

Biowaste treatment sector environmental performance 2013

Key data and information based on evidence pack, version 0.4
12/01/15 (contact Claire Daniel)

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Biowaste treatment

Sector Description

- ⇒ The biowaste sector is an emerging sector, rapidly growing and diverse in scale and nature. Long-term growth is being driven by factors such as EU and domestic landfill diversion, renewable energy and greenhouse gas targets, the EU 'waste hierarchy' priority order for dealing with wastes, the landfill tax escalator and the increasing costs of artificial fertilisers and soil conditioners. The sector comprises two sub-sectors; treatment and use.
- ⇒ The treatment sub-sector focuses on the treatment of biowastes to recover materials and/or energy, or to reduce the environmental impact of biowaste disposal. It includes composting, anaerobic digestion (AD), autoclaving and mechanical and biological treatment (MBT). We include incineration, gasification, pyrolysis and use of biowastes as fuels within the combustion and incineration sector.

Biowaste treatment: Sector comparison and overview

	Intensive farming	Chemicals	Food and drink	Metals (Surface treatment)	Metals (Ferrous)	Metals (Non-ferrous)	Paper and pulp	Textiles	Combustion (Power)	Incineration and energy recovery	Oil refineries and terminals	Onshore oil and gas	Refineries and fuel (other)	Waste treatment (Hazardous)	Waste treatment (Metals recycling)	Waste treatment (Non-hazardous)	Waste treatment (Inert)	Landfill	Biowaste (Treatment)	Biowaste (Use)	Cement and minerals	Water companies	
N^o Number of permits	1120	488	353	104	28	52	44	28	151	133	13	35	34	717	2629	4032	701	2017	608	381	234	23561	
! Number of serious pollution incidents caused by regulated sites	11	1	3	1			1		2				1	15	86	2	49	49	3			88	
✓ Compliance with permits																							
% of sector in band A	83	76	81	70	43	65	66	64	82	64	23	89	76	72	66	63	70	76	87	81	90	not applicable	
% of sector in bands D, E or F	1	2	3	1	11	2	0	4	1	7	8	6	3	2	3	5	2	5	8	4	0	not applicable	
⚖ Enforcement	£25k													£1k	£70k	£243k		£117k	£158k			£574k	
👤 Number of sites of high public interest	12	1	2					1		8	1			2	6	31	1	17	13		1		

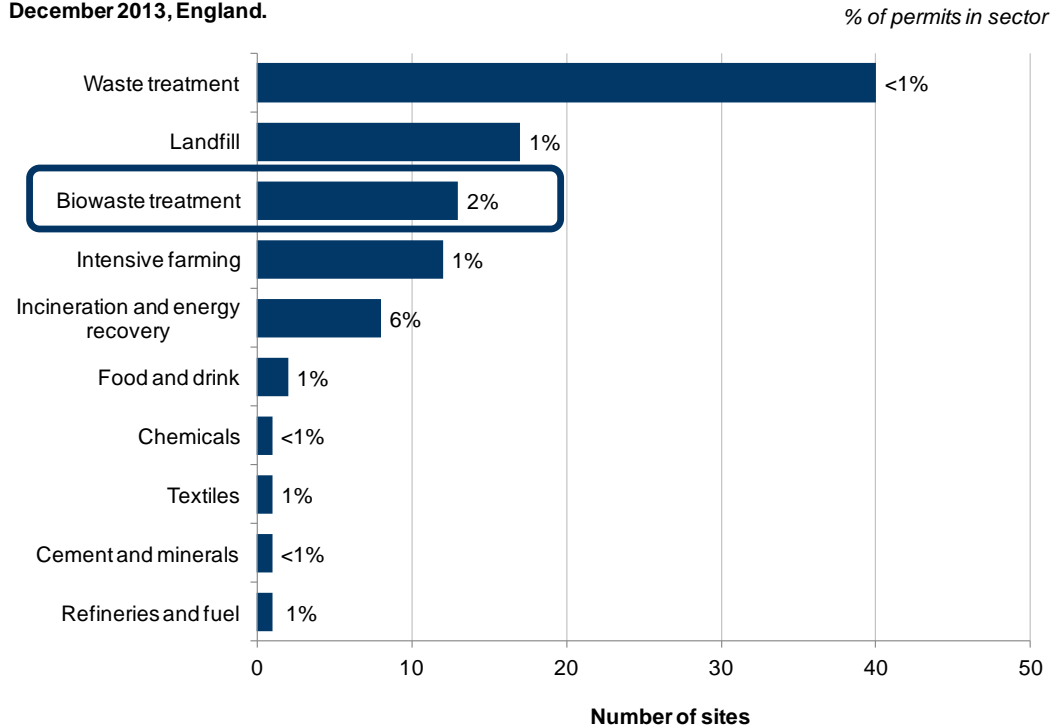
Biowaste treatment – no. of permitted sites by type

