



Petersen Tegl A/S – Sustainability

We at Petersen Tegl have a clear conception of our responsibility for sustainability and, although we believe that our product is already sustainable, this does not prevent us from trying to improve what we do little by little every single day – also when it comes to sustainability.

Brick and sustainability

Brick houses make good environmental and financial sense – a good investment in the short term and the long term.

Brick is made of natural, raw materials – clay mixed with sand and other minerals. Clay deposits were formed around the time of the last ice age, at least 15,000 years ago. Shaping and firing the clay properly makes bricks extremely hardy, with a lifespan unmatched by other traditional building materials.

To extract red clay, the topsoil is removed down to a depth of approximately 30 cm and put to the side. Later, it is put back so the site can still be used for farming or other purposes. Yellow clay is extracted from a depth of 8–10 metres. Petersen Tegl has converted the pits into recreational areas with lakes. The process of extracting clay does not have a negative effect on the soil or groundwater. The Petersen brickworks is close to clay deposits, minimising the energy expended on transport. However, a small number of the company's products are produced from clay imported from Germany and the UK.

All of the clay is used in the production process. And if anything goes wrong, the clay and brick are recycled. No material goes to waste.

The only significant environmental impact during the extraction and production phases stems from the energy used in drying and firing. Clay has to be fired at temperatures in excess of 1,000 degrees Celsius to guarantee weather-proofing and durability.

The surface does not have to be treated, and therefore no hazardous chemicals are involved (unlike in paint, wood preservatives, etc.).



Brickwork lasts hundreds of years without maintenance, replacement or treatment. Only the joints may need to be repaired or re-pointed. The lifespan of a building material determines its environmental impact. In other words, the longer it lasts, the better for the environment.

After demolition, bricks can be recycled and used as aggregate or for filling in other construction projects. Brick is easy to dispose of because it contains no environmentally harmful chemicals.

Unlike traditional brick, the new 'Petersen Cover' product can be reused intact. With the right tool, the bricks are easy to remove and re-use over and over again without damaging them.

Brick helps to regulate interior temperatures on both hot and cold days. It also absorbs some of the pollutants in the indoor climate. Brickwork emits no fumes or odours and can reduce humidity in houses.

Mould and formaldehyde fumes are increasingly common problems for the indoor climate. Clay provides no nourishment for micro-organisms, so mould is rare in houses made completely of brick.

ISO 50001 Energy management systems

Petersen Tegl A/S has voluntarily implemented the international standard ISO 50001 Energy Management Systems. The application of this international standard contributes to a more effective use of available energy sources, to enhanced competitiveness and to reducing greenhouse gas emissions and other related environmental impacts.

Energy goal

Petersen Tegl A/S wishes to be an environmentally aware company by minimising the level of energy consumed per manufactured unit without reducing product quality.



Energy policy

The aims of Petersen Tegl A/S:

- to comply with mandatory and voluntary requirements which the company has committed itself to observing
- to set new energy targets and draw up new action plans every year
- to prepare usable key figures for managing energy consumption
- to select an area to be the object of a particularly thorough energy review every year. We endeavour to have reviewed the entire plant every five years.
- to subject large energy-consuming equipment to energy-efficiency inspection and maintenance on an ongoing basis
- to include energy-related issues in the decision-making basis for new purchases and for the design engineering of rebuilding and new construction projects
- to register, investigate and rectify deviations from compliance with the objective and the policy
- to ensure that the system's documents and registrations illustrate our compliance with the requirements of the Danish Energy Agency and other relevant legislation
- to assess the system's suitability and effectiveness on a regular basis
- to inform, motivate and train our employees in the energy area on an ongoing basis.

Monitoring

The Energy Management System of Petersen Tegl is certified by Force Certification. This means that annual monitoring visits are conducted by Force Certification every year to ensure compliance with the requirements specified in ISO 50001.

Environmental Product Declaration

An EPD (Environmental Product Declaration) documents the environmental performance of construction products and is being developed according to European and international standards.



The main content of an EPD comes from the life cycle assessment (LCA), which is developed using production specific data collected at the production site.

An EPD is not valid if it has not been verified in accordance with the requirements in ISO 14025.

In collaboration with Kalk- og Teglværksforeningen af 1893 (Association of Danish Brickworks), an EPD was drawn up in 2014 for red clay at an average Danish brickworks. This EPD was prepared in accordance with ISO 14025 and EN 15804 and has been verified by Alectia A/S.

The EPD is based on a cradle-to-grave process with an expected service life of 150 years and shows that choosing bricks for construction purposes is a sustainable choice.

Did you know...?

Although firing bricks does emit CO₂, the overall environmental impact over the life time of a brick is relatively modest, as illustrated by the examples below.

- The carbon footprint of a family of four on a flight from Hamburg to Bangkok and back lasting 20 hours amounts to approximately six tonnes of CO₂.
- Two cows emit methane gas equivalent to about eight tonnes of CO₂ per annum.
- A standard house with a lifetime of a century or two uses 12-16,000 bricks. The firing process accounts for six-eight tonnes of CO₂ – and the bricks do not require any maintenance