

Characterisation of raw materials

Presentation of work led by the **University of Brighton**



*Project Steering Committee – Veolia Headquarters
30 January 2018*

3.1 Specification of raw materials

Review of existing products:

Primary:

Extensive research in South & South East England suggested very limited growing of flax locally. We have identified a few and small-scale suppliers growing 3-10 acres of material mostly for food, homeopathy and limited fibre for textile use.

We plan to access some material samples but the 'waste' management and access to useable stocks are proving limited.



3.1 Specification of raw materials - Prototype 2 Textiles - Long list of opti

1. Stuffed bedding



2. Mattresses



3. Carpet



4. Unsold/soiled clothing - charity shops



5. Specific streams – C&I



3.1 Specification of raw materials - Rationale for Stuffed Bedding

Health and safety:

Stakeholders – due to health and safety concerns this material was not suitable for reuse.

High level review of Charity Shops – majority would not accept due to health and safety including British Heart Foundation and Salvation Army.

Local authorities:

100% of local authorities collect textiles through their kerbside service including 12 out of the top 20 recycling authorities. All 12 collect non-clothing textiles such as sheets, duvet covers and towels - none accept stuffed bedding.

Household Waste Recycling Sites - have banks for clothing and textiles, but clearly state that stuffed bedding is not allowed.

Residual waste stream:

Recent research undertaken at 11 Household Waste Recycling Sites showed that 3.6-10.7% of the residual waste stream was non-clothing textiles which includes stuffed bedding.

WRAP estimate 61,900 tonnes of stuffed bedding enter the waste stream each year with the majority being sent to landfill or energy recovery.

EPR.



de développement régional



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3.1 Specification of raw materials

Review of existing products:

Web search and review of insulation products listed in sustainable construction product directories/certification schemes.

Review of 30 academic papers.

Review of International Solid Waste Association and Chartered Institute of Wastes Management archives.

Products specifically using stuffed bedding products.

Identification of samples:

Volume of segregated pillows and duvets entering Household Waste Recycling Site for a week - 3,000 litres – 52 items.

Diversity assessed composition and status.

Filling either: polyester (75%) or natural feathers (25%).

Covers: Mix of polyester and cotton in variable amounts or occasional polypropylene.

Material status: On observation 50% of sample seemed in good quality –

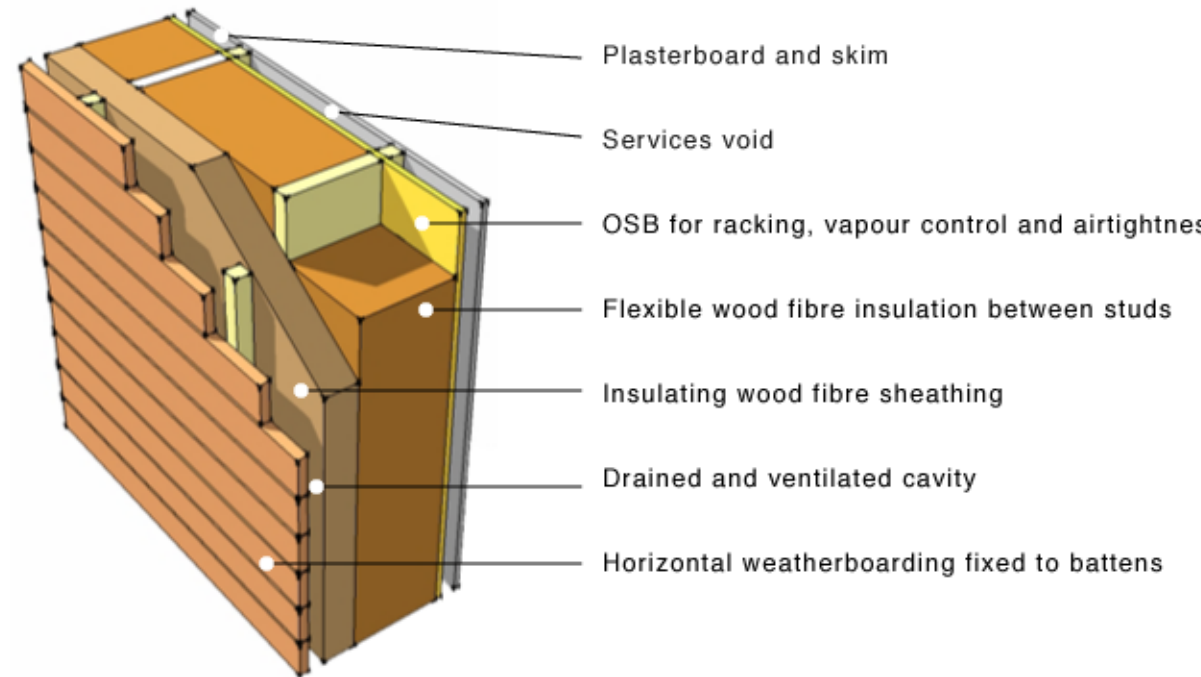
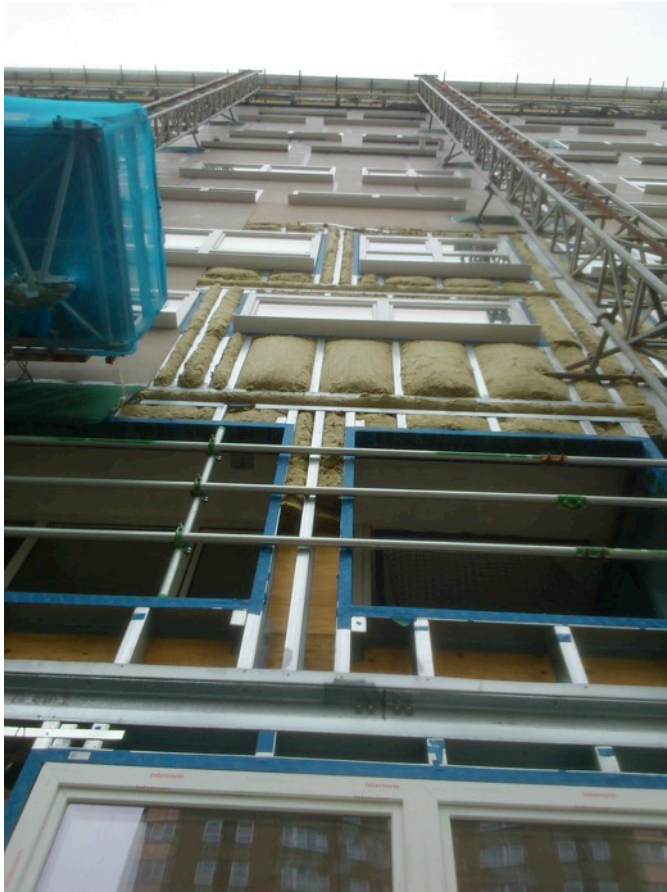
Potentially reusable.



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3.4 Analysis of building systems – External Wall Insulation



5.2 Sourcing and testing raw materials and manufacturing 'mini-types' for Prototype 2.



RICARDO-AEA

WRAP Business Development Support (BDS)

Project Report for Recovery Insulation Ltd



5.2 Sourcing and testing raw materials and manufacturing 'mini-types' for Prototype 2.



5.2 Identifying Pilot Site – The Brighton Waste House

