

# Resource Efficient Flooring Skills Project

**Construction Skills funding  
FSP, CFA and GreenSpec**

# Tackle issues every which way

- **Whilst design is the source of waste**  
GreenSpec and other bodies continue to try to educate the design professions from the top down
- The Flooring Sectors needs to come a the same problem from the bottom up
- We might find some common ground in the middle

# Executive summery

- **Proposal to provide CSkills funded training to assist flooring installers to improve their offering to contractors, designers and clients**
- **To enable dialogue up their supply chain with main contractors, designers and clients on resource efficiency and cost issues in flooring**
- **Provide ready made text to initiate the discussion and support the argument if not face to face**
- **Develop a calculator to provide compelling evidence to persuade designers to engage.**

# REAP Resource Efficiency Action Plans

## Trade Skills: 1 Flooring

WasteCost®Lite FLOOR Calculator	Resource Efficiency Report Generator	Arguments for RE	Training coaching
Flooring	Submit or present Data to support designers	Client Responses	Resource Efficiency; bigger picture
Room sizes & shape	Waste Quantities % & m2 Hazardous quantities m3	Counter arguments	Example wasteful designs
Products sizes & shape	Materials Costs £ Waste Costs £ & %	Counter Responses	Example Resource efficient designs
Setting out rules	Embodied Energy in waste	Response anticipation	Craftsmen v Client Dialogue coaching
Design & Specification requirements	Embodied Carbon in waste	Counter argument anticipation	Client: Main contractors Designers & Employers
Wastage calculations	Waste Reduction Opportunities % & m2	Guidance Documents	Training WasteCost®Lite FLOOR
Materials and Waste statistics	Reduced Tender £	Information Websites	Training Report Generator <sup>4</sup>

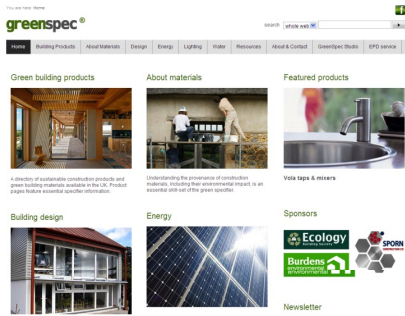
# REAP Resource Efficiency Action Plans

## Trade Skills: 2 Flooring Tender Added Value

Tender Added Value	WasteCost® Lite packaging Calculator	SPWMP Report Generator
Stand out from the crowd	Flooring Area Flooring quantities	Submit or present Data to support Contractor
SWMP & SPWMP checklist	Delivery size	Packaging Waste Quantities % & m2 & tonnes
Project Input	Packaging sizes & shape	Packaging Materials Costs £ Recycle Value £
Diversion Opportunities and Companies	Pallets Quantity	Embodied Energy in waste
Report generator	Polyethylene Quantity	Embodied Carbon in waste
Tender Input	Cardboard box/roll quantity	Waste Diversion Opportunities % & m2 & Tonnes
SWMP & SPWMP completed	Convert to weight	Reduced Tender £

# CITB Construction Skills

- The Sector Skills Council for Construction
- Paul Gaze
  - Specialist Federation Supports Manager
- John Carter
  - Specialist Account Coordinator
- MS&DP Management Supervisor Development Program Funding



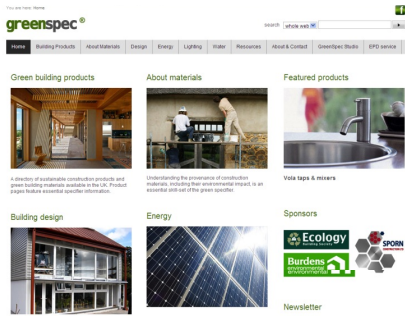
# Alan Best

- Flooring, Chemistry and REACH expertise
- FSP & CFA committees
- CFJ Journal articles
  - What will force change in your world?
    - Diminishing landfill capacity
    - EPD Environmental Product Declaration
    - REACH Regulation (driving out hazardous chemicals)
  - Promotional opportunity in journal
- Sales, HR & Training background
- Represents Global Flooring manufacturer

# Brian Murphy GreenSpec

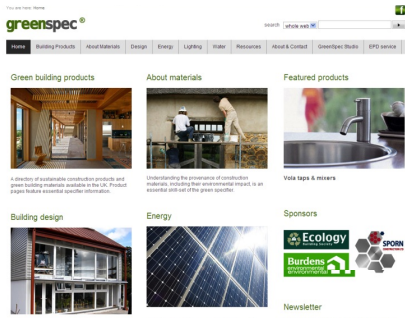
- Architect, Specification Writer
- Greening up since 1999
- GreenSpec website launched 2001
- DTI funded project with BRE on waste minimisation and recycled content
  - Website content, Specifications and Appendix
- 40 UK wide SWMP workshops with BRE, EA, WRAP, Envirowise, UKCEED, Kier, Simons
- Develops simple Excel calculators
- Runs seminars, workshops & lectures extensively





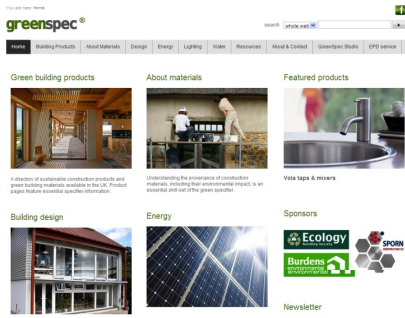
# Representing

- CFA Contract Flooring Association
- FSP Flooring Sustainability Partnership
  - Setup and initially funded by BRE, WRAP, CPA,
  - now funded by membership
- Alan and Brian on Committees and spoke at events
  - Follow up action: this proposal



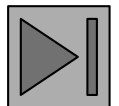
# Not Representing

- CRUK Carpet Recycling UK
- This project is about flooring installers and installation resource efficiency
- It is not about recycling since this is the domain of waste handling, carpet recycling, recyclate distribution companies and manufacturers



# Waste Hierarchy 2011

**EU and EA definitions &  
implications**



**Costs**

**Effort**

**Old Waste Hierarchy**

**old official definition & goal**

**Less**

**More**

**Reduce**

**Reuse**

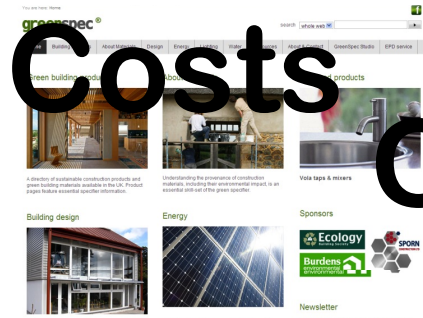
**Recycle**

**Recover**

**More**

**Less**





**Costs**

**Old Waste Hierarchy**

**The reality**



**Less**

**Reduce**

**Less**

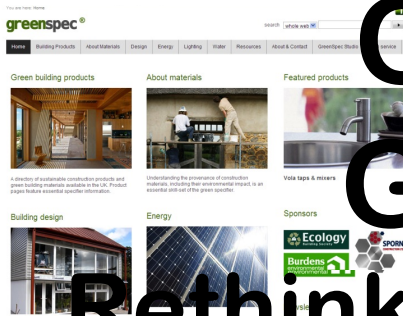
**Reuse & Recycle**

**Recover**

**Reject**

**More**

**More<sup>13</sup>**



# Old Waste Hierarchy

## GreenSpec definition



Rethink, Re-educate, Resolve, Re-evaluate,

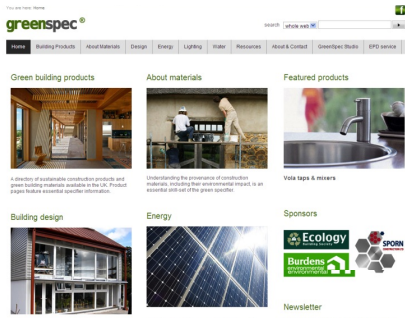
Resource, Relate, Research, Refer,  
Refresh, Rename, Regard, Revalue,  
Remeasure, Reprogramme, Replan,  
Reconsider, Refuse, Reject, Return,  
Redesign, Regularise, Rehearse,  
Rationalise, Remediate, Reduce,  
Reserve, ReSpec, Register, Reuse,  
Reclaim, Repair, Retain, Remind,  
Recycle, Recover, Record, Report,  
Reward. Review. Revise. Refine. Restart

