

# RECYCLING INSTRUCTIONS

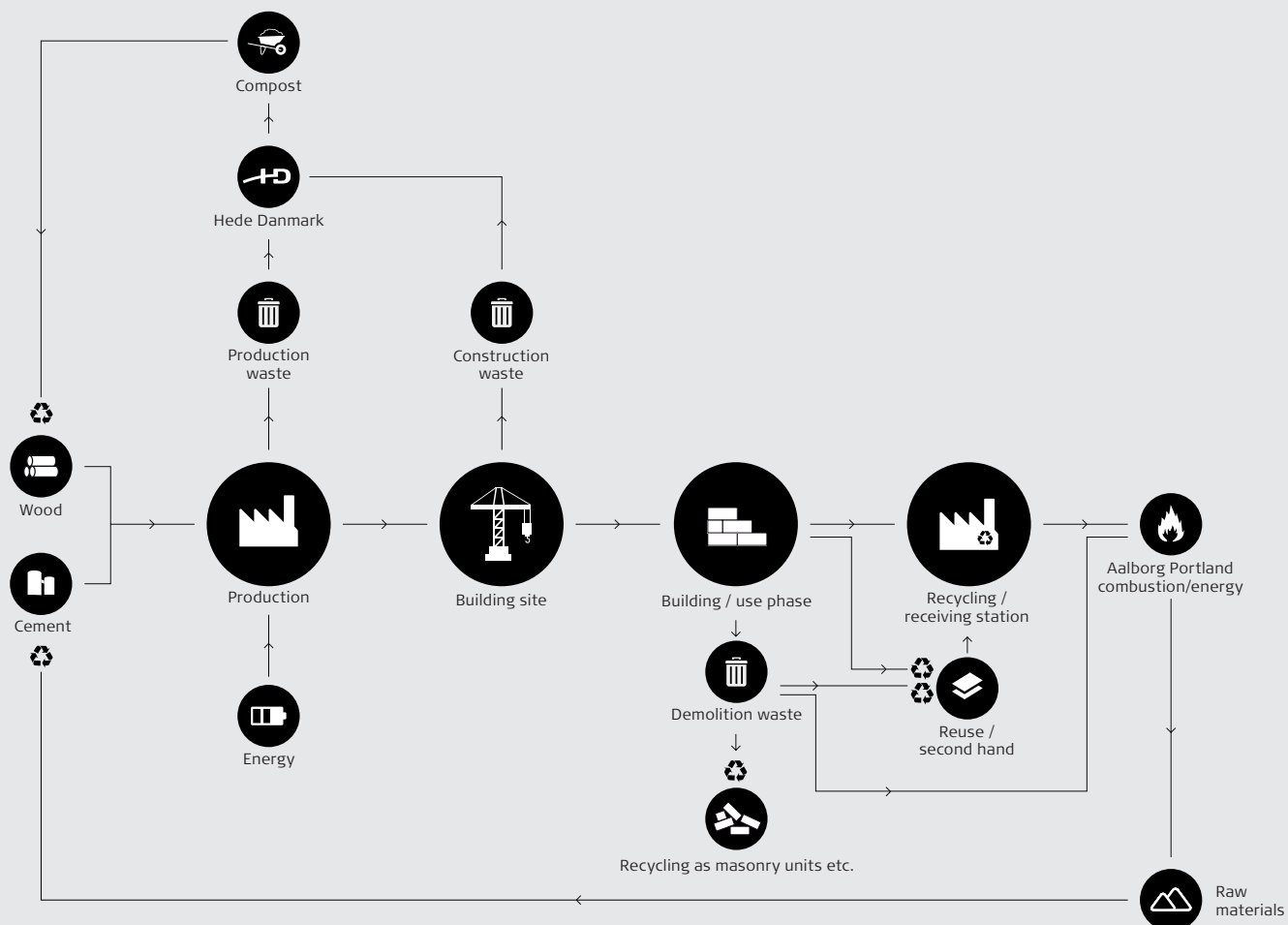
for Troldtekt cement-bonded wood wool

## HEALTHY RAW MATERIALS AND CRADLE TO CRADLE CERTIFICATION

Troldtekt cement-bonded wood wool is made of 100 per cent natural materials: wood and cement. We use PEFC™ or FSC®-certified Norway spruce, with both certifications ensuring that the wood comes from responsibly managed forests. The production of Troldtekt panels uses only cement from Aalborg Portland, which extracts the raw materials from the Danish subsoil with the least possible environmental impact. Here, chalk and sand are the main raw materials used to make Portland cement.

The entire range of Troldtekt cement-bonded wood wool panels – including Troldtekt agro and the non-combustible Troldtekt A2 panel – are Cradle to Cradle-certified in the silver category. Consequently, we have complete documentation of the substances in the products, and documentation that the products can be composted and safely returned to nature as a soil conditioner. The cement in Troldtekt's acoustic panels boosts oxygen levels during the composting process, while the wood adds organic material to the compost.

## PRODUCT LIFE CYCLE FOR TROLDTEKT® CEMENT-BONDED WOOD WOOL



## RECYCLING OF PRODUCTION WASTE

Production waste from our factory in Troldhede is delivered to, for example, HedeDanmark a/s, which receives, treats and refines waste products to make soil conditioners. In this way, carbon and

nutrients are recirculated to agricultural land and forestry operations. The quality of the compost is regularly analysed and checked.

**RECYCLING OF CONSTRUCTION WASTE FROM BUILDING SITES**

Like production waste, clean Troldtekt waste from building sites in the form of offcuts and waste from Troldtekt acoustic panels can be safely returned to nature as soil conditioner.

In Denmark, HedeDanmark has several receiving stations which receive Troldtekt construction waste, providing it is clean Troldtekt waste which is sorted at source.

We are working to find similar business partners on selected European markets.

**RECYCLING OF DEMOLITION WASTE**

Troldtekt cement-bonded wood wool lasts for a long time (usually 50-70 years), and at the moment used acoustic panels cannot be returned safely to nature as it is not possible to know whether the panels have been surface treated or have absorbed contaminants from the surroundings during use.

Cement-bonded wood wool demolition waste can instead be recirculated in the production process as a raw material in new cement. Cement manufacture is a thermal process which renders any surface treatment harmless. The wood content of the cement-bonded wood wool panels contributes to the combustion process (energy), while the cement component becomes a raw material in new cement. Together with Aalborg Portland, we are working to

offer this solution in Denmark from 2018 or 2019. The scheme will involve the collection of cement-bonded wood wool waste from waste recycling stations, and the collection of cement-bonded wood wool waste from building sites.

Troldtekt is working to establish similar partnerships on selected markets.

Until then, Troldtekt waste can be burned at the recycling stations' incineration plants, where the materials contribute to the combustion process.

Contact the local recycling station/receiving station.

**REUSE**

Troldtekt does not facilitate the reuse of used acoustic panels, but the panels are very sturdy and are often installed with

screws which makes uninstalling them very straightforward, and there is considerable potential for reusing them.

**TAKE-BACK SERVICE AGREEMENTS**

Troldtekt A/S offers take-back service agreements connection with project deliveries. The service agreement obliges Troldtekt to take back the old acoustic panels when a customer purchases new Troldtekt acoustic panels. However, this assumes that the user does not surface treat or in any other way

contaminate the Troldtekt acoustic panels during use.

So far, the service agreements are only being offered on the Danish market.