

FLOORING RESOURCE EFFICIENCY PLAN

1ST BROADLOOM CARPET MAP MEETING

13TH OCTOBER 2009

Key Findings of Scoping Study

FLOORING:

Towards a Resource Efficiency Plan

- Scoping Study February / March 2009
- Looked at where waste was generated throughout supply chain
- Initial survey of what recycling was happening
- Available on CPA Website

[http://www.constructionproducts.org.uk/publications/dbfiles/Flooring final 11-9-09.pdf](http://www.constructionproducts.org.uk/publications/dbfiles/Flooring%20final%2011-9-09.pdf)



Products Considered

- Carpets
 - Broadloom
 - Carpet Tiles
- Vinyl
- Linoleum
- Ceramics
- Wood
- Laminate
- Rubber
- Resin

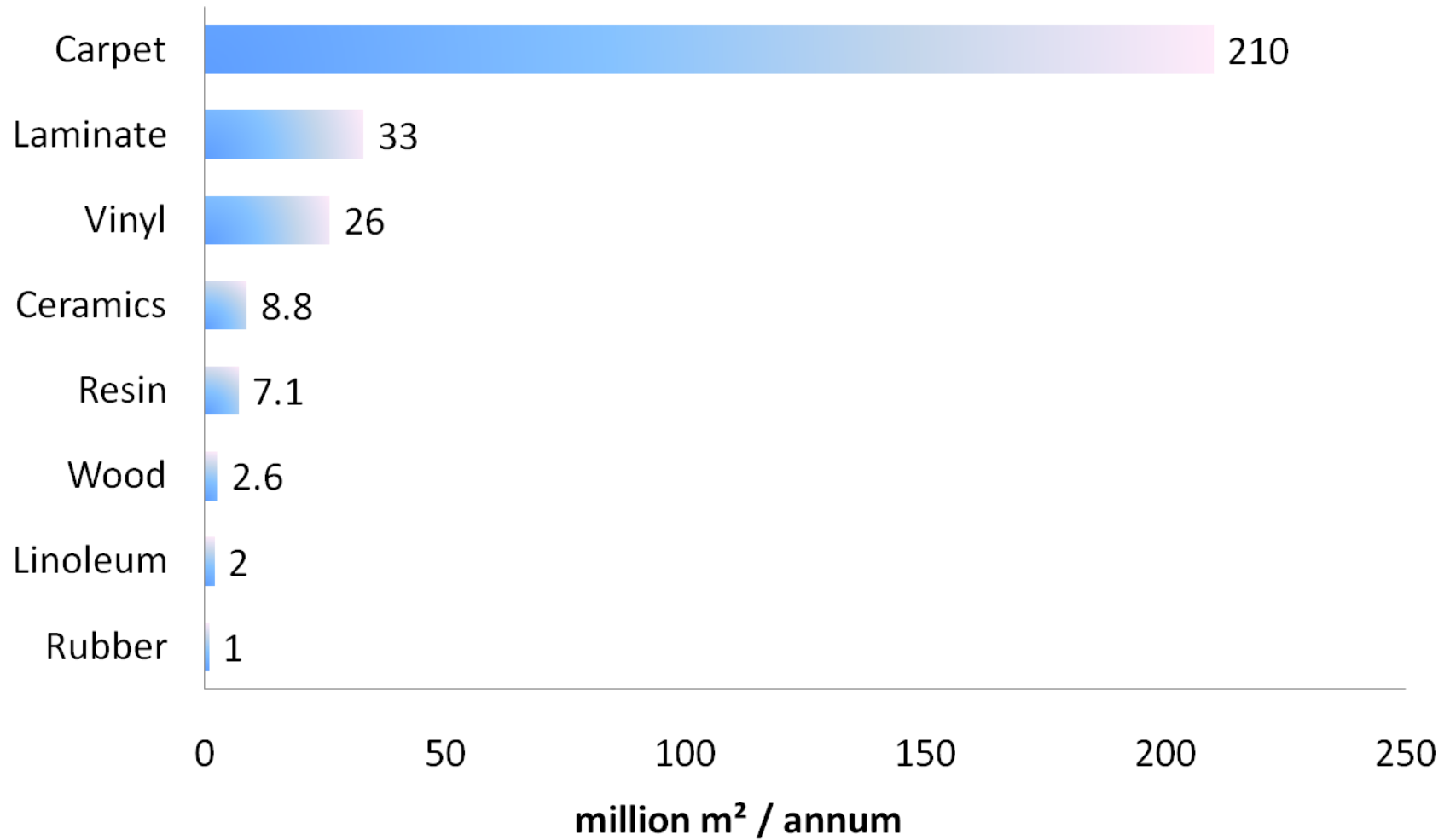
Scoping Study

- Spoke with stakeholders
 - Raw material suppliers
 - manufacturers
 - Installers
 - Waste handlers
 - Trade Associations