**Costs**

**Effort**

## 2011 Waste Hierarchy

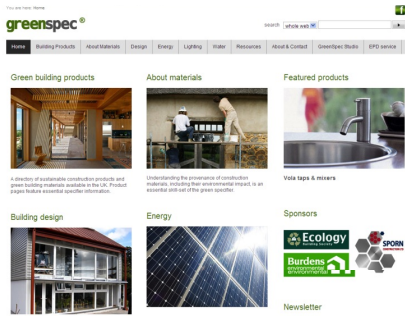




# Prevention

- Designers think waste is a site issue not a design issue
- Resource Efficiency (RE) and Waste Minimisation are No. 8 in their list of priorities
- GreenSpec WRAP, BRE, EA and Envirowise attempt to engage with designers on this issue
- And will continue to do so





# CSkills Meeting

- **Discuss Training Grant Application**
- **Forms**
  - (from previous aborted application)
- **Limited aspiration then**
  - 1 event and 10 Architect audiences
  - (wrong emphasis for this funding)
- **Bigger scope possible**
  - Passive and Proactive
- **What scope/time frame/budget should we consider?**

# CITB Construction Skills

- 1 of 25 Sector Skills Councils
- Represent 100 trade associations
  - They Develop Standards
  - Manage Trade Card Schemes
- Funded by levy on industry
- £1m back into businesses: training
  - Grants scheme for training
  - Gatekeeper: ensure benefits from money spent
- Funding each year: follow up projects or phases of same project possible

# REAP Resource Efficiency Action Plans

## Trade Skills: **Flooring** & Follow Up

WasteCost®Lite Calculator	Resource Efficiency Report Generator	Arguments for RE	Training coaching
Flooring	Submit or present Data to support designers	Client Responses	Resource Efficiency; bigger picture
	Waste Quantities % & m3 Hazardous quantities	Counter arguments	Waste generating designs
	Materials Costs £ Waste Costs £ & %	Counter Responses	Resource efficient designs
	Embodied Energy in waste	Response anticipation	Craftsmen v Client Dialogue coaching
	Embodied Carbon in waste	Counter argument anticipation	Main contractors Designers & Employers
	Reduction Opportunities Reduced Tender £	Recording new arguments	Training WasteCost®Lite FLOOR
	Emissions from Hazardous	Collecting disseminating arguments	Training Report Generator
	Charts	Mobile APP	Material Exchange
	Drawings		Reclaim reuse

# Budgets v outcomes:

- Don't focus on budgets, instead aim at:
  - Actions and outcomes
  - Actions: 6 events in 6 months,
    - EcoBuild via regional events to Harrogate
    - But this may be the wrong places for installers
  - Outcomes: 100 Installer companies engaged initially via estimators
  - Target: tonnes waste diverted from landfill
  - Evidence: participants diversion data
  - Follow up: is essential

# Aim to support Micro SMEs

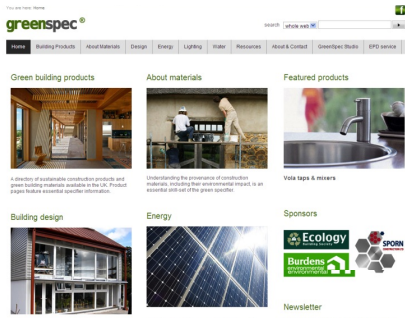
- Business support
  - Joined up activity and learning
- Business Development
  - Optimize, reduce safety margin %, reduce costs, more competitive tenders
  - PQQ: extra added value service offering
  - Or post tender pre-contract or site establishments meetings
    - Opportunities to reduce costs, waste, time,
  - Site Waste Management Plan workshops: enable engagement
- Productivity, Waste reduction, Savings
- Up-skilling, knowledge sharing
- Build Value Added Service to designers
  - to standout from crowd, building relationships with them
- Follow up: see if changes have happened and support ambitions

# **PMB: Pre meeting brainstorm**

- **Focus on C Skills, FSP & CFA audience**
- **Make use of Project partners**
- **Build on past experience, projects, relationships**
- **Build on existing resources and tools**

# PMN: Post Meeting Note

- Aim to support SME and Micro SME
  - CFA Contract Flooring Association
  - AIS Association of Interior Specialists
  - Association of Shop-fitters
- Two distinct groups
  - Domestic: work directly for client
  - Commercial: subcontract to main contractor
    - Challenge is to create a communication route up the supply chain past layers of management to the designers
    - Who may not be interested, or think they know better

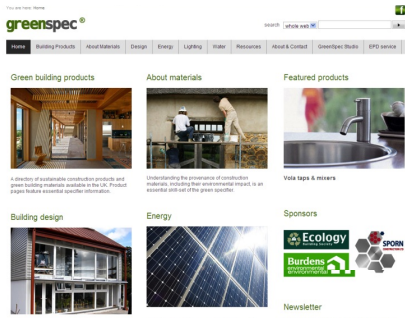


# Meeting at CFA



- **Richard Catt**
  - CEO of CFA
  - Former Chair of SFA
- **John Butler**
  - John Butler Contracts Ltd.
- **Tony Mathe**
  - Director Hillside Contracts Ltd.





# Purpose

- To present project proposal to the prospective audience
- Explore details
- Test the proposal
- Check if it works for them
- Presented:
  - Executive Summery and 1<sup>st</sup> diagram only

# Questions: Who in the SME?

- Who will be the recipient of the training?
- Who will use the software?
- Who will present the RE arguments?
- Estimators may be the right place to start
- They may be able to see the wasteful design if they have drawings
- They may be able to engage the installers

# When will it be used?

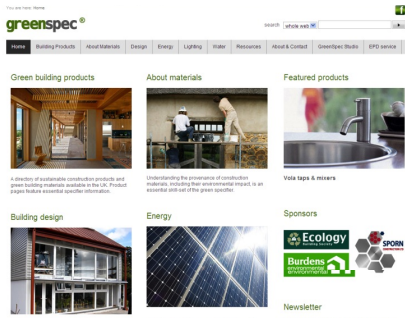
- We are expected to price the spec
  - We would irritate the Tender Reviewer
- Tender stage is too late
  - Ideally sooner but no opportunities
- Post Tender or In sub contract
  - Probably be the best time to address this
  - “Here are some potential savings”
  - “Can’t improve those, but can these”
- Ideally (but exceptionally) discuss with designer, educate them in process, convert wasteful to resource efficient design

# **Project Partners & Their Resources**

- **Knowledge of own markets**
  - Route to market
- **Websites**
- **Membership**
  - email lists
  - Audience
- **Rooms for events**
- **Graphic Design departments**
- **Marketing advice**
- **IT advice**

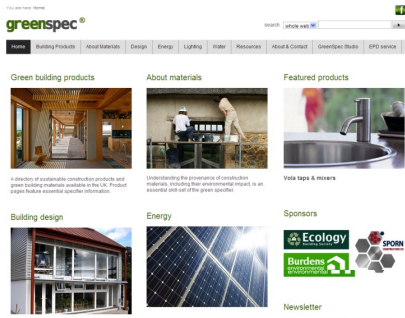
# Construction Skills

- **Grant for training installers**
  - Focused activity
  - Can this be the installing SME's estimators?
- **Membership email addresses?**
  - Training centers/Training venues
  - Training providers
  - Training AV creators
- **Meeting venues and room?**



# FSP

- **Flooring Sustainability Partnership**
  - Members
  - Initiatives & drivers
  - REAP Resource Efficiency Action Plan
    - Report 007
- **Website & tools**
  - Diversion from landfill
  - EOL End of Life options tool



