
Anvendt navigation i materialejunglen



InnoByg 4.september 2014

Sight and Settlement
Anna-Mette Monnelly, Architect MAA, LEED AP/ BC+D
Tietgensgade 64, 1.tv - 1704 København V
write@sightandsettlement.com
www.sightandsettlement.com



90%

...af vores tid bruger vi inden for



1984

WHO anslog at op til 30% af nye og ny-renoverede bygninger verden over viste tegn på Sick Building Syndrome

SICK BUILDING SYNDROME



<http://www.mywallart.com/>





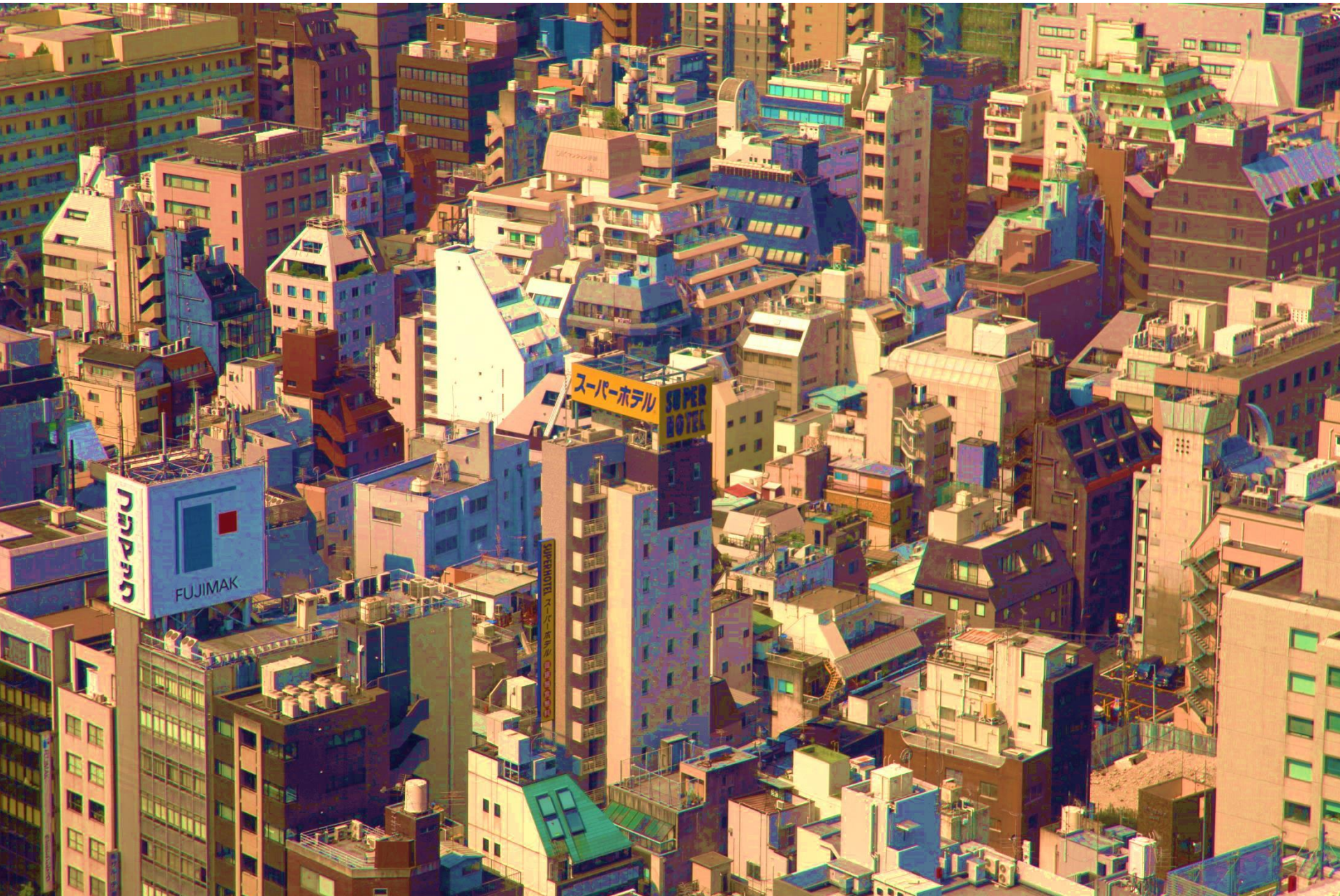




2001, A Space Odyssey , af Stanley Kubrick, 1968

1968





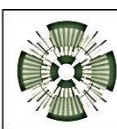
“Mens de danske myndigheder stiller stadig skrapper krav til nye bygningers energiforbrug, spiller klimabelastningen fra de tonsvis af beton, stål, isolering og glas, der indgår i husene, ingen rolle, når det offentlige opfører nye bygninger.”

