



# Methane to Markets

**The Kindersley Centre, Berkshire**

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Department for Environment  
Food and Rural Affairs



Making it work – The Farmer's perspective

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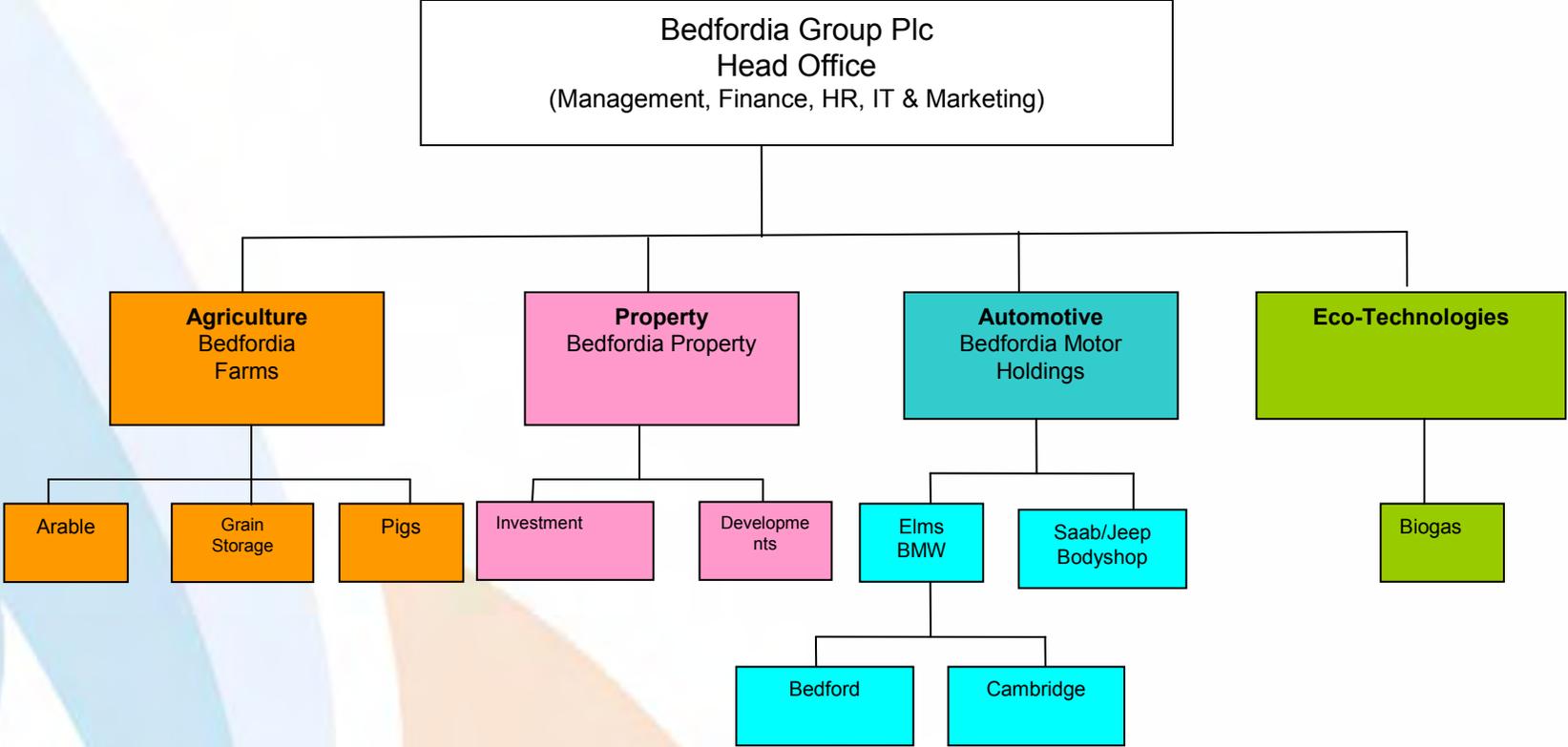
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# Format

1. Background to Bedfordia
2. Practical experience – feasibility to operation
3. Bio-fertiliser and the soil
4. Integrated management system
5. Questions

# Background to Bedfordia



# Background to Bedfordia Biogas

- **Own operational plant**
  - c 40k tonnes of product – ABP compliant
    - 30k food waste
    - 12k slurry
  - 1.1 to 1.2MW electrical output
- **Complete integrated solution**
  - Bio-fertiliser used on farm
- **Industrial plant in farm situation**
  - Designed to be flexible
- **Licenses**
  - WML, ABP, OFGEM



  
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# Background to Bedfordia Biogas

- **Develop a national network of plants**
- **Aim to have 10 to 12 operational over the next 5 years**
- **Processing food chain waste – 300 to 400k tonnes**
- **Further plans beyond this time frame**
- **Provision of expertise from concept to operational management**
  - Feasibility
  - Design
  - Planning
  - Construction
  - Funding
  - Licensing
  - Waste & energy contracts
  - Running & operating

# Practical experience - operational

- **Long lead in times**
  - Feasibility & planning
  - Construction etc
- **Technical - plant**
  - Mechanical and electrical ‘teething problems’
  - German approach different to UK
- **Complexity**
  - High degree of management expertise
  - Bio-security
  - Steep learning curve

# Practical experience - operational

- **Biology**
  - Support and testing very important
  - Commissioning critical
  - Patience & steady approach
- **Food waste**
  - Excellent green credentials for PR
  - Sourcing waste through partnership
  - Culture change for waste producers
  - ‘Quality’ & acceptance criteria a must