# CFA

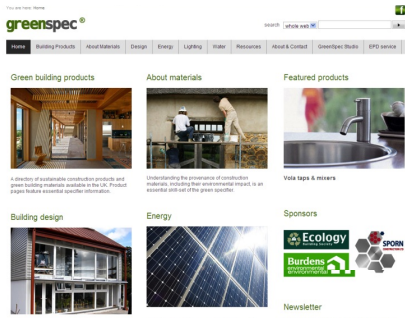


- **Contract Flooring Association**
- **Champions for this initiative**
- **4000 members install floors**
- **Meeting room?**

# **bre (formerly building research establishment)**

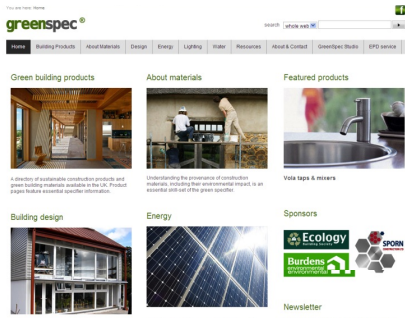
- **Championing REAPs**
- **BREEAM, CfSH, EcoHomes**
- **smartWASTE**
  - waste statistics,
  - hand held computers
- **BREMAP Resource Efficiency Businesses Map website**
- **CRWP Knowledge of wastage %**
- **More sophisticated but slow version of WasteCost*Lite*®**
- **SWMP checklist tool**
- **Meeting rooms**





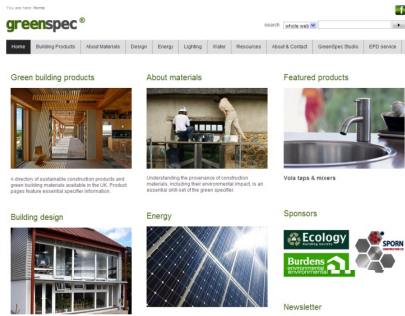
# WRAP

- Waste & Resource Action Program
- Championing REAPs
- WRAP materials websites
- Resource efficiency tools
  - Recycled content calculator
  - Waste Calculator
- SWMP Checklist tools
- Design to reduce waste guide
- Meeting room?



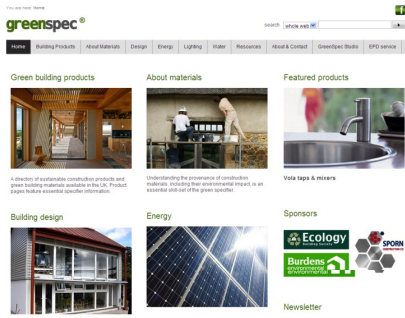
# WRAP Tools

- **Net Waste Tool**
  - <http://nwtool.wrap.org.uk/ToolHome.aspx>
- **Waste To Landfill Reporting Portal**
  - <http://reportingportal.wrap.org.uk>
- **Design Of Waste Tool For Buildings**
  - <http://dowtb.wrap.org.uk>
- **Design Out Waste Tool For Civil Engineering**
  - <http://dowtce.wrap.org.uk>
- **SWMP Tracker**
  - <http://swmptracker.wrap.org.uk>



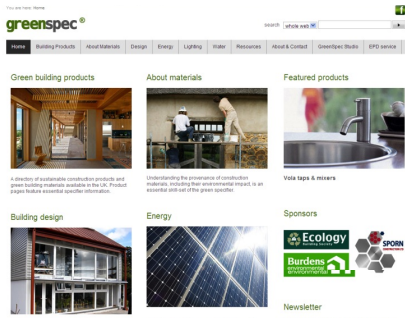
# CPA

- Construction Products Association
- Championing REAPs
- Member Associations
  - Manufacturing sector associations
    - Flooring sectors? Or materials sectors?
  - Member's Members
    - Manufacturers
      - Approved installers
- Building Centre Meeting Venue and training Rooms



# Need to approach

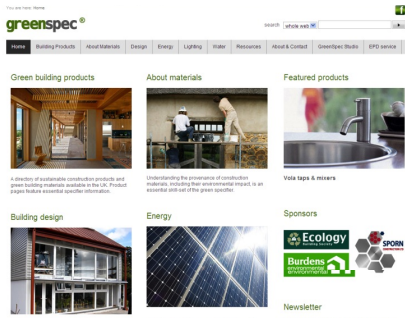
- AIS Association of Interior Specialists
  - Membership group
  - Able to promote
  - Aware of REAPs
  - Engaged with Ska EAM
- ASF Association of Shop-fitters
  - Membership Group
  - Able to promote



# FITA



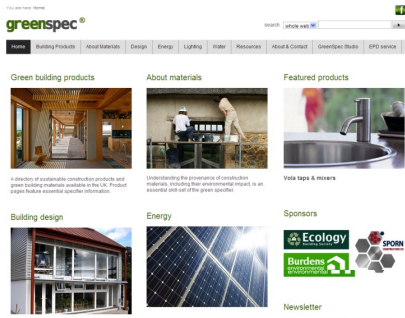
- **Flooring Industry Training Association**
  - Membership
  - Training Venues
  - Audiences
- Approach them to find coaching expertise if we do not have them
- Consider rolling out to larger audience



# CE

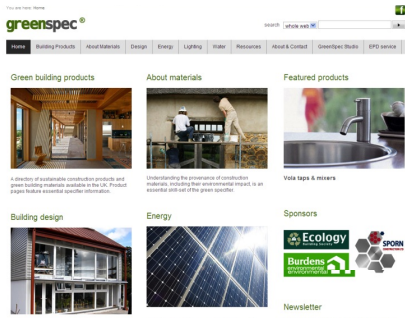


- **Constructing Excellence Clubs**
- **Membership**
- **Accessed via club activities**
- **Topical meetings**
- **Case Studies**
- **RE on their agenda**



# RE Champions?

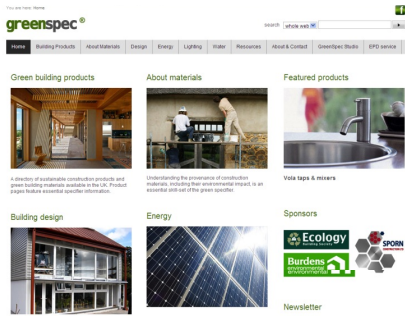
- Endorse and promote the initiative
- Speak at launch event?
- Encourage engagement to their sectors
- John Butler
  - John Butler Contracts Ltd.
- Tony Mathe
  - Director Hillside Contracts Ltd.



# Other resources

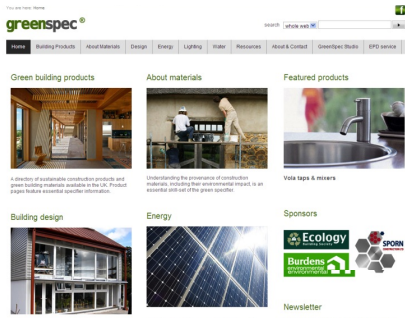
- **Responsible Solutions Loughborough**
  - Envirowise Packaging guides
  - Packaging SWMP checklists and datasheet
  - Packaging Calculator
  - Packaging waste Toolbox talks
- **Responsible sourcing**
- **Resource efficiency workshop model**
  - Main contractors and their supply chain partners





# Other resources

- **SWMP checklists & datasheets**
  - **Created by Constructing Excellence in SWMP workshops**
  - **Published by DTI in SWMP Voluntary CofP**
  - **Guidance added by GreenSpec**
  - **Made easier to use by non experts in workshops**
  - **Added calculators**
  - **Broadened scope to Packaging waste with Envirowise and Responsible Solutions**
  - **Published on Scribd**

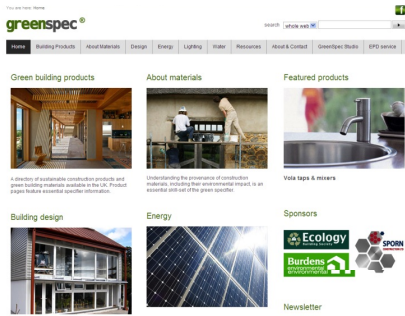


# GreenSpec

- Website(s) Visitors 48,000/month Jan'12
- Architects Specification writers,
- Resource Efficiency & Waste background
- WasteCostLite®, EE & EC calculators
- Waste specifications & Appendix
- Materials Specifications

