# Sustainable Building Materials

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### Outline

- What do we mean by SBMs?
- The NEES Project
- Best Practice
- Opportunities and Barriers
- Where next?









## What do we mean by SBMs?

- Natural and / or recycled
  - Using renewable resources
  - No / minimal use of hazardous materials
  - Not derived from fossil fuels
- Energy efficient
  - Comparable or better energy performance to conventional building materials
- Sustainable
  - Low carbon and resource footprints minimal processing
  - Socially and economically sustainable
  - Locally sourced











## Common Examples

















## The NEES Project

- Enabling the market for SBMs across Northern Europe
- Accrediting and promoting Best Practice producers and users of SBMs
- Partners in Scotland, Ireland, Northern Ireland, Sweden and Greenland
- 3 year project (2011–2014) funded by the ERDF Northern Periphery Programme











#### The NEES Process

- Independent expert accreditation scheme
  - Expert Panel drawn from the partner regions
- Applicants must meet 3 gateway criteria:
  - Using natural and / or recycled materials
  - Sourced from, or with significant operations in the NPP region
  - Suitable for improving the energy efficiency of buildings – particularly as retrofit solutions









## The NEES Process (2)

- Experts evaluate and score applications against 5 NEES criteria
  - Resource efficiency
  - Environment and health
  - Sustainability
  - Enterprise
  - Scalability
- Delphi Process applied
  - Thresholds used to determine automatic acceptances / rejections
- Panel meets to agree results



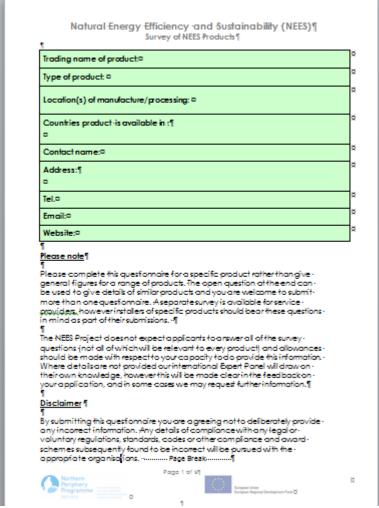






## The Surveys

- Products survey has 28 questions covering
  - Demographic info
  - Key criteria info ('natural' or recycled, contribution to energy efficiency, sustainability criteria)
  - Barriers and opportunities
  - Market/cost/enterprise info
- Services survey requires 3 case studies that address the NEES criteria











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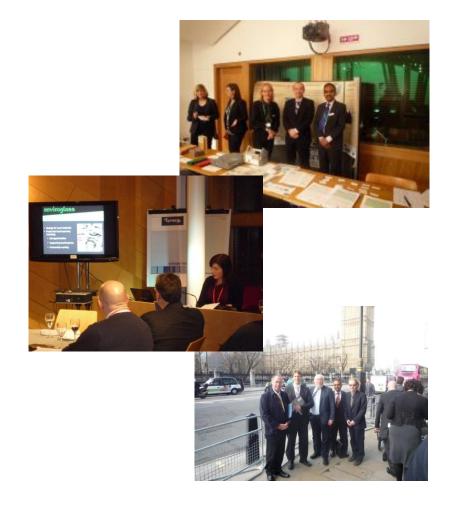






### Benefits of Accreditation

- Promotion across Northern Europe
- Events and lobbying
- Best Practices brochure
- Websites (results website under development)
- Access to expert networks and support - e.g. carbon footprinting
- Working towards a label / standard











#### Scottish Best Practices

- Ecological Architecture, near Aberfeldy
- Enviroglass, Shetland
- Inzievar Woodlands, near Dunfermerline
- Locate Architects, Dunblane
- MAKAR (Design and Build, nSIPs), near Inverness









### Scottish Best Practices



















#### International Best Practices

#### Ireland and Northern Ireland

- Anu Green green roofs
- Ecocel cellulose insulation
- FH Wetland Systems reed beds
- Mud and Wood clay and timber buildings
- The Hollies architects and education centre

#### Sweden

- Martinsons Xlam and Glulam timber products
- Masonite timber beams
- SWECO architects











## **Opportunities**

- Consumer demand local sourcing
- Aesthetically pleasing
- Culturally and architecturally sensitive
- Physical properties energy / thermal performance
- Healthier for occupants and installers
- Lower carbon and resource footprints
- Significant potential to support social and economic regeneration - particularly in deprived areas











#### **Barriers**

- No longer mass-market
- Loss of traditional skills and industries
- Disincentivised by some standards, regulations and procurement practices
- Lack of capacity amongst producers and users
- Lack of education amongst architects, developers and builders
- Litigiousness of some competitors
  - Claims need complex (and expensive) verification









#### Where next?

- New partnership forming
  - GCU, Alliance for Sustainable Building Products, Architecture and Design Scotland, University of Ulster, and others
- Consolidating resources
  - Public face, events, websites, directories, the Materials Library, testing facilities, etc
- Working towards a label / standard
  - NEES, NaturePlus, or something more Scottish?









# Sustainable Building Materials Scotland



9am-5pm
18<sup>th</sup> March 2014
Eden Court, Inverness
An exhibition and conference for producers and users of sustainable building materials, and anyone who would like to find out more about them.

Brochure and programme available at: www.sustainablebuildingmaterials.org