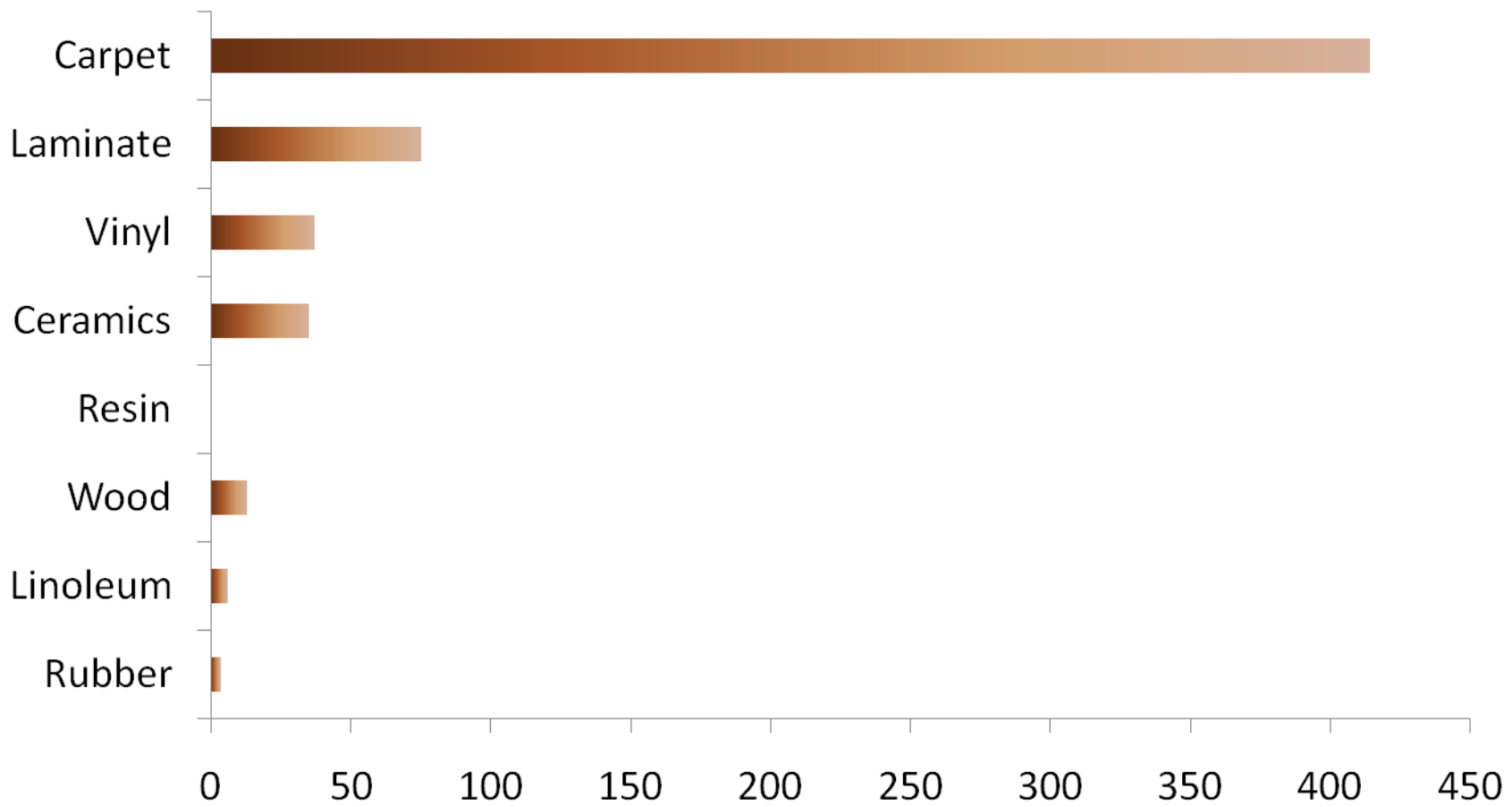
Summary of Study

- Covered majority of interior flooring surfaces
- Total estimated wastage 580,000 tonnes
- <1% recycled
- Majority goes to landfill, some is incinerated
- Lots of small, often successful, schemes
- Often supplier or material specific