# GreenSpecDownload.co.uk

- **Download Website (launch soon)**
  - CPD, Specifications, Calculators
  - LCA/EPD, BIM, etc.
- **Bulk email facility with target filtering**
  - 10,000 email addresses
- **Good use of Scribd, twitter, Facebook, LinkedIn, etc.**
  - Membership potential



# GreenSpec CPD

- 800+ seminar papers over 13 years
- 45 hours on Waste
- 25 hours on Recycling Reuse Recovery
- 10 hours on Eco Retrofit
- 5 hours on Resource efficient design
  - design to reduce waste and to reuse
- Ground floors PPT is the second most popular file
- Jargon buster is the most popular file
- Ground floors is the 2nd

# GreenSpec Specifications

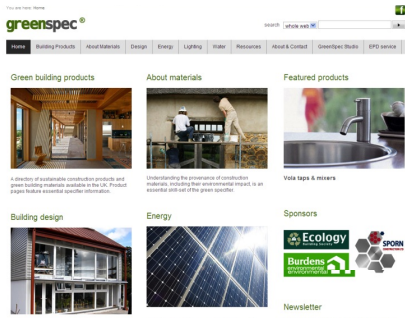
- **Waste management Specifications:**
  - Construction, Alteration, Excavations, Demolition, Landscape, Packaging
  - Demolition Protocol
    - Bill of Pre-demolition Quantities, etc. calculators
  - SWMP Site Waste Management Plan checklists, data sheets, calculators
- **Appendix: Material Exchanges, etc.**

# GreenSpec Calculators Tools

- **SWMP checklists,**
  - Datasheet Schedules that calculate
- **Demolition Protocol**
  - Checklists, BoPDQ,
  - Schedules that calculate
- **Embodied Energy & Embodied Carbon calculator**
- **WasteCost/ite® calculator**

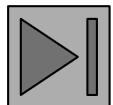
# **GreenSpec WasteCost*lite*®**

- **1 minute to input**
  - Number of buildings, floor area, number of floors, type of construction,
  - Choose which waste to be segregated
- **Instantaneous output:**
  - Cost of waste from building
  - Cost to segregate waste
  - Money saved by segregating



# Demonstration

[file:///localhost/Users/BrianSpecMan/Documents/  
ASWSDOCS/GREEN/NGSpec/GreenSpecServices/  
GreenSpecWasteCostLite/WasteCostLite\(R\)B.xls](file:///localhost/Users/BrianSpecMan/Documents/ASWSDOCS/GREEN/NGSpec/GreenSpecServices/GreenSpecWasteCostLite/WasteCostLite(R)B.xls)





# INPUTS

# OUTPUTS

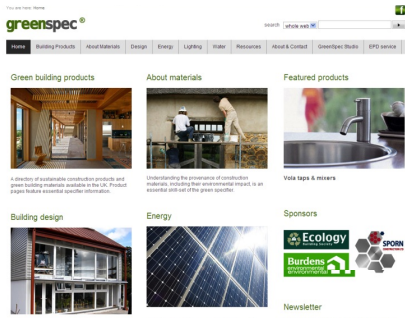
1	Number of buildings	0	No.
	Building Footprint	0	m2
	Number of floors	0	No.

2	Choose a construction type closest to your project		Type Yes in only one cell Make sure No appears in the remainder
	Average (All building types)	Yes	
	Average (Offices)	No	
	Average (Residential)	No	
	Innovative MMC Prefab Housing	No	
	Steel and Glass Office	No	

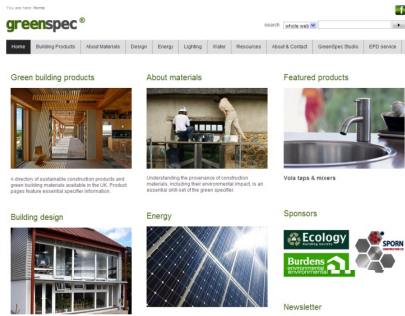
3	
Potential Waste Segregation/Reclaim & Reuse/Recycling Streams	Add Yes or No in each cell to indicate which
WAS+ICE Colour system	
No Segregation (Mixed incl. Hazardous)	Yes
Inert	No
Mixed metal	No
Mixed (non Hazardous)	No
Timber	No
Packaging	No
Compactable	No
Plasterboard	No
Hazardous	No
	1
Total number of waste streams proposed for	

Cost of one skip system of mixed waste removal	£0.00
"Waste segregation will cost more money"	£0.00
Revised cost of reduced one skip mixed waste system	£0.00
"But look how much it can save!"	£0.00
Predictable Volume of waste generated on Project	0 m3
Volume potentially diverted from landfill	0 m3
Volume diverted with chosen waste streams	0 m3
Predictable weight of waste generated on project	0.00 tonne
Weight of waste potentially diverted from landfill	0.00 tonne
Weight diverted with chosen waste streams	0.00 tonne
Potential % diverted from landfill (by tonnage)	100%

4		5		6	
Add or replace rates with local collection rates £/tonne		Number of 8 CuYd skips for each waste stream		Potentially Reusable or recyclable m3	
£15.00	£/tonne	0	No.	0	m3
-£25.00	£/tonne	0	No.	0	m3
£75.00	£/tonne	0	No.	0	m3
£25.00	£/tonne	0	No.	0	m3
£15.00	£/tonne	0	No.	0	m3
£15.00	£/tonne	0	No.	0	m3
£25.00	£/tonne	0	No.	0	m3
£800.00	£/tonne	0	No.	0.0000	m3
		0	Total	0	Total
Local waste collection rates £/8m3 skip		Total number of 8 Cu Yd skips		Potentially Reusable or recyclable m3	

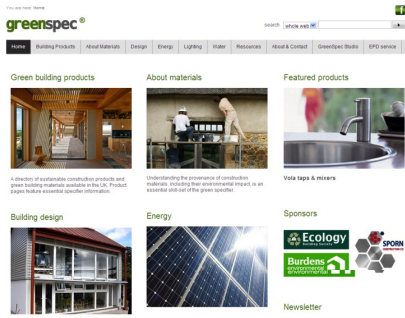


# Resource Efficient Flooring Proposal



# Particular Skills

- Defra? project some years ago addressed this, check final phase activity: Installers
- Give installers confidence to address environmental issues with their clients
  - Language to use
  - Arguments to adopt
    - Directives, legislation, campaigns, fiscal
- Data to support arguments:
  - WasteCost/lite® Floor
  - Focused on costs: a good starting point
  - Materials, accessories, labour, waste, tax



# Proposal

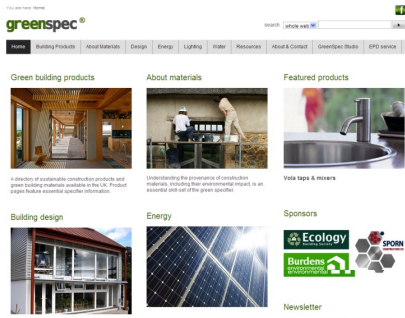
- **Raise awareness of resource issues**
- **Empower Flooring installers and/or estimators to participate in a debate with their clients**
  - Issues to debate
  - Counter arguments
  - Rehearse debates
  - Develop confidence
- **Provide a manual for future use**
  - Record 'Golden Nuggets' for all to use
- **Provide compelling evidence**
  - Create a waste calculator and report generator
  - Train Installers and/or estimators in its use

# Installer's Clients include:

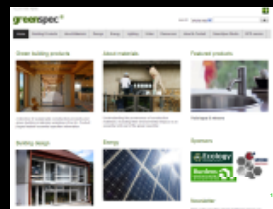
- Domestic (direct relationship possible)
  - Employer,
  - Self manage/procure/build
- Commercial
  - (layers of management barrier)
  - Sub-contractor: if installer is employee
  - Main Contactor, D&BC, MC, CM, DMC, etc.
  - Quantity Surveyor or Buying Department
    - Estimators speak their language: £
  - Designer: Architect/Interior Designer
    - (exceptional opportunities to meet and discuss)

