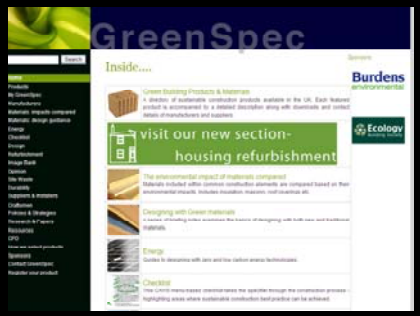

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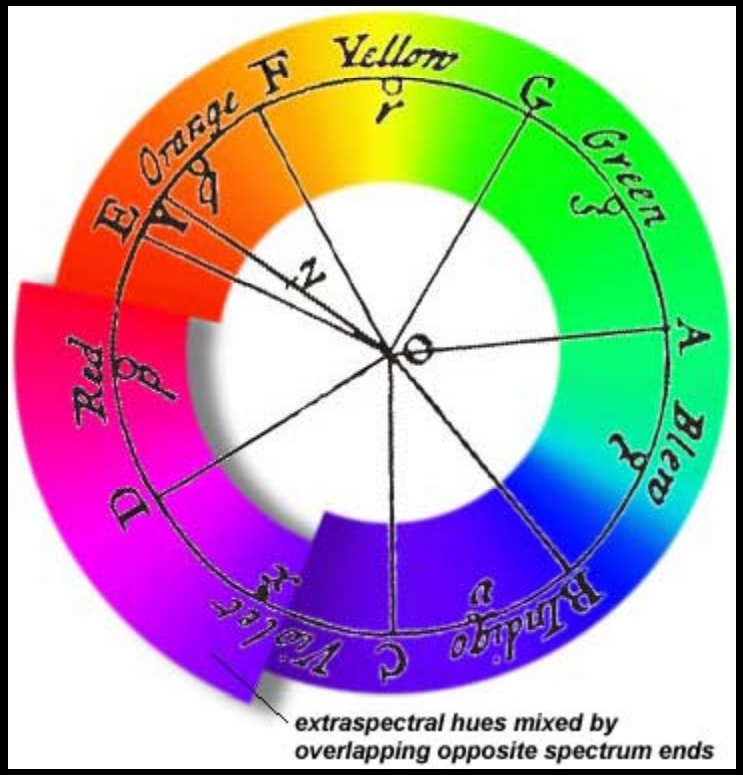
Greenwash

Green v Violet

Whitewash Greenwash

Manufacturers' Claims

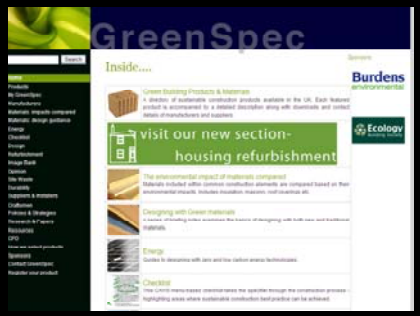
Sustainable
Eco
Green



Violet
Violent
Violate

Definitions

- Green
- Greenies: the people that do Green
- Light or Dark Green or Greenies
- Greenie Points: Brownie Points + Green (all positive)
- Violet: Opposite of Green
- Violets: the people that don't do Green
- Light or Dark Violet or Violets
- Whitewash: cover-ups telling porkies
- Greenwash: telling green porkies



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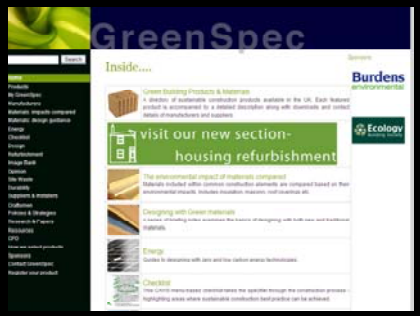
‘Violet’

- ‘Violet’ chosen as it is at the opposite end of the spectrum from ‘Green’
- Not far from violent and violate
- Others prefer Green-Brown, Green-Red, Green-Black
- Not Purple



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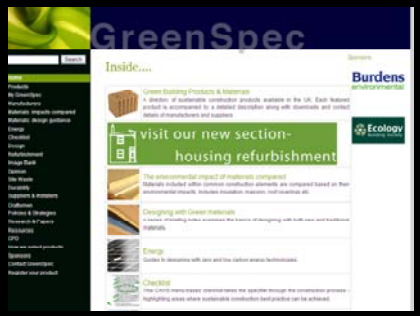
‘Violet’ Materials