”op til **75 %** af et moderne kontorhus’ klimabelastning stammer fra **byggematerialerne**

I gennemsnit er det omkring **30%** af klimabelastningen, der kan relateres til **byggekomponenterne.**”



Nyt tanghus på Læsø, af Vandkunsten
Foto: Helene Høyer Mikkelsen



gty.im/
139819841

By
Ed Reschke



Flyveaske
Beton – i konstruktion
Beton - i facadebeklædning
Facadebeklædning
- zink, kobber, stål og komposit
Gulvlim, Gulvtæpper
Sportsgulve
Gipsplader
Vinduer
Solafskærmning – ext og int
Gardiner
PVC fri materialer og alternativer
Maling
Kontorlamper
Bordplader m.fl

Sasaki Associates, Boston - Massachusetts

ECO-LABELS



European Union
Eco-Label



The International Organization for Standardization (ISO) definition:

Type I Environmental labelling (ecolabels) (ISO 14024/14020)

Udviklet af en 3.part , og har flere kriterier
 Verificeret af uvildig instans,
 Tilladelse til anvendelsen af mærkningen
 Produktet skal hæve sig over andre produkter
 i forhold til deres miljøpåvirkning



Type II Self-declaration claims – Single attribute

Kan være udviklet af en producent
 Ikke verificeret af uvildig instans



Type III Environmental declarations

Baseret på LCA
 Udviklet af en kvalificeret 3.part
 Verificeret af uvildig instans
 EPD's og EBD's
 Data skal fortolkes – er ikke i sig selv en ”anerkendelse”

Næringsindhold pr.	100 g	45 g portion *
Energi (kJ/kcal)	1270/300	572/135
Protein	10 g	4,5 g
Kulhydrater	52 g	23 g
- heraf sukkerarter	8,5 g	3,8 g
Fedt	6 g	2,7 g
- heraf mættede fetsyrer	1,2 g	0,5 g
- enkeltumættede fetsyrer	1,9 g	
- flerumættede fetsyrer	1,3 g	
- kolesterol	0 mg	
Kostfibre	16 g	7,2 g
Natrium	0,8 g	0,4 g
Salt eq.	2 g	0,9 g

* En portion indeholder 45 g

ECO-LABELS



Teknologisk
Institut

Fremtiden er smartere og grønnere

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Udgiveren

Hvem har udviklet og vedligeholder mærkningsordningen/certifikationen?

Hvem er involveret (konsulenter) ?

Processen

Er den videnskabeligt understøttet

Er den åben og tilgængelig

Er anderkendt fagligt?

Peer reviewed?

Hvordan er processen for at opnå certifikation ?

Hvor lang tid holder en certifikation?

Kriterier

Hvilke kriterier indeholder certifikationen?

Hvad er ikke dækket?

OSV OSV OSV.....



bagasse is the fibrous residue remaining after sugarcane stalks are crushed. It is 100% recycled.

Sugarcane is a renewable source because sugarcane can be harvested up to 3 times a year. 1 ton of sugarcane equals 1 ton of bagasse.





Råvarer?

Hvor kommer de fra? Hvordan er de udvundet? Arbejdsforhold? Transport?

Produktionen?

Hvordan er det lavet, vandforbrug, energi, kemikalier, arbejdsforhold

Hvor er det fremstillet? Bi-produkter? Transport?

Emballage?

Kan det genanvendes, genbruges, tages fra hinanden, komposteres, bionedbrydes?

Indeholdt energi?

LCA?

Anvendelse?

Brugscyklus, tid, energi, vedligeholdelse, afgivelse af stoffer, brand/ild, fugt

Efter endt brug?

Kan det genanvendes, genbruges, tages fra hinanden, komposteres, bionedbrydes?

OSV OSV OSV.....