  
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## Practical experience - licensing

- **Animal By-Product regulations - DEFRA**
  - SVS helpful and practical at the design stage
  - But.....regulations changing.....difficult to plan
- **Waste Management license - EA**
  - New to EA & heavily bureaucratic
  - Not particularly helpful apart from local officers
- **OFGEM accreditation**
  - New to OFGEM
  - Helpful but slow and bureaucratic

# Market barriers to development

- **Finding suitable sites**
- **Manufacturing production capacity**
- **Lead in time to full operational**
- **Skills gap**
- **Government support for AD**
- **Digestate standard**
- **Other technologies**

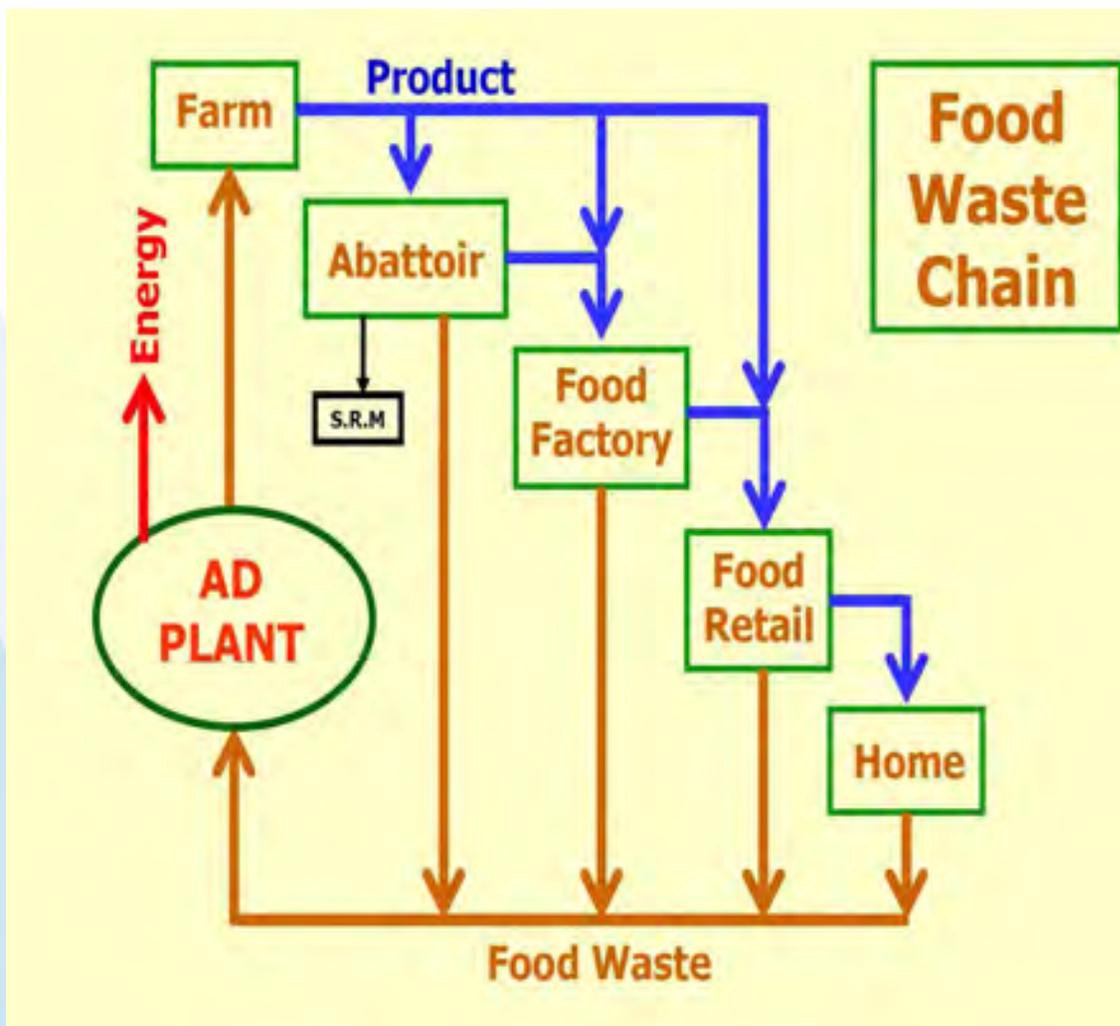
## Bio-fertiliser and the soil - benefits

- Valuable product
- Sanitised - pasteurisation
- Excellent nutrient availability
- Organic Matter
- Relatively slow release
- Virtually odourless
- Ability to be pumped – around 5%DM
- Homogenous

## Bio-fertiliser and the soil - issues

- **No digestate (bio-fertiliser) standard in UK**
  - Requires paragraph 7A exemption form EA for application
- **Cost of application infrastructure**
- **Storage**
  - NVZ's
- **Timing of application**
- **Possible soil structure damage from machinery**
  - Umbilical
  - Irrigation gantry
- **Requires excellent management**

# Integrated management system



*Greenfinch*  
By kind permission of Greenfinch

## Integrated management system - Summary

- **Excellent integrated project**
- **Fits very well into farm situation**
- **Superb green credentials**
- **Recycles and recovers renewable energy**
- **Commercially sound with economies of scale**
- **Provides valuable fertiliser**
- **Adds value to slurry**
- **Reduces pollution**
- **Diversification**

**Thank you for listening!**



# Questions?

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