- ‘Violet’ meaning:
- ‘any material, construction product, construction method or building
- unfriendly to humans or the environment or
- whose performance diminishes in use or over time’



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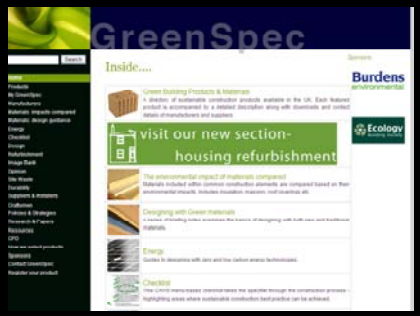
‘Violet’ Industry

- Clients/employers, developers, designers, Quantity Surveyors, contractors, manufacturers, applicators/installers, advisory organisations, manufacturer associations
- anyone that does not care about the environment
- or anyone that does not act on its behalf
- Virtually the whole industry
- It has been changing, slowly driven by legislation
- But far too slowly, until now……maybe/not



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Are you Green or Violet?

I am a shrinking Violet

a little green
round the edges but
less violet everyday

Violet Materials

- **Non-renewable, finite**
  - Fossil derivatives, fuel, hydro-carbons, plastics,
  - Petrochemical, chemicals, synthetics:
    - Paints
    - Plastics
- **Unsustainable**
  - Carbon based: e.g. Fuel, hydro-carbons, plastics,
  - Release Carbon in manufacture or use: e.g. Cement
- **High embodied energy: e.g.**
  - Metals: Aluminium
  - Plastics
  - Cement
- **Hazardous materials and hazardous waste:**
  - Wet, sticky , gooey or flows:
    - resins, paints, sealants, chemicals,
  - Fine particulate: e.g. cement, asbestos, ceramic fibre
  - Corrosive, acidic, alkali,
  - Off-gassing of unhealthy stuff
  - Hazardous emissions (liquids/gasses) and wastes from recycling
- **Ozone depleting & Global Warming**
  - Foamed plastics HFCs HFAs

Green: Environmentally Sustainable Materials

- Renewable: timber,
- Rapidly renewable: Plant based materials
- Abundant: Site subsoil, rocks, sand, gravel,
- Recycled & Recyclable:
  - post consumer content,
- Reclaimed & Reused: on site materials, timber not chipboard
- Carbon already out there:
  - reclaimed bricks, slates, stone
- Carbon sequestration: Carbon negative:
  - Plant and timber based
- Low embodied energy: Plant based materials, paints, resins
- Local: low transport miles: low transport emissions

Social Sustainable Materials

- Socially responsible: Fairtrade equivalents
- Pay the right price v plunder the world
- Local: materials, crafts, companies, tradesmen
- v
- Cheap/family/child labour abroad where nobody sees or cares

Healthy Materials

- Low VOC?: but not loads of other chemicals to achieve it
- No hazardous materials in application and use
- No hazardous waste
- Low allergy
- Low to Zero toxicity
- Indoor air quality

Economic Sustainable Materials

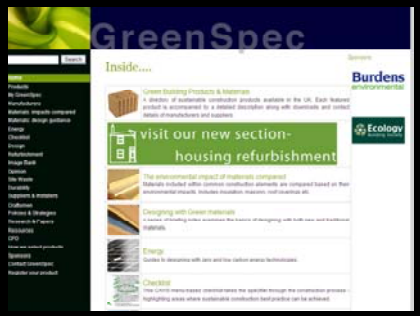
- Long term economic to maintain
- Long term economic to run
- Reclaimable, reusable and resalable
- v
- Short term cheap to build

General claims made in Greenwash

- Sustainable
- Environment Friendly
- Eco-friendly
- Recycleable
- Recycled
- Managed Forest
- CFC free
- HCFC free
- ZODP
- Water based
- Solvent free
- Low VOC
- Energy saving

Meaningless in a specification

- Sustainable
- Environment Friendly
- Eco-friendly
- Architects are prone to using these too, about their projects when in many cases they have tackled few elements and few issues.