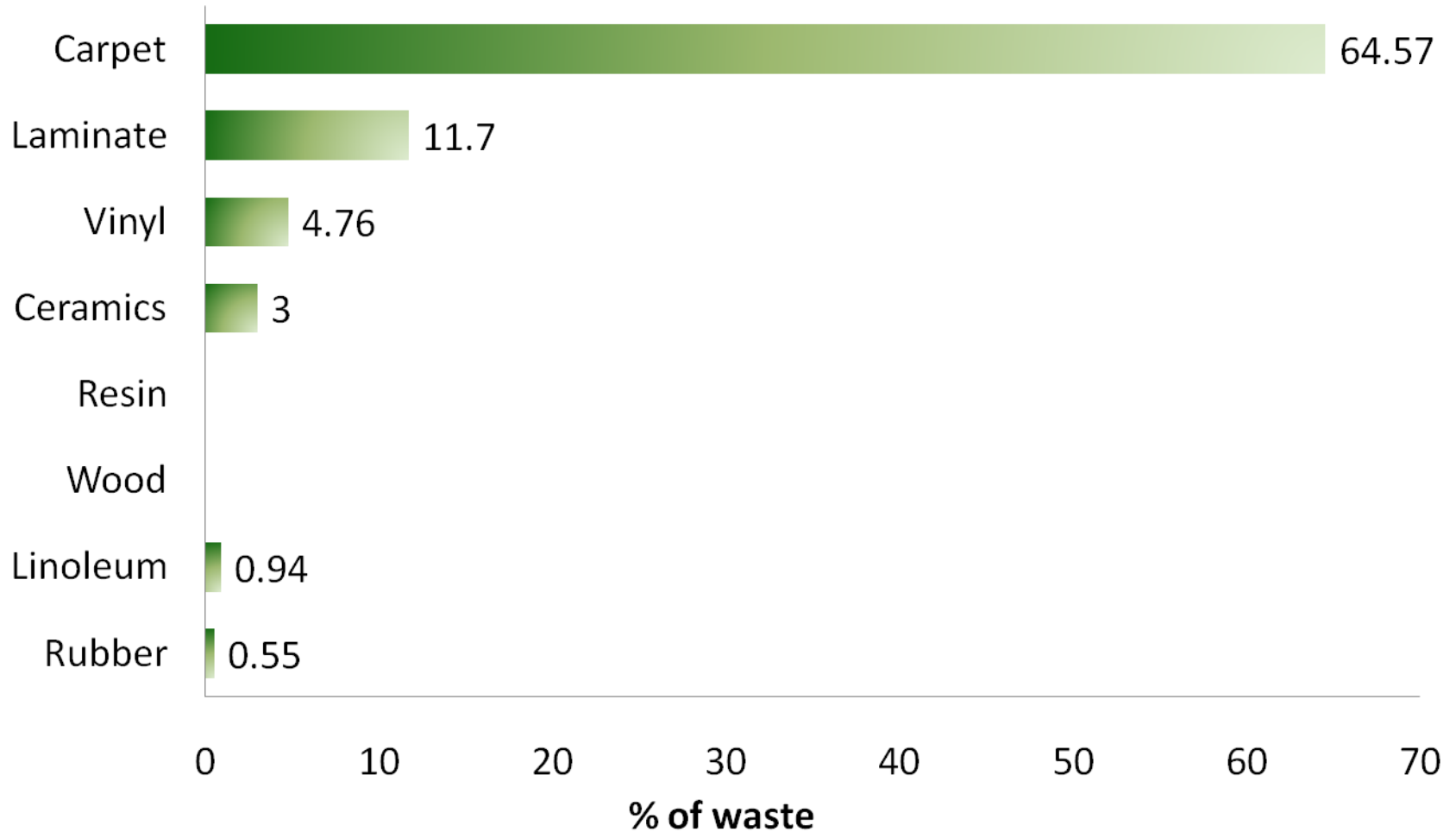
Market Size of UK Flooring Sector (million m²)



