BUILT TOUGHER THAN YOU THINK!
HELLO!
Arctic Polar Ice Melting
Northern Hemisphere Surface Temperature & CO$_2$ Levels
International Geosphere-biosphere programme http://www.igbp.kva.se/
Passive House Case Studies

- **Darmstadt-Kranichstein** (Germany)
- First passive house in Europe (1991)
- Superinsulating features – has optimized triple-paned windows
  - Ventilation system with heat recovery
  - Insulating material – 25 to 40 cm thick
  - U value – 0.1 to 0.14 W/m²K
  - Heating energy demand – 12 kWh/m²
Wiesbaden-Lummerlund (Germany)

First combined passive house & low energy settlement in Europe (1991)

46 houses in a row – 50% passive, 50% L.E.

Inhabitants commented that the passive houses were preferred over the low energy ones.
Applications

- IKEA (Regensburg, Germany)
- Underground garage insulation
- 10,000 m² of wood wool was used

Source: www.heraklith.com
Applications

- Dockland office building (Hamburg, Germany)
- Insulation of the technical area
- 1,600 m² of wood wool was used

Source: www.heraklith.com
Jom Tanam Pokok
Bersama Komuniti
21 Mac 2009

Hari Perhutanan Sedunia 2009,
10 000 anak pokok telah ditanam di Hutan Simpan Raja M. N. P.
50% CO$_2$ from Limestone

Cement Production

OPC content
app. 70% CaCO$_3$
18-25% SiO$_2$
4-8% Al$_2$O$_3$
2-4% Fe$_2$O$_3$

C3S (3CaO – SiO$_2$)
C2S (2CaO – SiO$_2$)
C3A (3CaO – Al$_2$O$_3$)
C4AF (4COO – Al$_2$O$_3$ – Fe$_2$O$_3$)
Environmental Impact of Maleki’s Green Concrete

77% cement reduction in concrete with Maleki CSH Technology
Environmental Impact of Maleki’s Green Concrete

62% less carbon emissions compared to normal concrete
Maleki Green Cement Compressive Strength

- **High cementitious formulation**: 345 kg/m³
- **Low cementitious formulation**: 280 kg/m³

**Eco Binder System**: 75 kg/m³ cement + 290 kg secondary products
Comparison of Lab Results

Strength consistency of project X Concrete

![Chart showing strength consistency of project X Concrete over time, with different curing conditions and sample dates.](chart.png)
Maleki Ultra High Performance Concrete

Strength Consistency – MALEKI UHPC with Eco Binder System

- Strength consistency graph showing the increase in strength over days for MALEKI Ultra High Performance Concrete with an Eco Binder System.

- The graph plots days on the x-axis and stress in N/mm² on the y-axis, showing a significant increase in strength over time.

N/mm²:
- 0
- 20
- 40
- 60
- 80
- 100
- 120
- 140

Days:
- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8

The diagram illustrates the consistent rise in strength over time, indicating the benefits of using MALEKI UHPC with an Eco Binder System for high-performance concrete applications.
Poster for trash room door

RECYCLING BINS

Please help us to recycle!

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>HOW TO HANDLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEWSPAPER, MAGAZINE</td>
<td>PUT ON SHELF</td>
</tr>
<tr>
<td>BOOKS</td>
<td></td>
</tr>
<tr>
<td>CARDBOARD, BOXES</td>
<td>PUT ON SHELF</td>
</tr>
<tr>
<td>BLACK &amp; WHITE PAPER</td>
<td>PUT ON SHELF</td>
</tr>
<tr>
<td>MIXED PAPER</td>
<td>PUT ON SHELF</td>
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<tr>
<td>ALUMINIUM CANS</td>
<td>CLEAN, DRY UP &amp; CRUSH</td>
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<tr>
<td>METAL TIN &amp; CANS</td>
<td>CLEAN, DRY UP &amp; CRUSH</td>
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<tr>
<td>GLASS BOTTLES &amp; JARS</td>
<td>CLEAN &amp; DRY UP</td>
</tr>
<tr>
<td>PET PLASTICS BOTTLES</td>
<td>CLEAN, DRY UP &amp; CRUSH</td>
</tr>
<tr>
<td>MIXED PLASTIC</td>
<td>CLEAN, DRY UP &amp; CRUSH</td>
</tr>
</tbody>
</table>
Peat accumulates for thousands of years storing concentrated Carbon in thick layers.

Lesotho

peat from 2 m deep
Smoke Haze spreads across the region
Peat Fires in Plantations

Riau province, Sumatera - 24th Jan 2005

South Selangor - 1997

PKPS, Batang Berjuntai - 2002
All great achievements begin with a belief
Are YOU doing all you can?