikvaren ønsker å gå i dialog med stiftelsen Miljømerking i Norge for å diskutere hvordan ren linoljemaling kan oppnå Nordisk miljømerking/Svanemerket.

Nordic Ecolabelling's comments
Based on the consultation inputs the requirement has been adjusted and clarified. The ambition level is unchanged.

Projects concerning renovation of buildings can vary a lot. This means that the requirements for ecolabelled products must be somewhat flexible so that the material needs in the building can be meet.

Riksantikvaren NO is welcome to contact Nordic Ecolabelling Norway to continue dialogue regarding linoleum paint.

4.3.9 General comments chapter 9: Wood raw materials

No consultation input.

O33 Prohibited and restricted tree species

No consultation input.

O34 Wood and bamboo, traceability, and certification

No consultation input.

4.3.10 General comments chapter 10: Indoor environment

Wästbygg
If the requirement is aligned with national legislation it's not necessary to include them in the assessment.

Peab Sverige AB
Upplevelsen är att krav O35, O36 och O37 är kopplade till den befintliga byggnaden innan renoveringen. Det skulle kännas mer naturligt att de hanteras i samband med kapitel 4. Alternativt att man flyttar upp inomhusmiljökapitlet.

ACC Glas och fasadkonsult
"Daylight and Thermal comfort should be standard criteria for assessment of all occupiable areas (not just for newly built areas/extensions).

In the current proposal, daylight O35 and thermal comfort O36 criteria is only applicable to extensions. Daylight has an intensity, spectral distribution, and variation that cannot be replicated artificially. Daylight helps regulate the body's internal clock, the circadian rhythm, and has a significant impact on our health. It affects our sleep quality, mood, alertness, and cognitive abilities positively. Reports from the Public Health Agency of Sweden (2017) and the Swedish Work Environment Authority (2019) provide strong arguments for why we should prioritize daylight and views in the built environment. In short, scientific research clearly shows that daylight has a strong correlation with user health and well-being.

In the Nordic region not all municipalities actively follow the national code requirements for daylight. This is particularly true of smaller municipalities with limited resources. Daylight provides a natural and necessary balance to energy requirements as per building codes and those of Svanen (such as those in criteria O7). Without daylight criteria there is a high risk that energy is optimized at the cost of a healthy indoor environment.

It could be argued that with renovation, little can be done to affect daylight. This is not the case however as renovation normally involves decisions about room depth and interior materials. Many renovations also include changes to window size and glass selection within the scope of work. All the before mentioned affect daylight and consequently user health. In a similar manner, assessment of overheating is not generally a requirement in the building codes and consequently often overlooked despite its affect on user health.

According to the current draft, buildings with inadequate or even harmful indoor environments could receive full approval (theoretically, occupiable spaces without windows could be approved according to the current Svanen criteria). It should be noted that amongst building users daylight and thermal comfort has been shown to be of high priority to buildings users. As such, failure to ensure a quality indoor environment in these areas could potentially erode confidence in the validity of the Svanen certification system."

VTT

The requirements use the general term “indoor environment”, but the criteria concern indoor air, radon gas, PVC emissions, and the acoustic environment.
Will there be any thermal comfort or spatial functionality requirements for the indoor environment, for example?

Should these requirements be weighted for different building types? Compare with the PromiSe criteria, for example, which include weighting by building type (see attachment).

Hanke- PromisEn indikaattorit ja niiden painokertoimet (%).