# Source of training material

- **Take briefing from: (stakeholder meeting)**
  - CSkills, FSP, CFA, AIS, ASF, FITA, Ska, BRE and RE Champions
- **GreenSpec existing material**
  - 800+ seminars
  - Cherry pick appropriate material
  - Update cherry picked material
  - Additional new material
  - Assemble unique combination
- **Different emphasis for different audience**
  - New material from partners
  - Current data from partners



# Resource Efficient Flooring Workshop

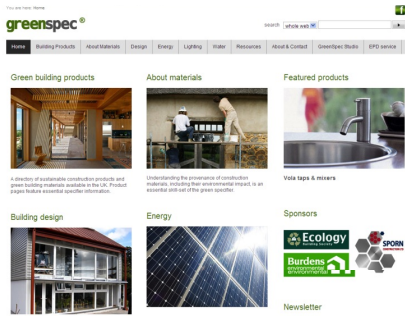


# Waste Hierarchy 2011

EU and EA definitions &  
implications

Another GreenSpec CPD file to download  
See [www.scribd.com/brianspecman](http://www.scribd.com/brianspecman)



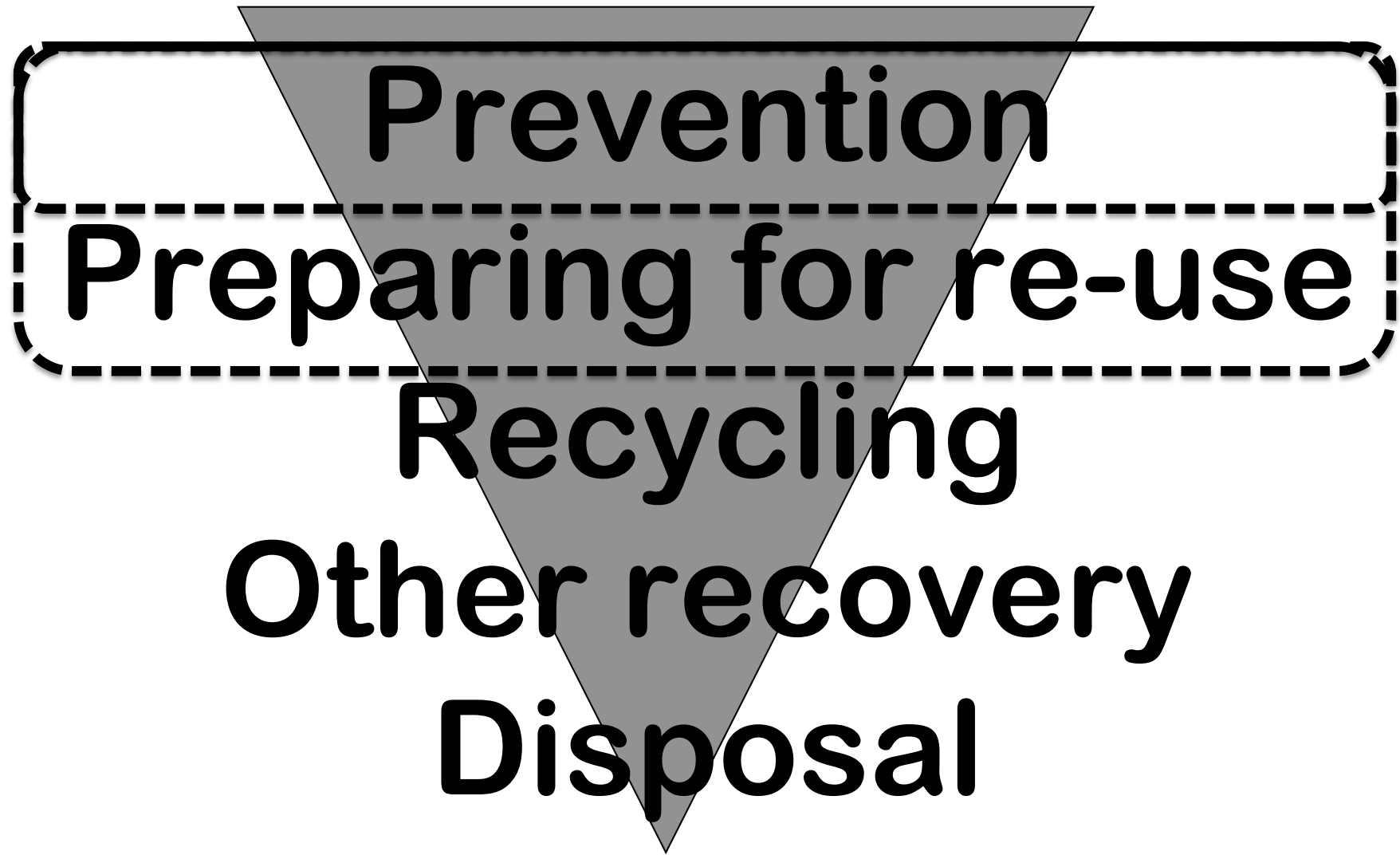


# Content



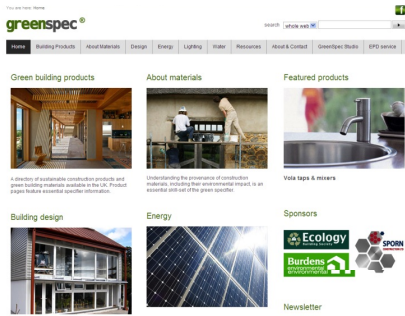
- **Resource Efficiency**
- **Waste Hierarchy 2011**
  - **Waste Reduction by Prevention**
  - **Design to Reduce Waste**
  - **Surplus to Requirements, Return to Stock, Spares for repairs**
  - **Reclaim and prepare for Reuse**
- **Sourcing materials**
  - **Design to Use Reclaimed**
  - **Design to reuse EOL materials**
  - **Material Exchange, Architectural Salvage, Construction Reclaim**
- **½ W 2 L: Half waste to Landfill**
- **Refurbishment for longer life**

# 2011 Waste Hierarchy



# Awareness raising

- Waste Hierarchy
- Reducing landfill capacity
- Waste to landfill reduction targets
- Rising taxes and gate costs of waste
  - Landfill Tax Price escalator:
  - inert v hazardous
- Hazardous waste
- End of Life scenarios:
  - options & alternatives
  - Material Exchange
  - Reuse Social Enterprise



# Content: Context

- Respond to: available EAM credits
  - Environmental Assessment Methods
  - Ska Retrofit EAM
  - DREAM, LEED?
- BREEAM & CfSH & EcoHomes
  - Little scope for serious engagement
- Respond to Institution's Syllabus
  - RIBA: national (but only partial application)
  - Interior Design:
    - every course has own syllabus

# Interactive Workshop

- Plans of wasteful designs: tabled
  - Delegates identify wasteful practices
  - Promote resource efficient alternatives
- Delegates introduced to and use **WasteCost/ite® Floor**
  - Delegates input project data
  - Tool works out wastage %, m<sup>2</sup>, £, EE, EC
- Then delegates negotiate with each other
  - as if contractor and designer/client
- We critique the dialogue and advise any improvements to help lead to success
- Cherry pick important messages and record

# Issues to debate:

- Reduction in waste in flooring layout
- Costs of waste: materials, accessories, labour, skip hire, landfill tax, waste gate fee, waste treatment,
- Embodied energy and embodied carbon in waste
- Landfill burden
- Resource Efficiency (RE)
  - Alternative uses for surpluses
  - Reuse of reclaimed

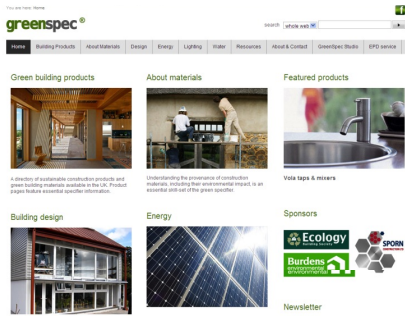
# Counter Arguments

- Invite designers to participate with their own arguments
- Multiplicity of issues
  - Focus on what you do know and have answers for now
- Develop Responses
- Develop logic to create instant responses to new counter arguments
- Record the best bits for later reuse

# **Rehearse debates in workshops**

- **Let the delegates use their own words and arguments and counter arguments**
- **Review their words and arguments and counter arguments**
- **Offer guidance on better words, argument and better counter arguments**



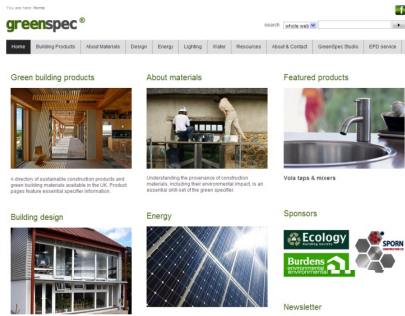


# Don't despair

- It may take a few attempts before progress is made
- Before designers are prepared to hear it or act upon it
- They never admit they don't know and can never be seen to be learning from craftsmen or artisans
- The craftsmen are often regarded as unintelligent
- Don't despair or swear
- Save it for the next battle
- Its important that the issues has been raised with them,
  - now its rattling around in their brain,
  - next time they design, it might come out bite them,
  - and may be influential on the next design.