VIDTIME

VIDTIME

QUARTZ

CASE: LE KLINT

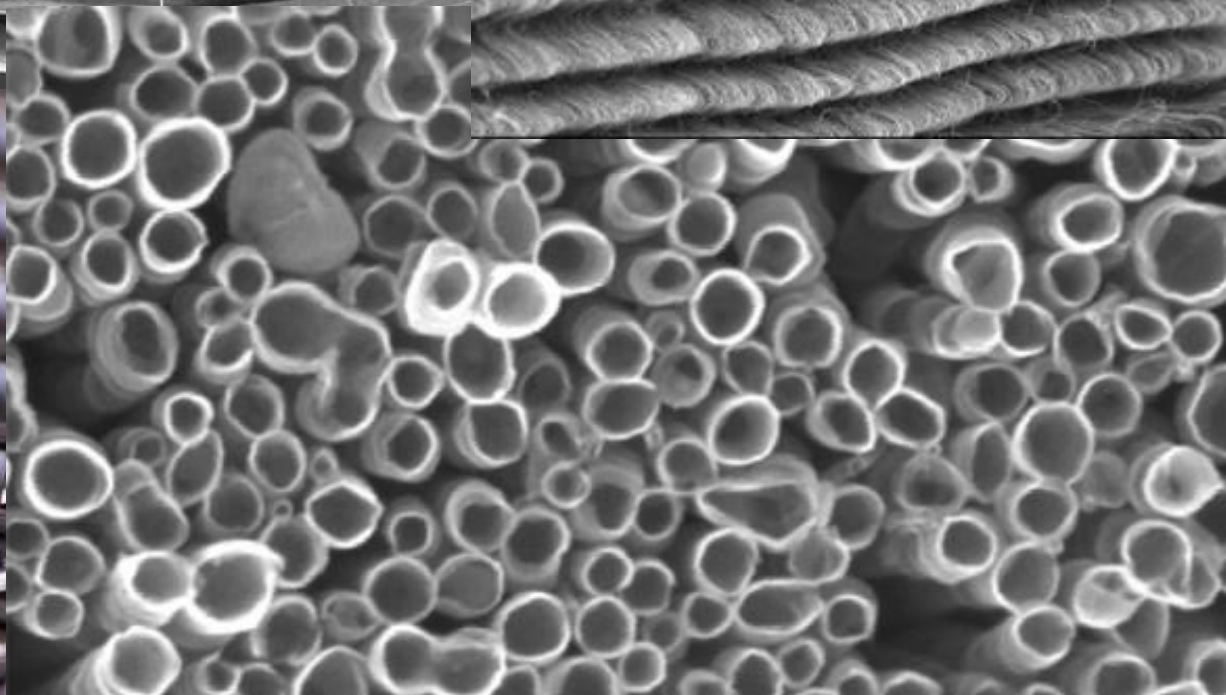
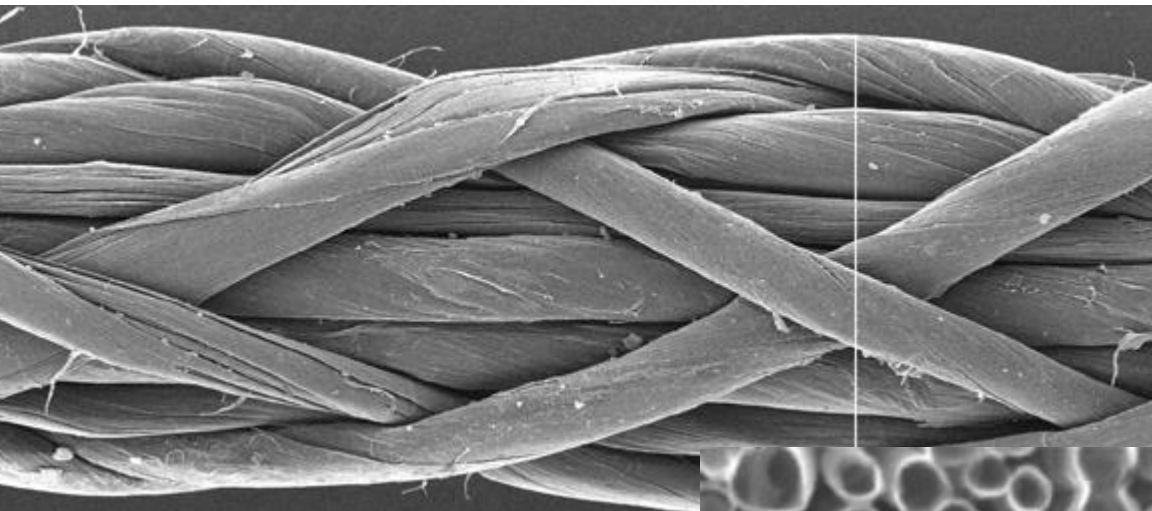