	Toimistot	Asunnot	Kaupat
KAYTTAJIEN TERVEYS	25	25	20
SISAILMASTON HALLINTA	35	40	40
Tavoitteiden asettaminen ja taso	35	35	30
Suunnitelmien sisältö	25	30	35
Valvonta ja dokumentointi	20	20	15
Tavoitteet kiinteistönhoitosopimuksissa	20	15	20
SISAILMAN LAATU	30	30	30
Ilmanvaihtomäärä	40	25	20
Tuloilman puhtaus	30	30	25
Materiaaliemissiot	30	45	55
KOSTEUDEN HALLINTA	30	30	30
Rakennusfysikaalinen suunnittelu	40	30	25
Työmaan kosteuden hallinta	45	55	65
käyttö- ja huolto-ohjeet	15	15	10
VALAISTUS	5	0	0
Voimakkuus ja tasaisuus	55	0	0
Heijastuksen ja häikäisyn esto	45	0	0
LUONNONVAROJEN KULUTUS	30	30	35
ENERGIAN KULUTUS	45	40	45
Energiakulutustavoitteiden asettaminen	15	15	15
Lämmönkulutus	25	40	25
Kiinteistösähkön kulutus	35	20	35
Käytönaikainen energiankulutuksen hallinta	15	15	15
Vastaanotto	10	10	10
VEDEN KULUTUS	5	10	5
Vesijärjestelmät	100	40	100
Vedenkulutuksen seuranta	0	60	0
MAAN KAYTTO	10	10	10
Olemassa olevien rakennuksien hyödyntäminen	55	55	55
Olemassa olevien verkostojen hyödyntäminen	45	45	45
MATERIAALIT	20	20	20
Luonnon raaka-aineiden kokonaiskäyttö	70	55	70
Materiaalien kierrätyksen aste	30	20	30
Tilansäästö yhteistilojen avulla	0	25	0
KAYTTOIKA	20	20	20
Käyttöiän suunnitteluarvo	20	25	20
Käyttöikäsuunnittelun huolellisuus	30	50	30
Muuntojousto	50	25	50

Toimistot: offices, Asunnot: residential buildings, Kaupat: store,

Ergian kulutus = energy usage

Nordic ecolabelling's comments
Based on the consultation comments the requirements for "Measurement of PCB levels in indoor air", "Radon" and "Plan for the indoor air quality" have been moved to other chapters, mainly Prior to the renovation phase. The requirement O38 Noise environment in office buildings, hotels, pre-schools, and schools has been removed from the criteria. The emphasis on the renovated parts of the building and extensions is deemed necessary to allow different scopes of renovations within these criteria. Nordic Ecolabelling's intention is not to require alterations or installations in the entire building if only a part of the building or certain structures or systems are part of the renovation. Such measures might drive unnecessary resource use and costs.

Requirements on daylight and thermal comfort are difficult to introduce as mandatory requirements, since they may be of low importance for some renovation projects and may be very difficult to reach due to the properties of the existing building and surroundings, even though requirements would no doubt be reasonable and justified in other projects. The steerability of such requirements is considered too low for mandatory requirements in the current situation.

Setting spatial functionality requirements and structuring the criteria by weighting the importance of different factors is something that Nordic Ecolabelling can consider in future criteria development.

O35 Plan for the indoor air quality

Peab Sverige AB

"Ingår inte eventuell spridning av farliga ämnen vid rivning och sanering i denna punkt, eller sk den hanteras helt i O2?

Upplevelsen är att kravet kommer sent i kriteriedokumentet."

Nordic Ecolabelling's comments
Yes, it is the intention of this requirement to prohibit the spreading of unwanted substances in the building. This requirement is moved to the chapter Prior to the renovation phase, to further connect it to O2.

O36 Radon

No consultation input.

Nordic Ecolabelling's comments
Further internal investigation has shown a need to exclude Sweden from alternative B. In Sweden a relatively high share of buildings has shown radon levels in the indoor air above legislation level.

O37 Measurement of PCB levels in indoor air

Statsbygg og Forum for miljøkartlegging
Hva legger dere i begrepet "decontamination"?

Burde man fått frem i kravene - enten i O2 eller her, at det er viktig at man har prøvetatt omkringliggende materialer hvor PCB kan ha migrert for å være sikre på at man faktisk fjerner alle kildene til PCB i bygget FØR renovering? Da minsker jo sannsynligheten for at man måler PCB i inneluft over grenseverdien etter arbeidene er utført.