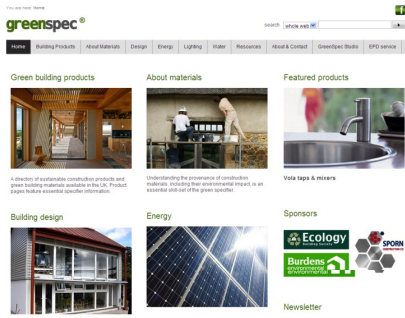
# Recording the Nuggets

- I believe that all actions including failure should lead to improvements
- Wish lists: record the failures
- Review Processes: fix the failures for next time
- Templates include best practice and get reviewed and updated
- Start the next job with the updated templates



# Templates

- All the arguments and counter arguments can be recorded in documents that the installer can use and edit according to the next job
- It can include extracts from the WasteCost®lite FLOOR Report Generator
- Turned into a report to accompany the tender up the supply chain to the client
- If Designer are to read it then it needs to be graphic with illustrations



# Resource Efficient Flooring Calculator

# **Provide compelling evidence**

- **to support debate**
- **Create a Calculator tool to provide evidence,**
- **Provide training in its use**
- **Give the tool away to delegates**
- **On a USB stick advertising the FSP**

# **New calculator:**

## **WasteCost*lite*®Floor Inputs:**

- Floor plans: add room sizes into spreadsheet
- Add flooring material sizes/direction for each room
- Choose setting out rules applied:
  - edge, centered, diagonal, curvy-linear, +ve/-ve, etc.
- Add material costs/m<sup>2</sup>
- Add accessories costs/m<sup>2</sup> /m run
- Add labour costs/m<sup>2</sup> costs/m run
- Add minimum order quantity into spreadsheet
- Modify or accept default waste category skip costs bands

# **New calculator: WasteCost*lite*®Floor Outputs:**

- **Calculate: waste £, %, m2**
- **Calculate embodied energy, embodied carbon in waste**
- **Calculate: labour costs of wasteful design**
- **Calculate: waste costs: gate costs, landfill tax, segregation costs, segregation savings.**

# **New calculator: WasteCost*lite*®Floor Arguments:**

- **Optimise materials sizes/length to better fit room  
– or visa versa**
- **Optimise materials size/lengths to fit space to minimise waste**
- **Minimise material choices to cut minimum order waste quantities in each**
- **Challenge setting out from middle**
- **Simplify curvilinear design**

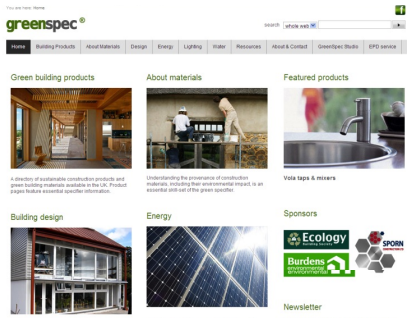


# Develop calculator

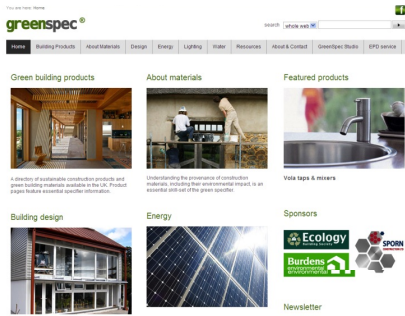
- **BRE SMARTWaste & CRWP data**
- **Link to BREMAP & FSP EoL tools**
  - Site postcode: local resources
- **Make available on USB stick**
- **Demonstrate it first**
  - Hand out at exhibition seminars
- **Turn into iPhone/iPod/iPad APP**
  - Other phones too: Android, Blackberry
  - Windows or Open Source APP too
  - RSS feeds to APP
  - Interactive link to central database

# Resource Efficiency Report Generator

- Submit or present to clients
- Data to support designers RE improvements
- Waste Quantities: % & m2
- Hazardous quantities: m3
- Materials Costs: £
- Waste Costs: £ & %
- Embodied Energy in waste
- Embodied Carbon in waste
- Emissions from Hazardous materials and waste
- Waste Reduction Opportunities: % & m2
- Reduced Tender: £
- Charts (easier to read than data tables)
- Drawings (Architects need help with reading)



# Resource Efficient Flooring Project Challenge



# Challenges

- **Getting bums on seats**
  - **Tradesmen: loss of income in down time**
  - **Estimators: is it different for them?**
    - **Visit them: Lunchtime+ CPD seminar, software and coaching**
- **Capture them on other days out**
  - **Exhibition visitors**
    - **Big players, Management, tradesmen unlikely**
  - **Association Meetings?**
  - **Obligatory Training days?**
- **Capture them on site**
  - **Tool Box talks on sites: make them more than ticking boxes**
  - **Café van visit small sites: tradesmen not estimators**
  - **Estimators on post-contract first site meeting**
- **Assume Marketing wont be easy, may be 1/3 of budget**

# **Project Promotion Opportunities**

- **Members and Email lists**
- **Emailing to each partner's email lists**
- **Mail shots**
- **Website marketing**
- **FSP Banner, all other logos in footer**

# Industry events to tap into

- Exhibitions
  - Eco Construction
    - EcoBuild March 2013 possible for the launch
      - Does not attract the installers
    - EcoShowcase (6-12 UK wide)
    - GreenBuild Manchester
    - Grand Design (2 London & NEC)
    - 100% Design Sept 2013
    - NEC Interiors 2013
  - Self Build
    - Many regional events (10 UK wide)
    - Self Build Centre Swindon (Permanent exhibition, Occasional Events)
  - Flooring
    - Harrogate Sept 2013
      - this is a retail show it wont attract installers
  - Refurbishment
    - GreenDeal (1)

# Workshops at Exhibitions

- **FSP will not have a stand**
  - Members will
- **Book seminar space**
  - Run launch seminar(s)
- **Leaflet drop on members stands**
- **Pop up banner on members stands**
- **Software loaded on member's stand displays and introduction provided to exhibitor**
- **USB stick: intuitive software handed out**

# Exhibition Seminar Promotion

- **Collect business cards of interested parties**
  - From members stands
  - Add into SMS list
- **Invite to event**
  - SMS text advanced warning of seminar
  - SMS text seminar starting



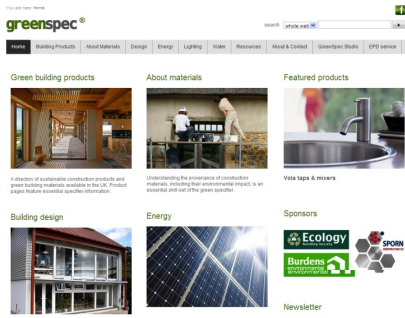
# Project promotional material

- FSP (banner head logo)
- Construction Skills (footer logo)
- CFA (footer logo)
- GreenSpec (footer logo)
- BRE (footer logo)
- WRAP (footer logo)
- CPA (footer logo)
- RE Champions (footer logos)
- FITA (footer logo)
- CE (footer logo)