Total flooring Waste Generated



% of flooring waste to landfill



Flooring materials data sheets

CARPETS

- Product description
- Market size
- Number of manufacturers
- Import penetration
- Specific legislative drivers
- Sources of waste
- Manufacturing waste
- Installation waste
- End of life material
- Volume of waste
- Current disposal route
- Future actions required

Future actions required

Carpet

- Information is needed on how much carpet and of what types, actually goes through the various disposal routes
- Specifications are needed for the individual carpet waste streams that could be recyclable
- A collection system is needed that can cope with the various disposal routes including municipal waste, household waste recycling sites and trade waste sites
- A system is required for easily identifying the composition of carpet waste
- A route is needed for disposing of a large volume of mixed fibre waste

Obstacles

All flooring

- The biggest obstacle is that there is no major cost driver to encourage anyone in the supply chain to set up a profitable recycling operation, i.e. there is no business case to be made. The main obstacles are:
 - Flooring materials after they have been used may have limited value due to contamination
 - Flooring materials are frequently of complex composition
 - The cost of processing the flooring waste is high in relation to its value
 - The quantity of flooring material is low in comparison to other major waste streams
 - Flooring waste that is generated is widely dispersed across the country

Obstacles 2

All flooring

- The cost of transporting small quantities of waste flooring around the country soon exceeds the value of the material
- Potential central collection points are at locations which are not licensed to receive waste
- The individual waste streams are contaminants for each other so require segregation for most applications
- Flooring which has been mixed with general waste is difficult to get clean enough to reprocess

Recommendations

- 11.1 Seek project support from DEFRA / WRAP / CRWP to develop a much needed resource efficiency plan for flooring which should involve the whole supply chain in identifying and implementing the actions needed, both vertically by supply chain segment and horizontally by product type, to increase the efficient use of materials and decrease wastage at all stages. This scoping study has been a precursor to such a larger project.
- 11.2 Create a One Stop Shop for flooring recyclers which would allow anyone with flooring waste to contact someone who is able to recycle or reuse the material.
- 11.3 Discuss with manufacturers, re-processors and research organisations potential uses for waste streams. Provide support including start up funding and access to sources of material.
- 11.4 Survey each product type and its associated supply chain to better understand the price currently being paid for disposing of waste and what people would be willing to pay to have the product recycled.
- 11.5 Enter into discussions with the flooring distributors regarding the use of their distribution system to collect the waste.
- 11.6 Develop a clean handling system that would allow contaminated end of life flooring to be transported on clean distribution vehicles.

Recommendations 2

- 11.7 Confirm that carpet waste, whether originating from the domestic or commercial sector, should be considered as a construction waste.
- 11.8 Outline the specification for the various material streams arising from flooring allowing them to be reused as materials rather than waste, i.e. carry out a Quality Protocol Project with the Environment Agency.
- 11.9 Develop a Resource Efficiency Programme with the UK carpet manufacturers to reduce the amount of manufacturing waste generated and to look at possible routes to make their products easier to recycle at the end of life.
- 11.10 Implement in conjunction with a commercial Materials Recovery Facility, flooring contractors, distributors and other sources of waste flooring, a pilot mixed flooring collection and segregation scheme to cover all recyclable materials that a flooring installer could generate.

Recommendations 3

- 11.11 Where members of an individual flooring material sector can see advantages of working together then voluntary agreements between them should be encouraged and research and financial assistance sought to demonstrate feasibility. (UK carpet manufacturers already have a voluntary agreement through Carpet Recycling UK (CRUK) but need additional funding for end-use developments).
- 11.12 Ensure that any wood and laminate flooring solutions proposed are fully integrated with those being proposed by the British Woodworking Federation project on joinery resource efficiency.
- 11.13 Undertake research to determine whether wastage rates can be lowered when ordering and installing flooring.
- 11.14 Investigate the opportunities for waste reduction from designing out waste in the first instance, as well as whether there are opportunities for waste reduction from changing existing procurement practices.

