

# **E A & Regulation of Anaerobic Digestion**

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# How do we regulate?

- **Duty of care**
- **Environmental permits**
- **Exemptions from Permitting**
- **Low Risk regulation positions**



## Planning – Agency Role.

- **Two distinct roles:**
- **Consultee on planning applications.**
  - **Flood Risk, Drainage , impact on local amenities.**
- **Permits Applications.**
- **- Emissions, sensitive receptors, Operating methods .**

**Planning Permission pre requisite for ISSUE of  
Waste Permit**

# Aims of Environmental Permitting

- The environment is protected
- No unacceptable risks to health
- Data available for better waste planning
- Simpler regime than PPC & WML previously
- Consistent approach to regulation of the waste industry
- Increasing opportunities for industry to benchmark its performance

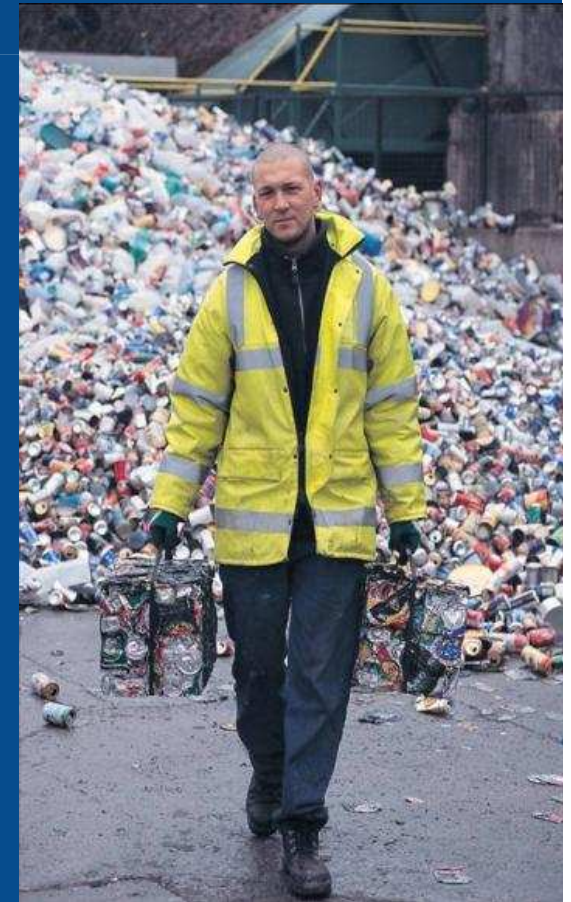
# What Permits are available? Standard or Bespoke

## Standard permits for:

- Low to medium risk
- Independent of Location
- Can operate to a set of standard rules
- Relatively common

## Bespoke permits

- Tailored conditions
- Advertising & consultation requirements
- More expensive to process



# Application Process

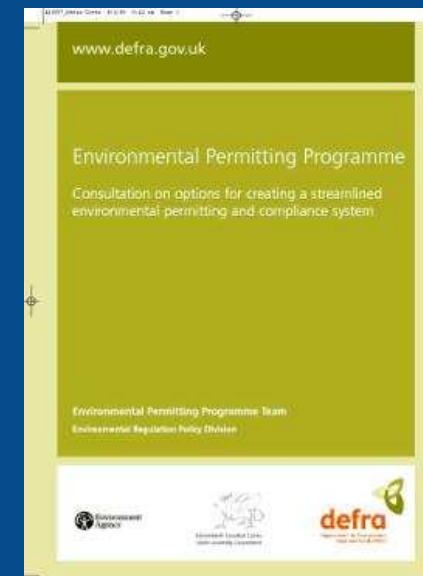
Pre-application discussions

Application assessed for completeness

Advertised and Consulted – for bespoke permits or major variations to conditions

Technical assessment

Determined - Issued or Refused



# Application Information

- The operator
- The Site
- Operator Ability
- Activity Aspects
  - Process and operating Techniques
  - Types and amounts of waste
  - Risk Assessments
  - Emissions and controls
  - Planning Status.



# Standard Rules developments

- **Regular additions.**
- **Latest Consultation no 3 June 2009.**
- **Covered operations affected by the exemption review that now require permits.**
- **Includes 3 permits to cover Anaerobic Digestion Activities.**
- **Each permit was accompanied by Generic Risk Assessments.**
- **Sets the limits on the rules**

## Standard Rules for Anaerobic Digestion

- **Anaerobic digestion facility including use of the resultant biogas**
- **On-farm anaerobic digestion facility including use of the resultant biogas**
- **Storage of digestate from anaerobic digestion plants**
  
- **Rules eg must be more than**
  - i) 500 metres of a European Site or a SSSI;**
  - (ii) 250 metres of any off-site building used by the public, including dwelling houses;**
  - iii) a specified AQMA;**
  - iv) groundwater Source Protection Zone 1.**
  - v) No Hazardous waste**

## Related Permits.

- **Mobile Plant. For Landspreading – Including AD digestate**
- **Registered to operational Base.**
- **Has a requirement for a Deployment Form to be complete every time waste spread.**