# Budget

## (not calculated, prediction)

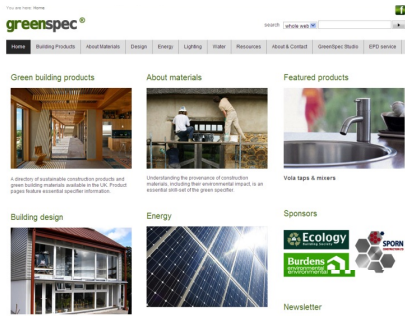
- Preparation: ~~33%~~ 25%
  - Calculator & Presentation material
- Marketing: ~~33%~~ 25%
- Promotion of launch and rollout
  - Bums on seats (less emphasis)
- Delivery: ~~33%~~ 50%
  - Speakers & Premises & Refreshments
  - Visiting Installer companies estimators



# Resource Efficient Flooring Project Follow up

# Follow up delegates

- Offer in-house meetings, seminars, demonstrations
- Use tool to collect data and generate reports
- Aim must be to reduce waste to landfill
- Evidence based statistics from users



# Follow Up: Tools

- **Develop Calculator into a mobile APP**
- **Training Trainers in Training centers**
  - to train craftsmen
- **AV audio visual tools (stand alone)**
  - Toolbox talks for sites
  - To replace tick box exercise
  - Focus on what to do with excess to requirements?
  - Probably the wrong time and focus

# Phased development plan

- Each could build on the previous
- Certificates of attendance could be issued
- Complete set should be the aim

# Project Ambitions

- Take Briefing (stakeholders)
- Develop Calculator
  - Phase 1: in Excel
  - Phase 2: Phone APP
- Develop Presentation material
  - Phase 1: for Events
  - Phase 2: for trainers and training centers
  - Phase 3: for AV toolbox talks or webinars
- Develop Interactive knowledge sharing exercise
  - Phase 1: for events
  - Phase 2: for trainers and training centers
  - Phase 3: for AV toolbox talks or webinars
- Develop Templates
  - Phase 1: for events in Word Template
  - Phase 2: for Phone APP
- Test run, edit, roll out
  - Phase 1: 6 events, 100 companies
  - Phase 2: 10 training venues, 10 sites toolbox talk
  - Phase 3: 30 sites Toolbox talks

# Project Ambitions Phase 1

- Take Briefing (stakeholders)
- Develop Calculator in Excel
- Develop Presentation material for Events
- Develop Interactive knowledge sharing exercise for events
- Develop Templates for events in Word Template
- Test run, edit, roll out
  - 1 launch event(s), 100 companies
  - 5 Membership club presentations



# **Project Ambitions Phase 2**

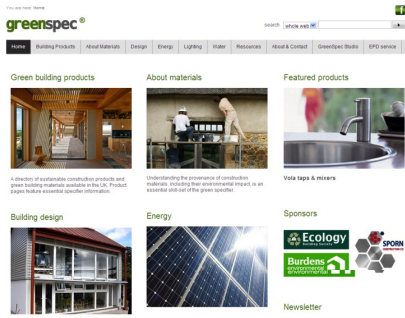
- **Develop Calculator Phone APP**
- **Develop Presentation material**
  - for trainers and training centers
- **Develop Interactive knowledge sharing exercise**
  - for trainers and training centers
- **Develop Templates for Phone APP**
- **Test run, edit, roll out**
  - 10 training venues, 10 sites toolbox talk

# Project Ambitions Phase 3

- **Take Briefing (stakeholders)**
- **Develop Presentation material**
  - for AV toolbox talks
- **Develop Interactive knowledge sharing exercise**
  - for AV toolbox talks
- **Test run, edit, roll out**
  - Say 30 sites Toolbox talks

# Potential Outputs

- **Presentation material**
  - Seminars/interactive workshops
  - **Toolbox talks: to replace tick box exercises**
    - Its too late to be useful here
- **Training materials**
  - Trainings/Hands on practical workshops
- **Project Design Guidance**
- **Specification & Guidance**
- **Tools: Calculator and Report generator**
- **Websites & Webinars**
  - **Few installers have time for internet**
- **Handouts: Design guidance for future use**
  - Hand to designers



# Resource

# Efficient Flooring

# Wider promotion

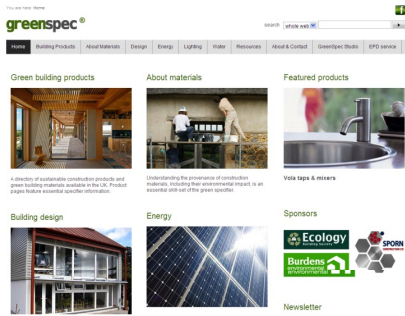
Not necessarily CITB Construction Skills  
funding eligibility

# Presentation material

- Presentation material
- Interactive workshop materials
- Accreditation
- Training materials
- Posting on websites (passive)
- Promotion of them (active)
- Presentations (active)
- Content

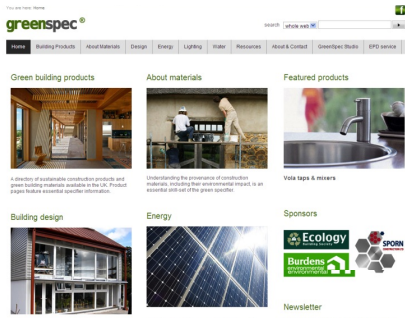
# Presentation Materials

- Existing material enhanced
- New material
- Stand alone webinars?
- Standalone PPT or PDF
- Handout versions
- Trainer versions



# Accreditation

- **RIBA Manufacturers CPD seminar accreditation (aimed at designers)**
  - Expensive & 2 year Renewal cycle
  - but limited scope
- **RIBA Accredited (presentation materials)**
  - GreenSpec & TGR have SBS accredited
    - Resource Efficiency is part of that
  - This material could be accredited
  - Not essential
- **CPD network accredited speaker not presentations**



# Training material

- Train the trainer
- Trainer version presentations
- Core material
- Encourage additional dialogue
- Bespoke RE Case Studies
- Feedback loops



# Posting presentation materials (Passive)

- Scribd (short term, move to GS Download, tasters long term)
- GreenSpec: Website:
  - Design, Materials, Resource Efficiency
- GreenSpec Download (soon)
  - Presentations,
  - Calculators, Specifications, Appendix
- Others:
  - Construction Skills
  - Flooring Sustainability Partnership
    - Members
  - Contract Flooring Association
    - Members

# Promoting presentation materials (active)

- Internet
- Email
- Institutions
- Association
- Higher Education
  - Regional college course
  - University courses

# Promoting presentation materials: Internet (active)

- **Scribd > 200 followers**
  - > Twitter > Facebook
- **Twitter > 1675 Followers**
  - > Lists > 50+ lists > 8700 members
  - > Twibes
  - > Favstar
  - > Topsy
  - > AOL Lifestyles
  - > Linked In > 750+
  - > Plaxo
- **Facebook (BrianSpecMan & GreenSpec)**
- **Others: many not exploited yet**

# **Promoting presentation materials: Email (active)**

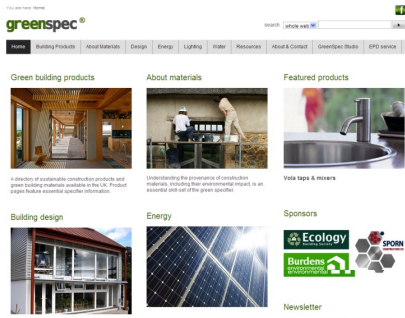
- **Participating organisations**
- **GreenSpec 10,000 email addresses**
  - **GreenSpec Download: email service**
- **RIBA membership CPD email (35,000+)**
  - **National or regional or local**
  - **Other institutions**
- **Interior Designers**
- **Artisans**
- **Estimators (RICS?)**