Bør vi si noe mer presist om når det er hensiktsmessig at målingene foretas?

Hvis remediert for PCB tidligere (man mener man har fjernet alt), må inneluftmåling gjøres ifm. miljøkartlegging.
Hvis kartlegging påviser PCB som ikke er funnet tidligere, må også måle i de rommene.

"If the level of PCBs exceeds the threshold limit value stated in the requirement, further action must be taken to trace the source of the PCB and then remove/remediate it. The indoor air must then be tested once again to analyse PCB levels.": Dette er et nytt avsnitt der innholdet blir i konflikt med logikk ift. når ting skal skje.
Kilden bør være kartlagt før sanering. Hvis grenseverdiene overskrides ETTER sanering, bør dere være veldig tydelige på hva dere vil kreve. Vil dere kreve at man river for å finne kilden og så fjerne den eller vil det gis disp?

"Analysis report showing measured PCB contents in the indoor air expressed as ng PCB/m3 air.": Svanemerket: Her og gjelder akkreditert lab og analyse.

Nordic Ecolabelling's comments
The word "decontamination" is a translation from the Swedish "sanering" and is now replaced by "remediation".

PCB analysis will be a part of the environmental survey in O2 and should be suggested by the surveyor when deemed necessary. Since renovation works might increase the indoor air levels of PCB, the measurement after renovation works is the most relevant for Nordic Ecolabelling. Measuring PCB in the indoor air before finishing the renovation work could be an alternative for some projects, but it should be optional in the criteria. If the measured levels exceed the threshold value, remediating actions are required. This text used to be in the background document explaining the intention of the requirement but has now been placed within the requirement for more clarity.

O38 Noise environment in office buildings, hotels, pre-schools, and schools

Norconsult NO
Den mer avgrensede tilnærmingen i kravet til støymiljø i kontorbygg, hoteller, barnehager og skoler (fokuserer kun på etterklangstid):
I dette punktet er det henvist til norsk regelverk på alle områder unntatt for barnehager. Her er det satt klasse B. Dvs etterklangstid på 0,3 sek. Det kan være en liten utfordring å finne nok areal til veggabsorbenter, men siden det nå i NS8175:2019 versjonen er presisert at etterklangstiden gjelder for møblerte rom, så vil nok dette kravet oppfylles med fornuftig møblering mm. Kravet anses som bra for barn og ansatte. Vi ser derfor ingen forhold som vi bør "reagere" på i forbindelse med denne høringen.

VTT Finland
The requirements/building type should be added to the insulation of airborne sound and impact sound.

Nordic Ecolabelling's comments
Based on the overall complexity of the criteria and the potential environmental benefit Nordic Ecolabelling have decided to remove the requirement on noise from the criteria. In projects where the indoor environment is not significantly change in the renovation it is difficult to require large investments in the acoustic environment. In cases where the indoor facilities are changed significantly the national legislation will in general handle the issues related to noise. Overall, it is therefore considered that the effect that Nordic Ecolabelling will have on this parameter is limited.

4.3.11 General comments chapter 11: Quality management of the demolition and construction process

Wästbygg
If the requirement is aligned with national legislation it's not necessary to include them in the assessment.

VTT
OK. For property business and construction industry operators, the term “(full) renovation” (peruskorjaus) means increasing the building’s level of quality. Other types of restoration are considered partial renovations, repairs, and maintenance.

Nordic Ecolabelling’s comments
Nordic Ecolabelling sometimes choose to include control of national legislation when we find it to be justified based on the situation in the market. This can for instance be the case if the feedback from the industry is that specific requirements are not always upheld or not controlled thoroughly by the authorities.