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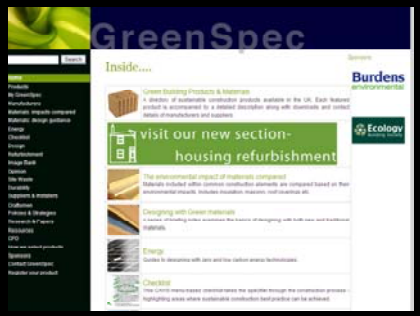
Recycleable

- Not recycled
- Meaningless in a specification
- How much of their own materials is recycled?
- This may be an indication of the state of their sector of the industry
- Don’t use non-recycleable



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Recycled

- But how much is post-consumer
- Or factory floor sweepings?
- What percentage?
  - ISO 14021
- Recycled what?
- PVC?

GreenSpec

Search

Designing with Green building materials

Airtightness & Intelligent membranes

In lightweight construction, the airtightness layer typically functions both as a barrier to air leakage and as barrier to moisture penetrating the building fabric. New types of membranes allow air movement according to environmental conditions.

Recycled content

Thanks to the introduction of the ISO 14021 standard, it is now far easier for the specifier to determine the recycled content of building materials and products.

Rammed earth

A traditional form of construction is once again becoming popular owing to its very low embodied energy and ready availability.

Reclaimed materials

Direct substitution of reclaimed materials for new can radically reduce the environmental impact of that particular item. It removes the need to extract more raw materials and it largely removes the need for processing and manufacture.

Plaster and render

Successful specification of renders and plasters relies on a thorough understanding of the properties of a wide range of available materials.

Lime mortar and render

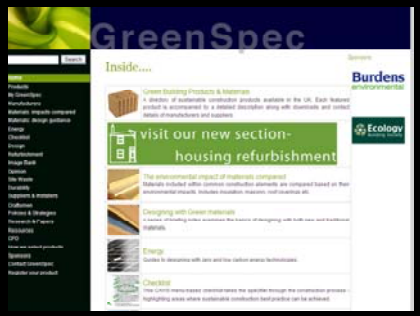
Traditional lime mortars and renders often offer a superior performance to their cement equivalents.

Glass and glazing

Glass technology is constantly improving the thermal performance of windows -

Managed Forest

- But in who's terms
- Is it FSC certified? Forest Stewardship Council
  - PEFC?
  - BM Trada is not a scheme just a test house
  - Another scheme?
- or none at all?
  - UK sources UK grown UK Species
- Non UK source
  - Chain of Custody?



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CFC & HCFC free

- What about HFCs?
- What about HFAs?
- What about PFCs (aluminium production)?
- What about Chlorine (PVC production)?
- What about ODP and ZODP?

ZODP Zero Ozone Depletion Potential

- But what about Green House Gases
- Global Warming Potential GWP
- This is often worse then ODP
- We have had some good news about Ozone layer holes repairing themselves

ODP v GWP

Substance	Type	Montreal Protocol	ODP R11=1	GWP CO_2=1
R11	CFC	Yes	1	1500
R22	HCFC	No	0.05	510
R125	HFC	No	0	860
Wider Group	HFA		As HFC & HCFC	As HFC & HCFC
H1301	Halon	Yes	10	5800

Water based/ Solvent-free /Low VOC

- Less or no Solvents
- Low Volatile Organic Compounds
- But still Synthetic
- Extra chemicals to be water based
- Sometimes more hostile than solvents

Materials:
Environmental impacts compared

Embodied energy

As the amount of energy used in the running of a building (operational energy) shrinks, the energy used in its construction becomes more significant.

Bricks

Though more-often consuming large quantities of energy in their production, this most traditional of English building materials offers strength, durability and a high capacity for reclamation.

Blocks

Blocks are becoming available in a more diverse range of materials including clay, concrete and wood. Careful specification can exploit each material's unique qualities.

Insulation

Insulation materials are used to enhance the thermal performance of construction elements. The wide range of products available reflects the variety of applications, materials, environmental concerns and performance.

Pitched roof coverings

The roof is arguably the component of a building most exposed to the elements. The specification of roofing materials often involves the trading-off of enviromental impacts with durability.

Flat roof coverings

In general, flat roofs should be avoided - but where pitched roof options are unavailable, a variety of roofing membranes are available that offer different qualitiles of durabiltiy and environmental impact.

Window frames

MATERIALS COMPARED:

- Embodied energy
- Bricks
- Blocks
- Insulation
- Pitched roof coverings
- Flat roof coverings
- Window frames
- Rainwater goods
- Composite boards
- Joinery paints & stains
- Wall paints
- Smooth flooring
- Carpet and matting

Window frames

Though the heat lost through a window frame is likely to have more of an environmental impact through the product's life cycle - much debate continues around the materials frames are made from.