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C A S E

Funktion: Gas and receiving station
Arkitekt: Studio Marco Vermeulen
Sted: Holland, (The Agro & Food Cluster
Nieuw Prinsenland)
Materiale: Bio-baserede paneler(hamp)og bio-binder



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C A S E

Funktion:

The BIQ House - boliger

Arkitekt:

Splitterwerk / Arup

Sted:

Hamburg/2013

Materiale:

Alge bio façade, SolarLeaf,



FREMTIDEN...



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Environmental Product Declaration

Weight / Volume: 100 cu ft / 2.8 m³

Type of material Nylon Carpet with pvc backing

Life cycle analysis

Acidification Potential	XX
Eutrophication Potential	XX
Freshwater Ecotoxicity Potential	XX
Global Warming Potential	XX
Human Toxicity Potential	XX
Marine Aquatic Ecotoxicity	XX
Ozone Layer Depletion Potential	XX
Photochemical Ozone Creation Potential	XX
Radioactive Radiation	XX
Terrestrial Ecotoxicity Potential	XX
Abiotic Resource Depletion	XX
Embodied Energy	XX
Total Rating	X

Waste lbs/kg

Hazardous Waste lbs/kg

Energy MWh

Materials lbs/kg

Potable Water Gallon/L

A green material should not exceed the following

Total LCA rating	X
Waste	XXX
Hazardous Waster	XXX
Energy	XXX
Materials	XXX
Potable Water	XXX



For more information go to www.youcantrustus.org



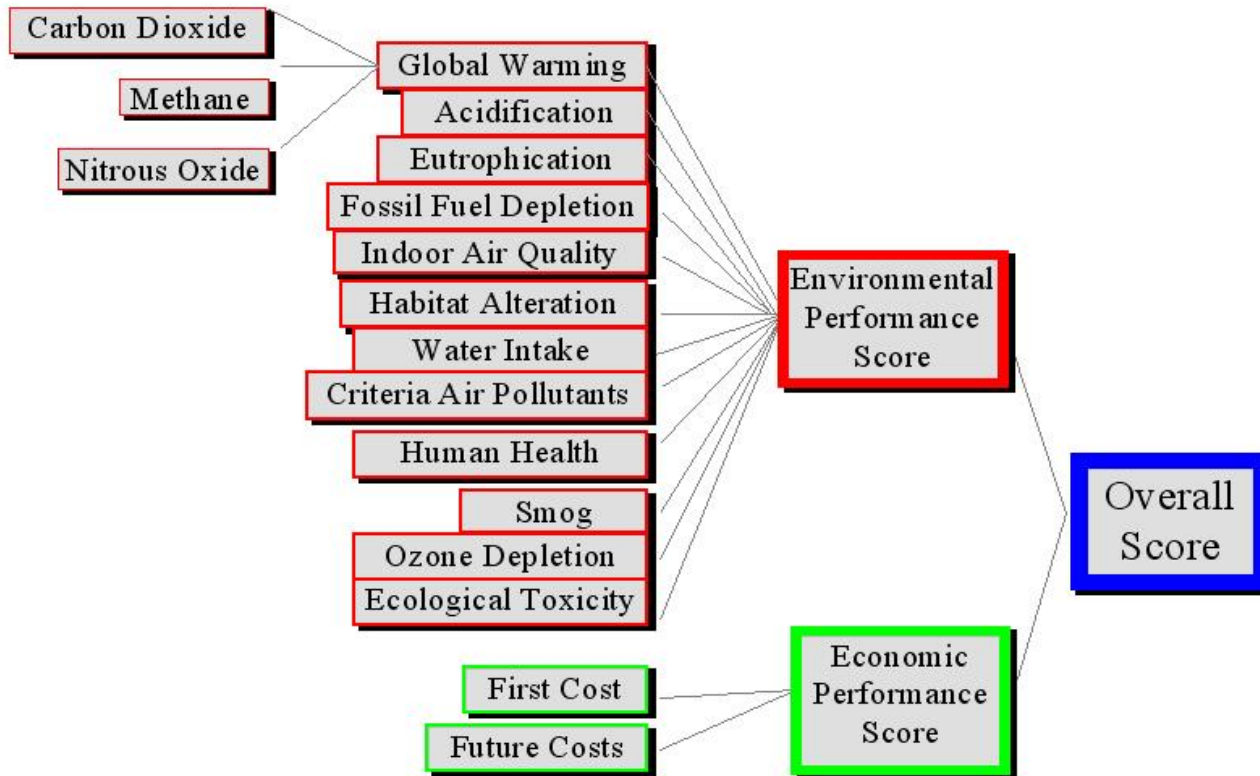
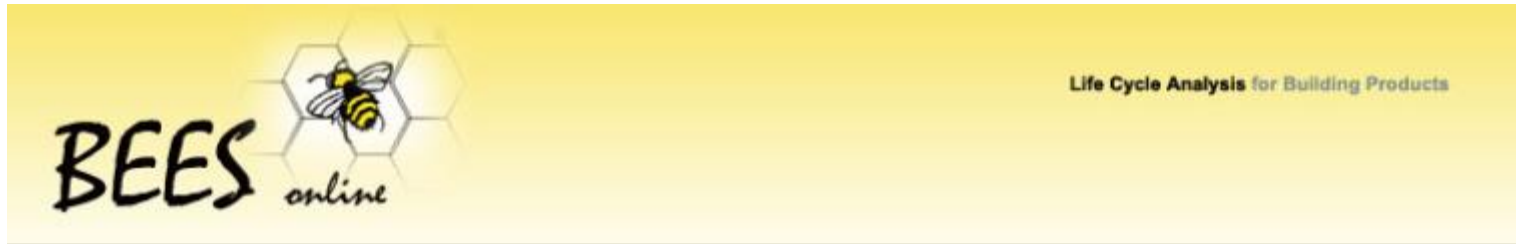
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FREMTIDEN...