Going Forward

- Timescale _ Completion by 31/03/10
- Stakeholder Forum
 - 4 Meetings act as milestones
 - 1st meeting held 21st September 2009
- One Stop Shop
 - Web site collating all available information
 - Designed to be of use to anyone with flooring waste or wanting waste for processing
- Waste Survey
 - To produce accurate data and opinions
- Material Action Plans

Report on 1st Stakeholders meeting 21st September 2009

- Attended by 19 people representing
 - Carpets Broadloom and Tile
 - Ceramics
 - Resin
 - Resilient
 - Installers
 - Distributors
 - Building Users
 - Waste Handlers
 - WRAP
 - DEFRA

Report on 1st Stakeholders meeting 21st September 2009

- Defined there would be 4 meetings
 - September 2009, November 2009, January 2009 and March 2009
- Confirmed 4 Activities
 - Activity 1 Stakeholder Group
 - Activity 2 Production of an online “One Stop Shop”
 - Activity 2 Completion of a flooring waste questionnaire
 - Activity 4 Formation of a ‘Resource Efficiency Action Plan’ for CFA and production of 5 associated Material Action Plans

Material Action Plans MAPs

- Broadloom Carpet
 - Carpet Tile
 - Resilient Flooring
 - Ceramic and other hard floorings
 - Resin Floors
- Not all MAPs will address the same issues

Project Goal and Purpose

- Project Goal

- *To contribute towards reducing the total amount of waste produced by the flooring sector.*

- Project Purpose

- *To produce a Flooring Resource Efficiency Action Plan with the support and ownership of key industry groups representing the different flooring material types, which will include individual Material Action Plans for each type, which when implemented will contribute towards the goal of reducing the total amount of waste produced by the flooring sector.*

Pete Thomas
Environmental



bretrust



Flooring Waste Survey

To provide more accurate data form
all stakeholders

To be carried out October 2009

Waste Survey Progress

- Web Based
- Request to complete via individual trade association
Log in should identify association
- Should allow comparison with Carpet Foundation survey
- Outline presented at 1st Stakeholders Meeting
- Final Version on Web by mid October
- One section for everyone 2nd section tailored to market sector

Question

Response

Yes / No /Maybe/Don't Know. Numeric.
Choose from List. Defined Text. Free Text

For all respondents

Company Name

Free Text

Contact

Free Text

Post code

Defined Text

Type of business

List:-
Manufacturer
Distributor
Retailer
Installer
Waste Contractor
Local Authority
Other

Turnover

Bands

Employees

Bands

Type of waste

List – Select all applicable
Manufacturing Waste
Flooring Waste
Packaging waste
Cardboard Cores
Metal
Uplifted Flooring
Wood
Paper
Other

| Question | Response |
|---|--|
| For all respondents | |
| Collection System | List – Select all applicable Open Skip Closed Skip Wheeled Bin Other |
| Separate collections | List– Select all applicable Cardboard Paper Metal Wood Plastic film Carpet Waste Vinyl waste Other |
| Hazardous waste | List– Select all applicable None Adhesive Solvents Cement residues Others |
| Total Weight of waste disposed / year (all categories) | Numeric (tonnes) |
| Total Cost of waste disposal / Year | Numeric (£) |

Manufacturers

| | |
|---|--|
| What is the average post use recycled content across your full product range? | Numeric |
| What is the average recycled content (including post industrial waste) across your full product range? | Numeric |
| What is the maximum post use recycled content in a specific product? | Numeric |
| What is the maximum recycled content (including post industrial waste) in a specific product? | Numeric |
| Do you process 3 rd party flooring waste into your products? | Y/N |
| Is REACH an obstacle to recycling? | Y/N |
| Are there any other obstacles to increasing the use of post-use recycled content across your product range? | <p>List– Select all applicable</p> <ul style="list-style-type: none"> Lack of suitable materials Investment required to use it Cost Technical innovation required Other – Please describe |

Manufacturers

Do you receive raw materials with re-useable or recyclable packaging?

Y/N

If Yes please give brief details.

Free Text

What are the barriers to increasing

Do you offer a take-back service to your customers?

Y / N

If Yes, is this service available to all customers?