Rainwater goods

Specifying rainwater goods is not as straight-forward as it might seem. The environmentally-conscious designer must be aware of the, often complex, equation of durability, sourcing, embodied energy and recycled content.

Composite boards

Composite boards can offer material and structural efficiency, but concerns remain about wood sourcing and potentially toxic binding agents.

Joinery paints and stains

Paint has a relatively poor environmental reputation, flush as many products are in embodied energy and VOC solvents. However, these concerns are motivating a new generation of products which include more natural and friendly ingredients.

Wall paints

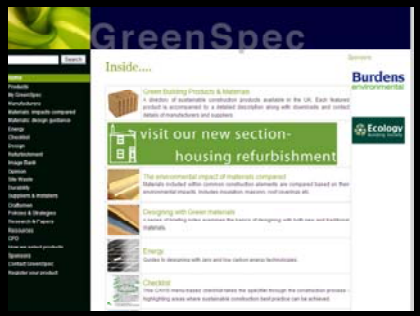
New, greener ranges of wall paints are becoming available to replace the high-VOC synthetic varieties currently specified.

Smooth flooring

The flooring market has become associated with the dominance of synthetic, particularly PVC, materials - but more traditional and natural materials such as linoleum, cork and rubber are staging a renaissance.

Carpets and matting

Carpets including materials derived from petrochemical sources almost completley dominate the industry - but careful research and specification can offer alternatives that result in less impact on the envrionment.



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Water saving

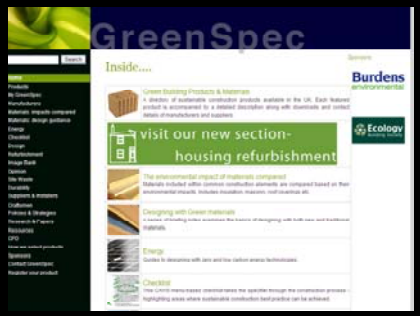
- But how low a flush WC?
- 6/4 litre should be regarded as bad
- And better than this is readily available
- 4/2.5 litres should be normal
- as low as 1 litre flush
- Taps, Showers, White goods, etc.

Low maintenance

- Example PVC windows
- But PVC is short life, Ironmongery fails
- Requires a good maintenance regime
- PVC is dangerous stuff in manufacture and in landfill
- There are alternatives
- Peabody have already rejected them
- ICI make a PVC Paint
- BRE Green Guide PVC windows A rated

Makes Zero Energy Buildings possible

- Meaningless
- Meaningless in specification
- Is reliant on so many other things to be able to claim anything



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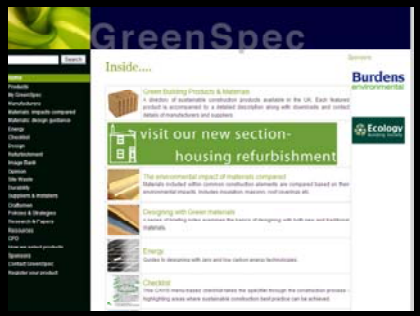
Part L Compliant

- Elements can be assessed against elemental requirements
- When chasing (CO2) the whole building needs to be looked at together not individual elements



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Code 6 Compliant

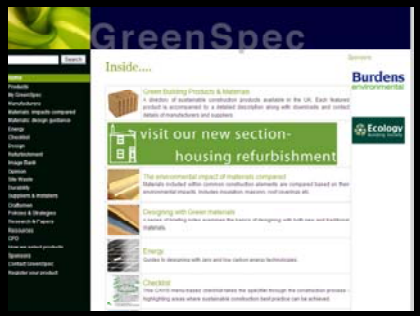
- Elements can be assessed against elemental requirements
- Materials are difficult to extract
- One element or material may have a few criteria to be judged against

BRE Green Guide to Specification Compliant

- BRE's Green Guide to Specification has its flaws
  - Shades of green: 3 part 3 hour lecture
  - Green Materials Olympics 1 hour lecture
- Its not Green
- Its not a guide to specification

Natural

- Sheep were dipped in nerve toxins
- to kill moths and other insects
- toxins remain in the wool
- Woolmark carpets were from dipped sheep
- Your carpets might be a killer
- Choose carpets without dip