# Presentations (active)

- **Seminars**
  - Exhibitions (UK, Flooring, Eco, Self Build)
  - Trade groups events:
    - AIS, ASF, CFA, FSP, FITA, Ska,
  - Universities (want free seminars)
  - Technical Colleges/Craft Colleges: ???
  - Sustainability Training centers:
    - SmartLIFE, SusCon, UEA, BRE, etc.
  - Institution Regional/local membership events
    - RIBA, RICS, ICE, CIOB, CIAT, CE
  - Membership groups local CPD events
    - AECB, TGR, others

# Different Audiences

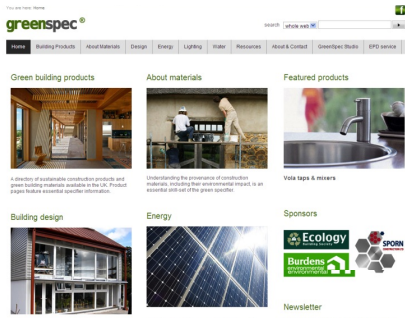
- **Contractors/Sub contractors/Artisans/Estimators**
  - Engagement with designers/clients
    - Consider the options
  - Waste reduction, segregation, money saving
  - Material Exchange
- **Designers**
  - Emphasize they create the waste by their designs
  - Very graphic
  - Explicit examples
  - Practical: example layouts waste generated alternative designs, alternative sizes, alternative materials,
  - Ensuring equivalency of specification
    - Avoiding substitution with inferior



# Report generator 2 Documents



- **Might not be paper but part of the APP**
- **Installers:**
  - How to engage with the clients/designers on resource efficiency issues
  - What statements to make
  - What questions to ask
- **Designers:**
  - How to engage with installers on resource efficiency issues
  - How to respond positively to the challenge



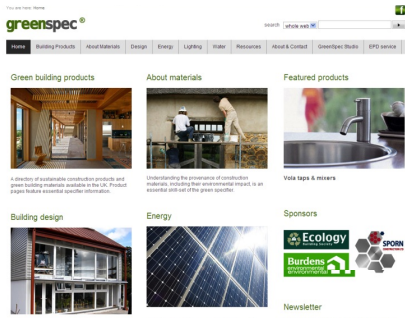
# Design Guidance

- **Design Principles**
  - Tables of standard sizes (like Brick Development Association brickwork tables)
- **CAD 3D BIM additional intelligence**
  - Waste warning built into materials
  - Materials as 'objects': know their own size
  - so awareness raised when applying
  - Warning when wastage factor is high %



# Specification Guidance

- **Specification Clauses**
  - Includes sizes available
  - Roll width and length
- **Guidance Notes**
  - Tables of multiples
  - Appendix of reclaim sector
  - Lists of materials exchanges
- **SWMP & Waste clauses**
- **'Not-new' clauses permit reclaim and reuse**

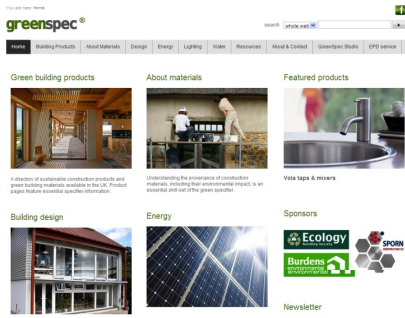


# Resource

# Efficient Installers

# Wider roll out

## CITB Construction Skills funding eligibility



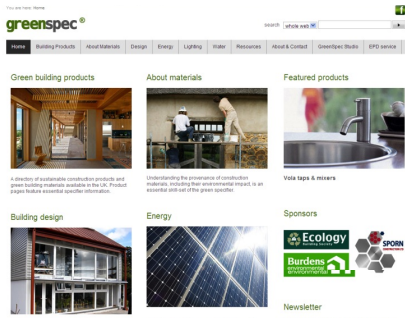
# Other trades

- This project can be recreated for all other trades/sectors
- **WasteCost/lite® OTHERS**
- Same activities with different content

# REAP Resource Efficiency Action Plans

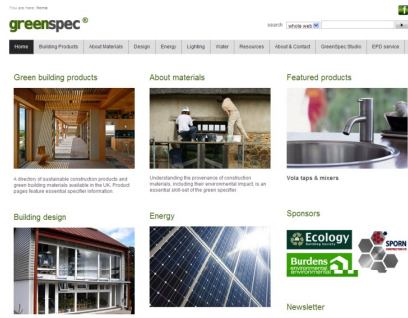
## Trade Skills: Follow Up

WasteCost®Lite Calculator	Resource Efficiency Report Generator	Arguments for RE	Training coaching
Flooring	Submit or present Data to support designers	Client Responses	Resource Efficiency; bigger picture
Ceilings	Waste Quantities % & m3 Hazardous quantities	Counter arguments	Waste generating designs
Partitions & Linings	Materials Costs £ Waste Costs £ & %	Counter Responses	Resource efficient designs
FF&E Furniture	Embodied Energy in waste	Response anticipation	Craftsmen v Client Dialogue coaching
Other	Embodied Carbon in waste	Counter argument anticipation	Main contractors Designers & Employers
	Reduction Opportunities Reduced Tender £	Recording new arguments	Training WasteCost®Lite FLOOR
	Emissions from Hazardous	Collecting disseminating arguments	Training Report Generator
	Charts	Mobile APP	Material Exchange
	Drawings		108 Reclaim reuse

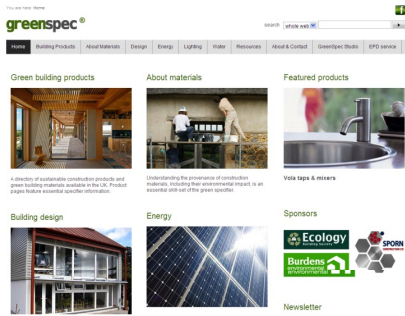


# Resource Efficient Flooring Skills Project

**Construction Skills funding  
FSP, CFA and GreenSpec**

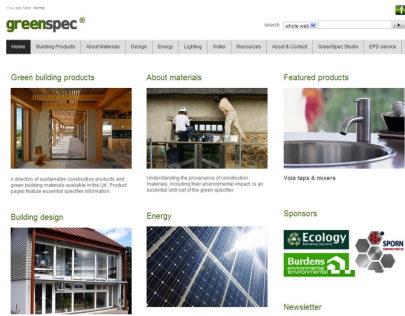


**Another GreenSpec CPD file to download**  
**See [www.greenspecdownload.co.uk](http://www.greenspecdownload.co.uk)**



# Feedback

- **These files are created by generalists with a big dollop of green flavour**
- **These files are updated from time to time**
- **We are not experts so from time to time these file may get out of date or may be wrong.**
- **If you feel that we have got it wrong please let us know so we can put it right**



© GreenSpec



- **Brian Murphy BSc Dip Arch (Hons+Dist)**
- **Architect by Training**
- **Specification Writer by Choice**
- **Greening up my act since 1999**
- **Founder of www.greenspec.co.uk**
- **And www.greenspecdownload.co.uk**
- **E BrianSpecMan@aol.com**
- **Twitter: http://twitter.com/brianspecman**
- **Facebook:**  
**http://www.facebook.com/pages/GreenSpec/77375462337**



<b>Rev</b>	<b>Comment</b>	<b>Date</b>	<b>Initials</b>
<b>A00</b>	Created on route to CSkills meeting Brain storm in car en route to CSkills Update after CSkills meeting Issue and Email ARB	<b>24/08/2012</b>	<b>BRM</b>
<b>A01</b> %%	Added revision table Added waste hierarchy 2011 Minor revisions Added CRUK	<b>28/08/2012</b>	<b>BRM</b>
<b>A01</b>	Updated WRAP tools Updated existing resources SWMP checklists Added text report template Added executive summery at front Issue and email to ARB	<b>30/08/2012</b>	<b>BRM</b>
<b>A02</b>	Update for CFA and Installer meeting Update after CFA and Installer meeting Issue to ARB, RC & 2 Installers	<b>21/09/2012</b>	<b>BRM</b>
<b>A03</b>	Create Executive summery Custom Show for FSP committee Update scribd and download Print for Cskills meeting	<b>06/11/2012</b>  <b>31/01/2013</b>	<b>BRM</b>