giving
nature
a home

Conservation Biomass for Bioenergy

Sally Mills
RSPB

The Scale of the UK Conservation Challenge

- Larger areas
- Limited resources
- Habitat and species decline
- More habitat management demands with knowledge increase
- The need for energy efficiency & reduction of fossil fuel use

rspb giving nature a home

The management headache

Resultant Biomass

Disposal of Biomass – the consequences

- Habitat not managed
- Habitat degradation
- Sacrificial areas, material left to rot
- Material burnt
- Demand on resources

rspb giving nature a home

Utilisation

Composti

Energy Product

Wetland Biomass to Bioenergy

- Department of Energy and Climate Change – new strategy
- Increase sustainable supply of bioenergy feedstocks
- Increase renewable energy contribution to energy mix
- Optimise wetland management
- Utilise ‘waste’ biomass
- Achieve the above whilst having a positive impact on biodiversity and no impact on food production

rspb giving nature a home

A problem into an opportunity

- Biomass into an energy product
- More habitat managed
- Landscape partnerships
- Carbon Reduction
  - RSPB aspire to cut their emissions by 30% by 2020 compared with 2010
- Product production off-set costs and possibly lead to future income generation

rspb giving nature a home

The DECC Project Challenges

- End to end
- Energy production and use
- Harvesting – wet and delicate substrates
- Driven by conservation objectives
- Rural and remote locations
- Economically viable
- Life Cycle Analysis

rspb giving nature a home

The Participants

- **AB Systems**
  - Harvesting, AgBag storage and briquetting
- **AMW-IBERS**
  - Harvesting, screw-pressing, anaerobic digestion, bio-charring & briquetting
- **Natural Synergies**
  - Bespoke anaerobic digestion

rspb giving nature a home


CLAAS
SWAN


LOGLOGIC
CLAAS


CLAAS
ROLLANT 46

Location

Conversion into energy

Energy and Efficiency

- **AB Systems**
  - GHG Emission savings = 89.8%
  - Biomass energy efficiency = 65%
- **AMW-IBERS**
  - GHG Emission savings = 84.1%
  - Biomass energy efficiency = 68.7%
- **Natural Synergies**
  - GHG Emission savings = 73.4%
  - Biomass energy efficiency = 58.9%

rspb giving nature a home


It isn’t just about wetlands

Heathland Trials

- Apply knowledge of the DECC wetland work
- Build on work already achieved:
  - Forestry Commission
  - Footprint Ecology
- Identify the gaps and understand the potential
- Share lessons learnt

rspb giving nature a home

Harvesting

Pisten Bully and Kemper head

Softrak and Ehlo double chop

rspb giving nature a home

Storage and drying

AgBag Storage and drying

Kiln drying

rspb giving nature a home

Conversion

Bio-charring

Briquetting


The Next Challenge...