

## **ANEC comments on the 'Reference Document on Best Environmental Management Practices in the Construction Sector (Draft May 2012)'**

ANEC recognises the tremendous work done by IPTS on the description of 'Best environmental management practices' (BEMPs), the description of common specific indicators for the construction sector and derived benchmarks of excellence. The document is very comprehensive and does not leave much to be desired with respect to quality and completeness. We certainly appreciate very much that major findings of the ANEC Study on "Environmental and health related criteria for buildings", conducted by IBO in 2011, have been taken into account.

We realise that some benchmarks are ambitious (e. g. the consumption value of energy for heating and cooling of retrofitted buildings according to the passive house standard of 25 kWh/m<sup>2</sup> yr) and appreciate this high level and the acceptance of the simplified calculation method of the Passive House institute for the verification of the energy performance in order to avoid an excess of calculation.

### **ANEC comments below address some major aspects according to the structure of the BEMP document:**

#### **2. Land planning**

We support the idea that not only the building itself is the object of consideration but also the interdependence with the local surrounding and the broader ecosystem, which is inevitable for a holistic approach. Mostly regional and local politics apply with respect to urban sprawl, conversion of brownfields; compression of town centres etc. and the approach chosen (i. e. use of GPP Tools) seems feasible in light of the described constraints. We therefore appreciate to include these aspects.

#### **3. Building Design**

We do not quite support the statement on the bottom of page 34 that "user behaviour should always be considered" when regarding the environmental impact of buildings. The user's behaviour is out of the reach of a construction company. Of course, user's awareness and potentially training is necessary to optimize the buildings environmental performance, but the building itself has to provide for the technical means to enable users to act environmentally friendly. E.g. water consumption in buildings highly depends on water saving devices (or even waterless urinals in office buildings), waste separation on the provision of respective facilities.

We support the development of the EU-Label for office buildings as described on bottom of page 36 and the use of GPP criteria when assessing and communicating the environmental performance. As stated in the reference document on top of page 38, we also have a very restrictive position using LCA-methodology with respect to comparing the environmental performance of buildings. The reason being that LCA methodology features fundamental shortcomings including dependency on numerous subjective choices, lack of adequate data and limited precision and does not suitably characterize all environmental impacts. The significance of (several) life cycle indicator results is difficult to assess even for experts, let alone the average consumer. Hence, Consumer information based on a choice of LCA indicators is strongly rejected by ANEC (see also the ANEC May 2012 position Paper "Environmental assessment goes astray – a critique of environmental footprint methodology and its ingredients")<sup>1</sup>.

When comparing different design options, the avoidance of future energy and mass flows should be considered. This is especially relevant with regards to the conversion of the building use (e.g. from office to residential) and well taken into account in chapter 3.5.5 "design for deconstruction and reuse". Likewise, covering accessibility aspects for wheelchair users and visually and hearing impaired people during design stage would avoid necessary technical adaptations during the use phase. This does not only cover lifts and accessible toilets for employees and customers but also addressing two senses (visual and acoustical) at the same time for alert and information systems.

With respect to low, zero and plus energy buildings we would like to comment that the definitions, system boundaries and methods for calculation of the energy demand need to be harmonized in order to make the energy performance of these buildings comparable.

We would like to stress the importance of the specific energy consumption of the building during the use phase and also support the benchmark of excellence for heating demand from the passive house with 15kWh/m<sup>2</sup> for new buildings and 25 kWh/m<sup>2</sup> for existing buildings. However, we believe that benchmarks are also needed for the overall energy consumption of the building, reported as yearly final energy consumption divided by the floor area. The overall final energy consumption includes lighting, heating, cooling, DHW and auxiliary energy partial

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<sup>1</sup> ANEC position paper " Environmental assessment goes astray – a critique of environmental footprint methodology and its ingredients", May 2012 (available at [http://www.anec.eu/attachments/ANEC-ENV-2012-G-008final%20\(3\).pdf](http://www.anec.eu/attachments/ANEC-ENV-2012-G-008final%20(3).pdf))

consumptions of the building. All kinds of fuels and all energy carriers should be included (electricity, natural gas, oil fuel, PV, solar thermal, etc.).