Life Cycle Analysis for Building Products

[Home](#)

[Analysis](#)

[Help](#)



SELECT ALTERNATIVES

Select Product Alternatives

- Generic Nylon Carpet Broadloom
- Generic Nylon Carpet Tile
- Generic Nylon Carpet Tile/Low-VOC Adhsv
- Generic Terrazzo
- Generic Vinyl Composition Tile
- Generic Wool Carpet Brdlm/Low-VOC Adhsv
- Generic Wool Carpet Broadloom
- Generic Wool Carpet Tile
- Generic Wool Carpet Tile/Low-VOC Adhsv
- IFC Entropy Carpet Tile, Climate Neutral
- IFC Sabi Carpet Tile, Climate Neutral
- IFC Transformation Carpet Tile, Climate Neut
- J&J Industries Certificate Brdlm Carpet
- Mohawk Meritage Broadloom Carpet

Update Product Details

[View Product Data](#)

Generic Nylon Carpet Broadloom

Transportation distance from manufacture to use: miles

kilometers

Select Alternative



[Home](#)

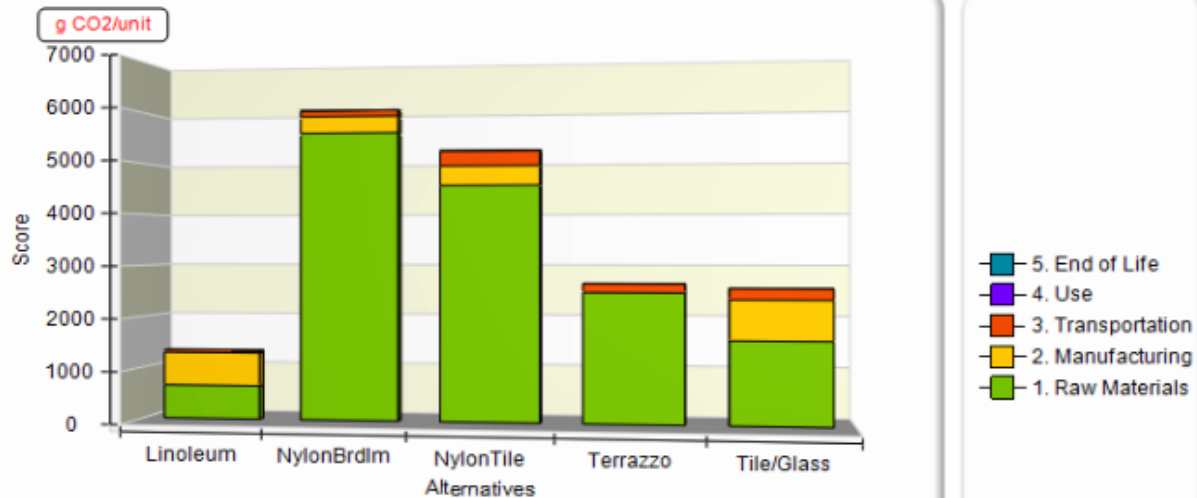
[Analysis](#)