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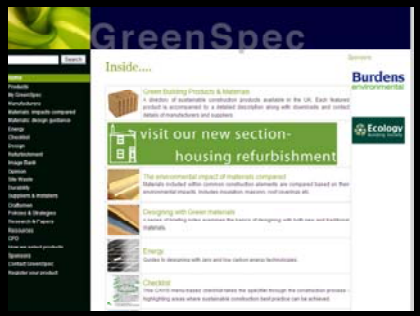
Natural

- Timber of a perishable species needs preservative treatment if use in a vulnerable situation
- Treatments are designed to kill spores which would otherwise rot the timber
- Treatments remain in or on the timber's surface



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Natural

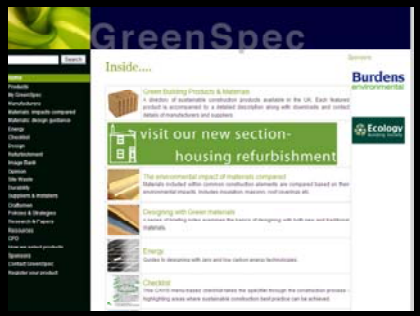
- Sheep's wool is natural (if not dipped)
- Cork, cellulose fibre, hemp,
- Natural paints, stains, waxes,
- Solid timber floor boarding
- Linoleum flooring
- Rubber Flooring

Ambiguous advertising

- that is easily misread and interpreted
- Recycled v Recycleable
- Recycled might be good
- but recycleable means very little or nothing
- Let future generations sort out the mess

Ambiguous advertising

- Certificate or endorsements shown in advertising
- When questioned:
  - the AECB logo is for company membership its not about the products
  - The endorsement is for the other product in our range



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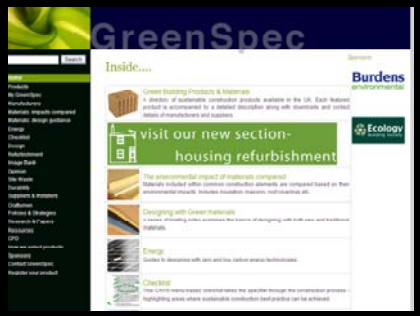
Green Marketing: Concrete Centre

- £3m/annum budget
- Tell a good story
  - BAU
    - Durable
    - Versatile
    - Strong
    - Fire resistant
  - New
    - Thermal mass
- Suppress a bad one
  - High CO_2 production from heating
  - High CO_2 from chemical reaction
  - 8% global CO_2 production
  - 1.8% UK CO_2 production
  - 13% of 106m tonnes / annum waste: timber
  - 10% of 106m tonnes/annum waste: temporary works formwork
  - 10.2% of 106m tonnes/annum waste: concrete

Cement Aggregates Quarry Products Associations

- Joined forces
- Marketing Bugest combined
- £12m/annum



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Greenwash

- http://sinsofgreenwashing.org/findings/greenwashing-report-2009/

Greenwashing Report 2009
Greenwashing Report 2007
The Seven Sins
FAQs

FINDINGS

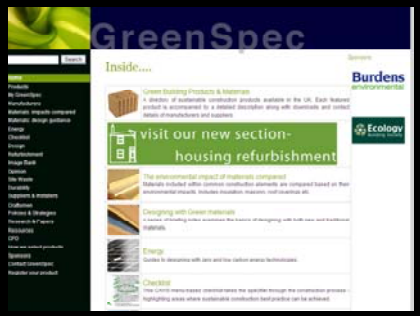
About the Sins of Greenwashing Report & Study

In 2007, in an effort to describe, understand and quantify the growth of greenwashing, TerraChoice Environmental Marketing launched a study of environmental claims made on products carried on category-leading 'big box' store shelves. Based on the results of the study, six patterns in greenwashing were identified, now recognized as the Six Sins of Greenwashing study. The Six Sins of Greenwashing exposed a nerve with consumers wanting to do the right thing but growing suspicious of misleading environmental claims.

In 2009, TerraChoice released the follow-up study, the Seven Sins of Greenwashing to present new and significant trends that have emerged since the first study. This year's research includes even more 'big box stores' in both Canada and the U.S. and more products studied. The second edition of the study also gives closer examination to product categories of special interest to consumers — toys/baby products, cosmetics and cleaning products.

About TerraChoice Environmental Marketing

TerraChoice Environmental Marketing, North America's premier environmental marketing firm is the author and brainchild behind the Sins of Greenwashing studies



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