



From Waste to Re-Usable Raw Materials

Waste Mineral Wool Processing

Antti Häggman – Products Director

# EcoUp – Finnish Circular Economy Group

## Insulation Materials

- Insulation materials (sheet wool & blowing wool) from recycled wood fiber and related assembly services



- Blowing wool from recycled, clean mineral wool

## Recycling Technologies

- Methods and equipment for waste mineral wool processing



- Methods, formulas and processing instructions for waste-based product creation – mineral wool waste as a binder



# Recycling Technologies

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We provide means to transform waste mineral wool into a re-usable raw material that can be circulated over and over again.

Equipment to process mineral wool

Formulas to make end products from waste



# Who do we work with?

Recycling Service Providers



Produces raw material



Construction Material Brands



Manufactures products



Construction Developers & Builders



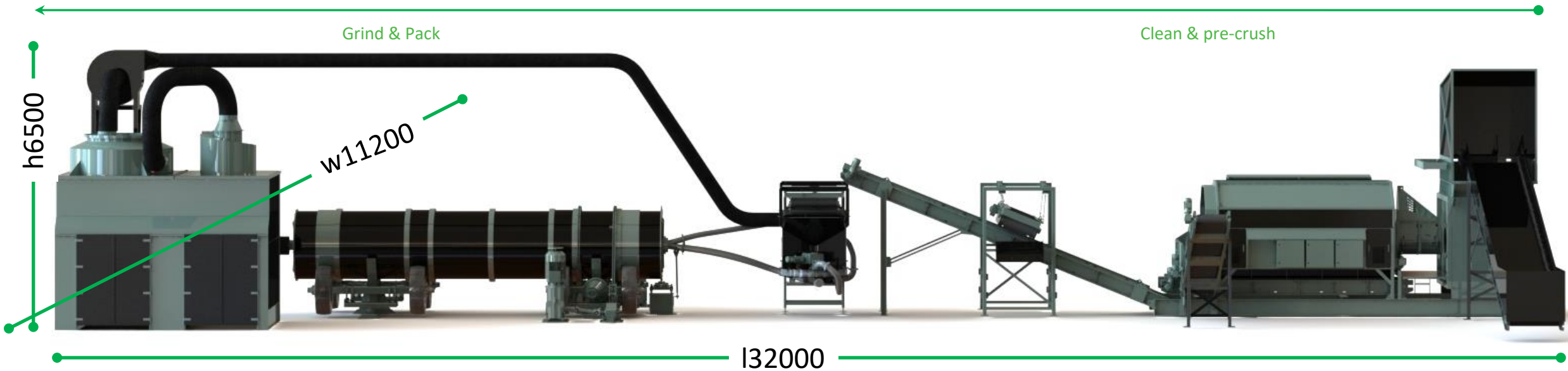
Uses products

# In Finland

EcoUp recycles 5000 tons of mineral wool annually.



# Equipment: Inputs & Outputs



## Output Materials:

- Pulverized, clean raw material
- 900...1100kg/m<sup>3</sup>
- <100µm particle size

## Input Materials:

- Stone wool, glass wool
- ~5wt-% moisture
- Automated cleaning of wood, metals, plastic, crushed concrete & bricks (max. 150x150x150mm)

# Examples of EcoUp Formulas

Waste based binder formula



Binder = clean powder(s) + chemical activators

Wet-cast concrete products



Dry-cast concrete products

Aggregate

Aggregate alternatives eg:

- Gravel
- Customer-specific aggregate (e.g. porcelain waste)