[Help](#)

- Summary Graphs
- Life-Cycle Stage Graphs
- Environmental Flow Graphs
- Embodied Energy

Global Warming

Global Warming

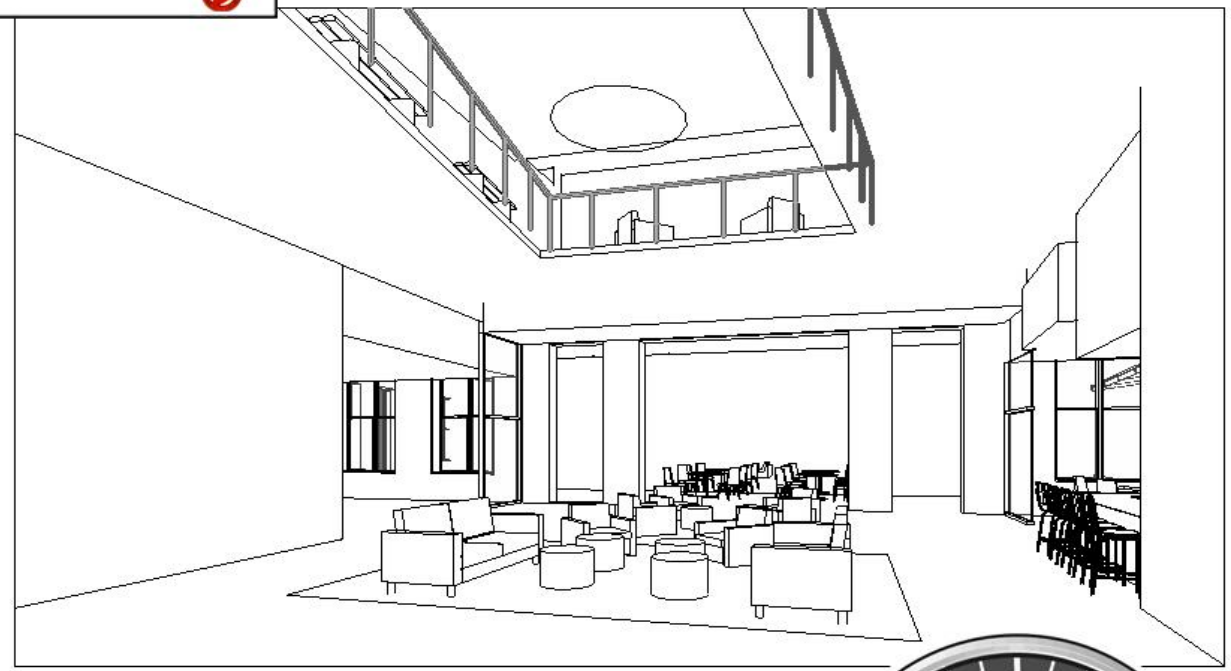


CARPET

- Goodbye Landfill Carpet ●
- Eco forever Carpet ●
- Vinyl Dream Carpet ●
- I-kid-you-not-plastic Carpet ●

- Room
- Roof
- Floor
- Grid
- Lines
- Ref Plane
- Dimension
- Section
- Level
- Text