Y/N

If Yes, Please estimate the proportion of customers who opt for the take-back service?

| Distributors | |
|--|--|
| Do you have a system to collect flooring waste for recycling | Y/N |
| If yes please give brief details? | Free Text |
| Is it open to your customers? | Y/N |
| If no, is this something that you would consider introducing in the future? | Y/N |
| Please rank obstacles: | List – Rank items Space constraints cost, no available outlets for materials admin time legal constraints |
| What do you do with ends of rolls? | List– Select all applicable Return to manufacturer Sell off Donate to Charity Send for Recycling Place in waste skip Other |
| What do you do with cardboard cores | List– Select all applicable Return to manufacturer Send for Recycling Place in waste skip Other |
| If a mixed flooring recycling service were available, what cost would you be willing to pay per tonne? | Numeric £ |

Installers

What product types are installed?

- List – Select all applicable
- Broadloom Carpet
 - Carpet Tile
 - Vinyl
 - Linoleum
 - Rubber
 - Wood
 - Laminate
 - ceramic tiles
 - porcelain tiles
 - natural stone
 - Resin
 - Terrazo
 - Other

Locations (Domestic education etc)?

- List – Select all applicable
- Domestic
 - Education
 - Health
 - Retail
 - Offices
 - Others

Where are fitters / fixers based?

- List –Select all applicable
- Company premises
 - Home
 - Installation Site
 - Other

Installers

What do fitters do with

uplifted flooring?

- List –Select all applicable
- Leave with client for disposal
 - Charge client for removing
 - Take to waste disposal site
 - Take back to base
 - Other

Offcuts?

- List –Select all applicable
- Leave with client for disposal
 - Charge client for removing
 - Take to waste disposal site
 - Take back to base
 - Other

General installation waste?

- List –Select all applicable
- Leave with client for disposal
 - Charge client for removing
 - Take to waste disposal site
 - Take back to base
 - Other

Packaging including Cores / Spools?

- List –Select all applicable
- Leave with client for disposal
 - Charge client for removing
 - Take to waste disposal site
 - Take back to base
 - Other

Waste Contractors

| | |
|---|--|
| What is the source of your waste | municipal % Commercial and Industrial % Construction and Demolition % |
| Do you see flooring in the waste streams you handle? | Y/N |
| Estimated tonnage of flooring that you handle per month | Numeric (Tonnes) |
| What is the source of the flooring in the waste streams you handle? | List – select all applicable Municipal retailer Commercial and Industrial Construction and Demolition other (please give details) |
| Do you segregate any type of flooring? | Y/N |
| If yes please list which types | List –Select all applicable Carpet Vinyl Wood Ceramic Tiles Others |
| What is the cost to dispose of flooring if not segregated? | Numeric £/tonne |
| Would you pay a gate fee to dispose of segregated flooring? | Y/N |
| Would you segregate flooring waste if you received £X /tonne? | List £0, £10, £25, £50, £75 |

Waste Contractors

Could you bale material where appropriate to reduce freight costs?

Y / N / M

Could you shred material where appropriate to reduce freight costs

Y / N / M

If all clean recyclables* were in 1 container would you be a) interested and b)able to segregate into useable streams

* paper, cardboard, glass, plastic bottles, wood, vinyl flooring, carpet, metal, plastic film

Y / N / M

What level of investment you estimate would be required to carry out the above segregation and what volume of material would be required to make it viable

Numeric £
Tonnes / annum

Local Authority

| | |
|--|------------------|
| How many household waste recycling centres (HWRCs) do you operate? | Numeric |
| What is the cost per tonne of residual waste disposal from HWRCs? | Numeric £ |
| What is the annual tonnage of residual waste from HWRCs? | Numeric (tonnes) |
| Please estimate the proportion of residual waste to landfill via HWRCs that is flooring waste (i.e. carpet, underlay, laminate, vinyl)? | Numeric % |
| If a mixed flooring recycling service was available, how many of your sites would have space for an additional container for Mixed Flooring? | Numeric |
| Do you offer a bulky uplift service? | Y/N |
| What is the cost to residents? | Numeric £ |
| What is the annual tonnage of waste collected via bulky uplift? | Numeric tonnes |
| Please estimate the proportion of bulky waste that is flooring? | Numeric % |
| If a mixed flooring recycling service was available, would it be possible to segregate out flooring waste from the rest of the bulky uplift items? | Y/N |