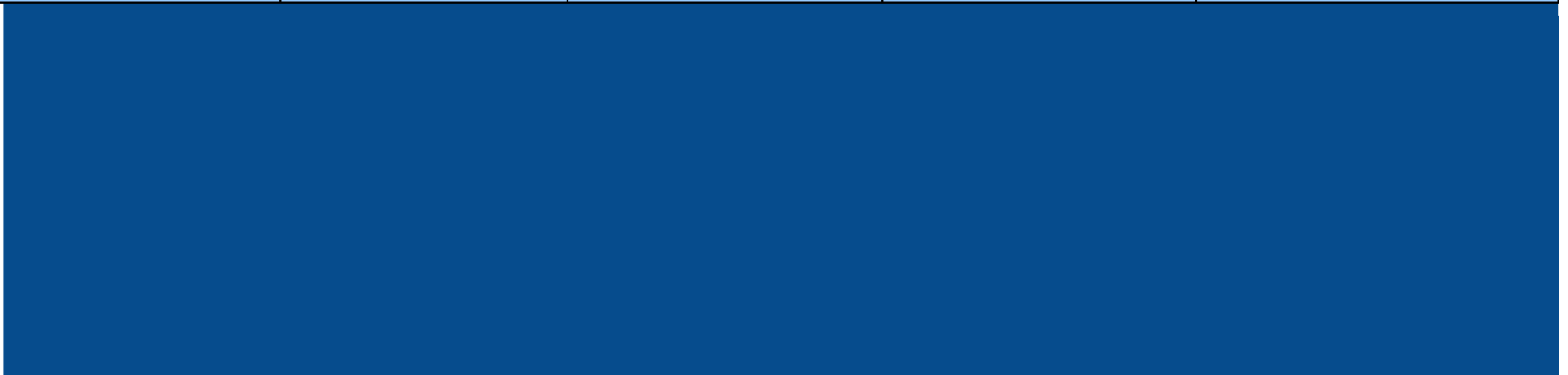
# Exemptions-What has changed?



Environment  
Agency

- No more simple and complex exemptions
- All exemptions are low risk
- Registration lasts 3 years
- 60 new exemptions
- Fall into 1 of 4 categories:
  - **Use (U1 – U16)**
  - **Treatment (T1 – T33)**
  - **Disposal (D1 – D8)**
  - **Storage (S1 – S3)**

2007 Regulations Exemption Paragraph number (1)	Existing exemption title	Final date for transition to the revised Regulations	New exempt waste operation reference	Exempt waste operation title
13	Construction and Soil Materials	6 Apr 2012	T5  T6	Screening and blending of waste  Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
19	Waste for construction	1 Oct 2011	U1  U3	Use of waste in construction work  Use of waste in the construction of entertainment or educational installations etc



## Anaerobic Digestion – Exemptions

- **T24 & T25.**
- **Limited range of wastes**
  - **Manures & slurries & green waste on Agricultural premises.**
  - **Catering, manures or green wastes on other sites**
- **Limit on amount – 1250 m<sup>3</sup> on Agricultural Premises**
  - **50 m<sup>3</sup> elsewhere.**
- **Must collect any gas**
- **If burnt on site maximum size appliance 0.4 megawatts**
- **Digestate spread under U10 or U 11.**

## Low Risk Waste Positions

LRW positions will still exist. The new exemptions have absorbed a lot that existed (few exceptions e.g. tomato haulm) but we are sure there will be requests for other activities to be considered low risk in the future.

LRW Panel will still consider requests and add to the list if deemed appropriate

# Waste Protocols Project

- Quality Protocols are developed by the Environment Agency, WRAP and industry.
- Enable materials that would otherwise be considered waste to be used without waste regulation control
- Regulatory Position Statement on how EA regulate AD outputs produced under AD QP.
- [http://www.environment-agency.gov.uk/static/documents/Business/MWRP\\_RPS\\_045\\_AD\\_QP\\_V8\\_09-10-09\\_rev2.pdf](http://www.environment-agency.gov.uk/static/documents/Business/MWRP_RPS_045_AD_QP_V8_09-10-09_rev2.pdf)



# Anaerobic Digestion – Air Emissions

- ➔ Waste handling
  - ➔ Odorous Substances (air extraction from tipping hall and maturation process) – via stack
  - ➔ Noise emissions – waste delivery, reception and processing
- AD Process → Biogas (60% CH<sub>4</sub>, 40% CO<sub>2</sub>)
  - ➔ Biogas Combusted in Gas Engines
    - ➔ Of main concern NO<sub>x</sub> & PM<sub>10</sub> (small particles)
    - ➔ Also H<sub>2</sub>S CO<sub>2</sub> SO<sub>2</sub>, VOCs

# Anaerobic Digestion – Permit Determination

- ➔ Applicants complete H1 screening assessment
- ➔ Detailed modelling normally required (for combustion gases, odour and noise)
  - ➔ Risk-based assessment
- ➔ Permitting Officer review modelling
- ➔ High risk or contentious applications → AQMAU for detailed audit

# Anaerobic Digestion – Audit Findings

- ➔ Annual NO<sub>2</sub> objective compromised if low headroom – (i.e. in AQMA)
- ➔ Habitats impact (Acid & Nutrient Nitrogen deposition)
  - ➔ > 5 MWth potential concern if Habitats site within 500m
- ➔ Odour acceptable unless receptors very close – odour abatement often required for extraction air
- ➔ Noise impact – noise attenuation required if sensitive receptors nearby

## How do I find out more?

- From our website  
[www.environment-agency.gov.uk/epr](http://www.environment-agency.gov.uk/epr)
- From Defra website  
[www.defra.gov.uk/environment/epp/guidance](http://www.defra.gov.uk/environment/epp/guidance)
- We have contacted operators directly on these changes
- Use [Netregs.gov.uk](http://Netregs.gov.uk)
- Contact local officers about making permit applications