# Application Examples for Mineral Wool Waste



Blocks



Pavers



Columns

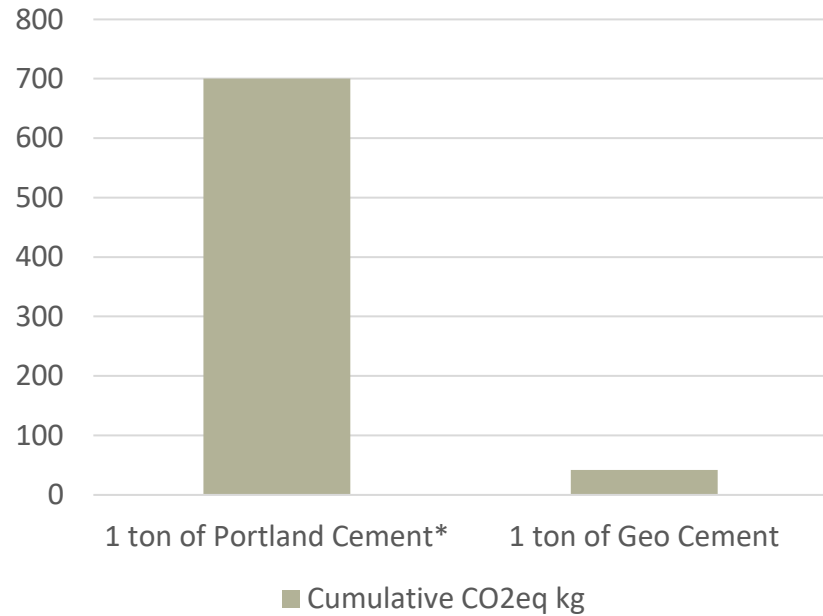


Curbs

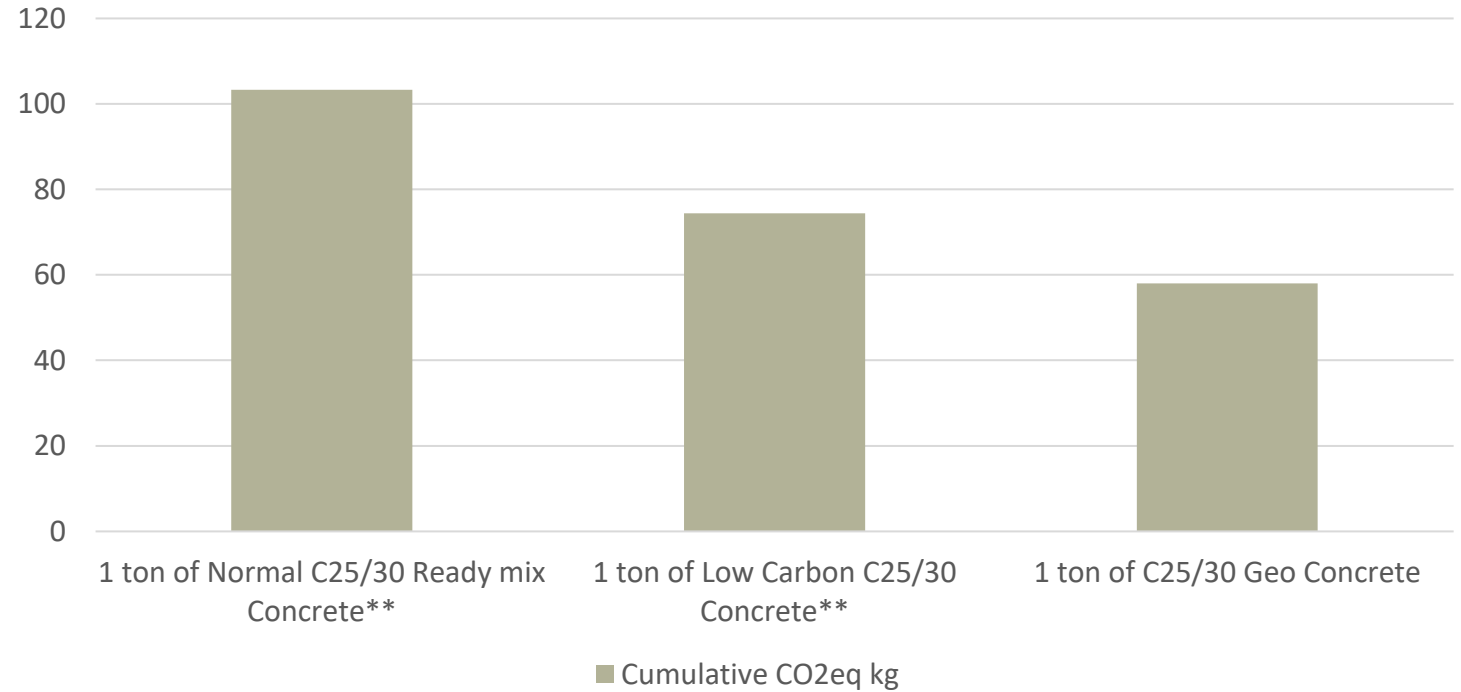


# LCA

## Comparison with Cement



## Comparison with Concrete



\*Ecoinvent 3.6 (Reference product: fast-hardening portland cement, Finnsementti)

\*\*<https://betoni.com/tietoa-betonista/betoni-ja-ymparisto/betonituotteiden-ymparistoselosteet/valmisbetonit/>

\*\*\*<https://www.rudus.fi/ajankohtaista/2021/02/10/roduksen-pihakivien-uutuudet-jatkavat-vahahiilisyiden-linja>



Others see waste. We see a treasure.

[antti.haggman@ecoup.fi](mailto:antti.haggman@ecoup.fi)