- Floor Plan: THIRD FLOOR PLAN
- Floor Plan: SECOND FLOOR PLAN
- Floor Plan: SITE PLAN
- Floor Plan: FIRST FLOOR
- Floor Plan: BASEMENT
- 02 Enlarged Plans
- 03 RCPs
 - Reflected Ceiling Plan: PENTHOUSE
 - Reflected Ceiling Plan: THIRD FLOOR
 - Reflected Ceiling Plan: SECOND FLOOR
 - Reflected Ceiling Plan: FIRST FLOOR
 - Reflected Ceiling Plan: BASEMENT
- 04 Exterior Elevations
 - Elevation: WEST ELEVATION
 - Elevation: SOUTH ELEVATION
 - Elevation: NORTH ELEVATION
 - Elevation: EAST ELEVATION
- 05 Interior Elevations
- 06 Building Sections
- 09 area studies
- 10 Autocad Linked Files
- ???
- Section: Section West
- Section: Section East
- Section: Section 16
- Section: Section 15
- Section: Section 14
- Section: Section 12
- Section: Section 11
- Section: Section 9
- Section: Section 8
- Section: Section 7
- Elevation: WC 3 - c
- Elevation: WC 2 - c
- Elevation: Elevation 15 - a
- Elevation: Elevation 14 - c
- Elevation: Elevation 13 - a
- Elevation: Elevation 12 - a
- Elevation: Elevation 9 - a
- Elevation: Elevation 6 - c
- Elevation: Elevation 6 - a
- Elevation: Elevation 5 - c
- Elevation: Elevation 2 - a
- Elevation: Elevation 1 - d



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Potential	XX
	XX
	XX
	XX
	XX
	XX
	X

lbs/kg
lbs/kg
MWh

Materials

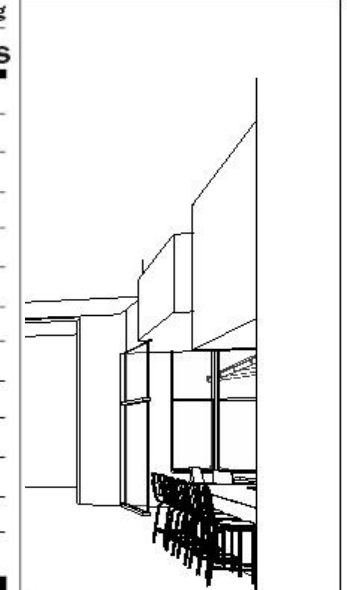
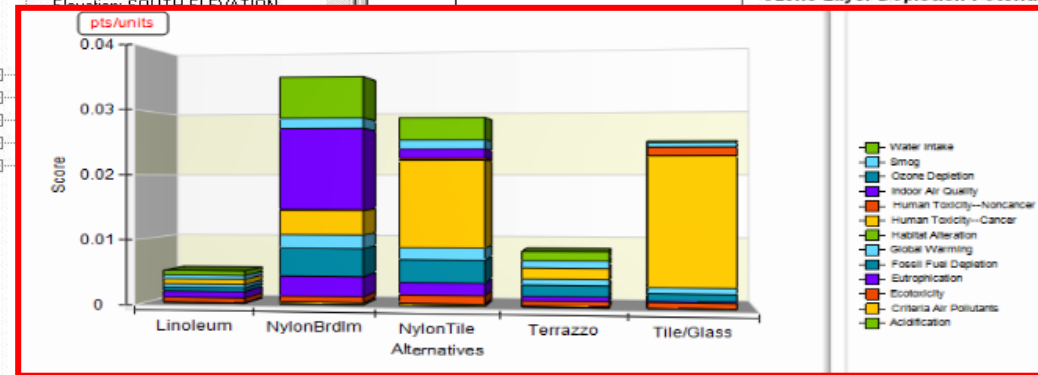
Potable Water: Gallon/L

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Total LCA rating	X
Waste	xxx
Hazardous Waster	xxx
Energy	xxx
Materials	xxx
Potable Water	xxx



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TAK



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Green Building Product Certifications

GETTING WHAT YOU NEED



PUBLISHED BY BUILDINGGREEN ■ 2011



EcoLabel Index

www.ecolabelindex.com



SVANEN - Nordisk Miljømærke

(dansk - LCA baseret, kvalitet, sundhed, funktionalitet)

www.nordic-ecolabel.org

www.ecolabel.dk/da/produkter/byg-og-bolig/bygningsmaterialer



Dansk Indeklima Mærkning

(dansk – fokus på indeklimavenlige produkter. Mindre grad på produktion og LCA)

www.teknologisk.dk/ydelser/dansk-indeklima-maerkning/253



BASTA

(Byggematerialer - kun på svensk)

www.bastaonline.se



Der Blaue Engel (kun på tysk)

www.blauer-engel.de