



# Wool-Rich or Rich-Wool Carpet?

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# Content of presentation:

- What is wool-rich carpet (WRC), and what are its attributes?
- What are the challenges to recycling?
- Current progress with recycling WRC
- Opportunities
- Conclusion .....



# Wool-rich carpet:

- Wool:
  - a natural & renewable resource
  - high in nutrients
  - good insulation properties
  - very good water absorption properties
- WRC is an inseparable mixture of wool, nylon, polypropylene, jute, polyester
- Note different constructions of woven and tufted carpet



# Recycling Challenges:

- Opposing properties, e.g.
  - land spreading
  - external ménages
- Cost and capacity of shredding machinery
- Transport costs – need local solutions
- But landfill cost increases are encouraging entrepreneurs to find solutions. (WRC is the cheapest source of wool).



# Progress to-date:

- Energy recovery – UK and USA
- Land restoration programmes
- Trials with shredded carpet into various products, e.g. underlay
- Animal bedding trials
- Meetings with the EA on WRC being applied to the land



# Progress to-date (cont.):

- Aware of WRC shred being used as a component within Green Roof growing media
- Insulation properties – thermal and acoustic
- Composting discussions - UK and USA
- Land usage in sports surfaces (in Portugal)
- Brick manufacture (in India)



## WRCS benefits:



“wool/wastes offer a source of major plant nutrients which could be used to replace inorganic sources, and valuable organic matter which could be used to replace soil organic matter lost as a result of normal agricultural activities.”

# Technical information for WRC:

- 10% Nitrogen w/w
- 1.4% Sulphur w/w
- 70% Carbon w/w
- pH 6.4



# Further Opportunities.....

- Construction related, e.g.
  - composite materials
  - embankment design
- Absorbent properties
- 100,000 tonnes pa available in UK
- Others? !!!



# To conclude .....

“We all know you can’t recycle wool-rich carpet” – anon nylon carpet representative, (Florida 2008)

- Wool-rich carpet is rich in environmentally beneficial properties, and with some effort progress is being made
- Wool-rich carpet has an excellent start to its life cycle, we are aiming for its end of life to be just as good!!





Any Questions?