O39 Moisture prevention

Satakunnan ammattikorkeakoulu, Satakunta University of Applied Sciences

Pätevyyttä käsiteltäviin kohtiin maininta, että täyttää kansalliset vaatimukset työn suorittajan pätevyyksistä (FISE)

English translation:

In the chapters dealing with qualifications, there should be a mention that the employee’s qualifications meet the national requirements (FISE).

Nordic Ecolabelling’s comments
It will be evaluated in the national certification organisations which national requirements that qualify to document the requirement.

O40 Compliance with material and chemical requirements

No consultation input.

O41 Information for those involved in the construction process

No consultation input.

O42 The contractor’s self-monitoring system (construction phase)

No consultation input.

4.3.12 General comments chapter 12: Definitions

No consultation input.

4.3.13 Appendices

Statsbygg og Forum for miljøkartlegging
Appendix 1.
Her er det gjort store endringer ift. tidligere krav, både i selve tabellen og forklaring til tabellen. Vi synes det er uheldig at noe av teksten er fjernet, især at det bør fremkomme tydelig at dette er grenseverdier som Svanemerket har satt for enkelte stoffer. Eksempler på hvor stoffene kan finnes (kolonne 3) er også vesentlig forkortet, uvisst hvorfor. For land der miljøkartlegging ikke er så utbredt, vil en utfyllende kolonne 3 være til stor hjelp.

Forståsr ikke hva som menes med "must also be documented". Slik vi leser det står det det samme i punkt 2 som i punkt 3.

CFC: Denne var ikke med sist. Hvorfor har dere med KFK? Vi mener at alt med KFK skal fjernes fra et bygg og ikke ombrukes og mener det er et krav i Norge.

«Substances classified as hazardous waste according to national legislation and guidelines.»: Anbefaler ikke at dette er en egen rad; jf. savn om presisering av hva kravet nå faktisk omfatter. Det ville vært ryddigere om det innledningsvis står generelt om krav til farlig avfall i det aktuelle landet, og at de enkelte miljøgiftene i tabellen angir hvilke stoffer der Svanemerket har spesielle krav som kan være strengere enn grenseverdiene for FA.

Cadmium etc: Dette er og vesentlig endret fra sist kriteriegenerasjon; vesentlig er at dere ikke skiller på metalliske forurensninger og forbindelser med metallene. Vi mener de burde vært håndtert ulikt. Å ha en grenseverdi på Hg på 100 er og alt for høyt.

Dere har nå fjernet raden med PCB i vinduer, kabler, el.komponenter. Mener dere disse nå kun skal fjernes iht. nasjonale regler - at ting ivaretas der?
Vi anbefaler sterkt at det fremkommer at disse komponentene bør ut av bygget - det er ikke hensiktsmessig å analysere disse komponentene. En miljøkartlegger skal vite at de må fjernes (men det er jo veldig liten kompetanse i noen av landene, så man kan ikke forvente å få erfarne kartleggere i alle land som vet dette).

«Measured inside the material or in a finish, depending on where the concentration was deemed to be the highest.”: Jeg trodde det var ment innom- eller utenomhus, jeg, i sist generasjon, men ser at det ikke står sånn. Men jeg mener det var slik jeg hadde ment det. Altså for eksempel PCB i maling utendørs.

Nordic Ecolabelling’s comments
Appendix 1 in the criteria for renovation of buildings are aligned with the corresponding appendix in New Buildings 089. Nordic Ecolabelling does not find that the situation has changed since the new criteria for New Buildings 089 was released in March 2023.

National legislation must always be fulfilled, we believe that this detail level suggested is sufficient and that the old appendix 3 in generation 1 is not necessary in this requirement.

Bullet point 2 refers to substances in the table and bullet point 3 refers to substances not in the table. They both refer to national legislation and guidelines, and that materials must comply with these.

5 Comments to the background, in detail

Nordic Ecolabelling’s comments
Only a few comments were given on the background. These are handled and accounted for in sections for the specific requirements above.