Profitability Sustainability through Solar, Cutting-Edge Automation and BREEAM Standards

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Kloosterboer

Leading in temperature controlled logistics

Sustainability

Global Cold Chain Alliance
European Conference
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Kloosterboer family
Sustainability: Definition

Definition:

« Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs ». 
United Nations development goals
Value of People Development

"Sometimes the most ordinary things could be made extraordinary, simply by doing them with the right people."

Elizabeth Green
Planet: we take care for the environment

- Transportation
  - Modal shift
  - Energy-efficient

- Development of best-in-class green warehouses
  - Automated High Bay Cold stores: 37-45% reduction in energy consumption and carbon emissions
  - Sustainability important in investment decisions
  - Certifications (e.g. BREEAM)

- Upgrading efficiency of existing warehouses
- Wind turbines on site
- Use of solar panels
Wind turbines

GENERATED ENERGY TO BE USED FOR REFRIGERATION INSTALLATIONS

4 Wind turbines on site Vlissingen

Capacity per wind turbine:
4,000 MwH per year; equal to consumption of 1,250 households

Savings per wind turbine:
7,320 tonnes of CO2 per year.
Total saving over the lifespan approx. 34,900 tonnes CO2
Roof solar panels

GENERATED ENERGY TO BE USED FOR REFRIGERATION INSTALLATIONS

Capacity 430,000 KwH per year; equal to consumption of 130 households

1800 solar panels in total, saving 140 tonnes of CO2 per year
35% CO2 Saving in 5 Years
What is BREEAM?

- BREEAM scores consist of variable sustainability categories with each its own weighing:
  - Management 12%
  - Transport 8%
  - Waste 7.5%
  - Health 15%
  - Water 6%
  - Use of land and ecology 10%
  - Energy 19%
  - Materials 12.5%
  - Pollution 10%

<table>
<thead>
<tr>
<th>Score</th>
<th>Category</th>
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<tbody>
<tr>
<td>&lt;10%</td>
<td>UNCLASSIFIED</td>
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<tr>
<td>&gt;10%</td>
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<tr>
<td>&gt;25%</td>
<td>PASS</td>
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<td>&gt;40%</td>
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<td>&gt;55%</td>
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<td>&gt;70%</td>
<td>EXCELLENT</td>
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<tr>
<td>&gt;85%</td>
<td>OUTSTANDING</td>
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<10%  UNCLASSIFIED -
>10%  ACCEPTABLE    ★★★★★
>25%  PASS          ★★★★★
>40%  GOOD          ★★★★★
>55%  VERY GOOD     ★★★★★
>70%  EXCELLENT     ★★★★★
>85%  OUTSTANDING   ★★★★★
BREEAM in practice

Some of the sustainable measurements we implemented to obtain the BREEAM Award:

- Rain water is stored in underground tank for toilet purposes
- Waterless urinal
- Extra windows, triple glass, skylights
- Detailed insight in energy usage of building
- Internal ventilation system
- Energy efficient lighting insight and outside (LED, DALI)
- Charging points electric vehicles at every Kloosterboer site
Kloosterboer Velsen

Energy Neutral because of 2500 solar panels

BREEAM “outstanding” : 1st in Europe to receive highest BREEAM certification.

Expansion of 15,000m2 and adaptation of existing coldstore
Kloosterboer Velsen

Winner of EZK Energy Award by Dutch Government
Kloosterboer Cool Port

Underway for BREEAM “outstanding” as well.

Significant savings through ‘modal shift’ from road (trucks) to barge (water)

Simplifying the total supply chain
Less transport through consolidation.
Adjusted opening hours and working 2 shifts

5,000,000 KG CO2 REDUCTION PER ANNUM
Kloosterboer Lelystad

Set up direct connection with own wind turbine through which energy can be buffered

Research for driverless electronic truck transport between customer’s site and Kloosterboer cold store.
Kloosterboer
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