In addition we would like to stress that the calculation method shall be stipulated for reasons of comparability. It will be difficult to allow for other common methodologies unless comparability between the different methods is assured by defining comparability related criteria.

Water consumption per person per day will highly rely on the consumer's behaviour. To our opinion the best performing state of the art with respect to water using devices should be taken as a benchmark, such as 1 per toilet flush or even waterless urinals in office buildings, as described in chapter 3.6.5.3 "Water saving plumbing fixtures". Also, the promotion of grey-water-use is highly appreciated. If the use of potable water is used as an indicator, as proposed on page 175, it should be connected to a functional unit, e. g. m<sup>3</sup> water per m<sup>2</sup> floor space, serving x employees (pupils..) 8h/day.

#### **4 Construction products**

With respect to the introduction of chapter 4 we are happy to see that the main findings of the ANEC study on Environmental and health related criteria for buildings have been taken into account.

Hence, we are very pleased that the proportion of used Type I ecolabelled products is envisaged as benchmark rather than the use of products with a Type III (EPD) declaration. Likewise, the exclusion of hazardous substances according to GPP or ecolabel criteria is very much appreciated.

However, we would welcome to establish benchmarks for substances of concern (like cadmium, lead), following the approach of the cited ANEC Study. The establishment of benchmarks would also be appreciated for indoor air emissions, taking the German AgBB<sup>2</sup>-Scheme into account.

With respect to the quotation of the risk categories of timber following DIN 68800-3 in table 4.3 on page 206 we would like to inform that the draft (dated November 2009) has now been transformed into a standard, published in February 2012. In Part one of DIN 68800 (October 2011) "Wood preservation - Part 1: General" 8.1.3 it is basically stated that "wood treated with wood preservatives shall not be used in rooms deem to serve permanent occupancy. Exceptions from this rule are possible in working places when technically justified".

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<sup>2</sup> Ausschuss zur gesundheitlichen Bewertung von Bauprodukten.

We therefore believe that the word “should” in the entire chapter on wood preservatives should be replaced by “shall” in order to read that wood preservatives shall not be used under the conditions cited above.

We appreciate the approach described on page 210 due to the proposed mix of measures that should be taken to improve the selection of environmental construction products.

## **5. Construction and refurbishment:**

We appreciate the inclusion of waste prevention, separation and recovery during construction and demolition, as well as consideration of local emissions as noise and dust.

We support the implementation of a target-oriented construction site management plan but do question whether the percentage of sites with an environmental management plan seems to be a good performance indicator, as stated on bottom of page 287.

For water consumption on building site it would be helpful to differentiate into different sources of water (potable, river, groundwater) and disposal of polluted water. However, if no data are available, monitoring should only be considered as a first step with the option to develop clear benchmarks in the near future. This also holds true for the use of energy on the building site.

## **6. Operation and maintenance**

With respect to energy and indoor air quality the major aspects have already been mentioned in the chapter of building design. However, issues concerning the acoustic performance of the building should already be addressed in the design phase. Benchmarks better than existing national levels could be established, e. g. by using the German VDI 4100 “sound protection in buildings - Housing - Assessment and proposals for enhanced sound protection”.

We would support the idea of energy monitoring and displaying to all users in a building to address and influence user's behaviour.

## **7. Building End-of-life**

We support the promotion of re-use and recycling of building products at the end of life stage. The approach chosen in this chapter. i. e. to assess the environmental performance of environmentally-friendly deconstruction techniques on basis not only of the performance of the demolition (in terms of recycling rate or recovery index) but also taking into account the nuisance generated, seems entirely feasible.

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## **APPENDIX – About ANEC**

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*ANEC is the European consumer voice in standardisation, defending consumer interests in the processes of technical standardisation and conformity assessment as well as related legislation and public policies. ANEC was established in 1995 as an international non-profit association under Belgian law and represents consumer organisations from 31 European countries. ANEC is funded by the European Union and EFTA, with national consumer organisations contributing in kind. Its Secretariat is based in Brussels.*

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