	2011	2012	2013
Composting		304	312
Anaerobic digestion		36	64
Waste Water Treatment Works (WWTW)		128	148
Other treatment		82	84
Total	406	550	608

Biowaste treatment: Sites of high public interest (SHPI) by FAR sector

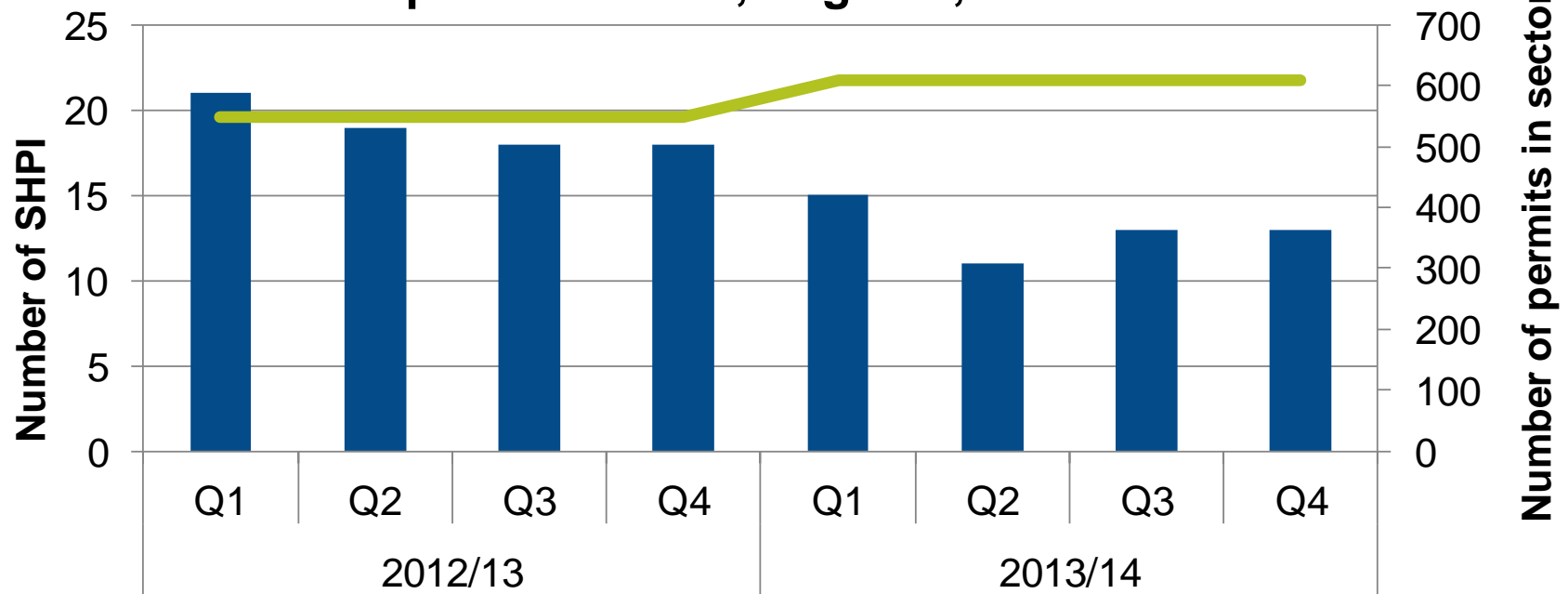
- ➔ Across all sectors 96 permitted SHPI, cf. 108 in 2012/13
- ➔ Biowaste treatment sector – 13 SHPI (2% of permitted sites)
- ➔ Of these 13, 7 were composting sites, 1 WWTW site and 5 other treatment sites
- ➔ Odour was the primary concern at 12 of the 13, public perception at the other one other treatment activity).
- ➔ 8 of the 13 were also rated D, E or F for compliance.

Permitted active sites of high public interest
December 2013, England.



Biowaste treatment: SHPI changes 2012-2014

Permitted active biowaste treatment sites of high public interest, England, 2012-14.

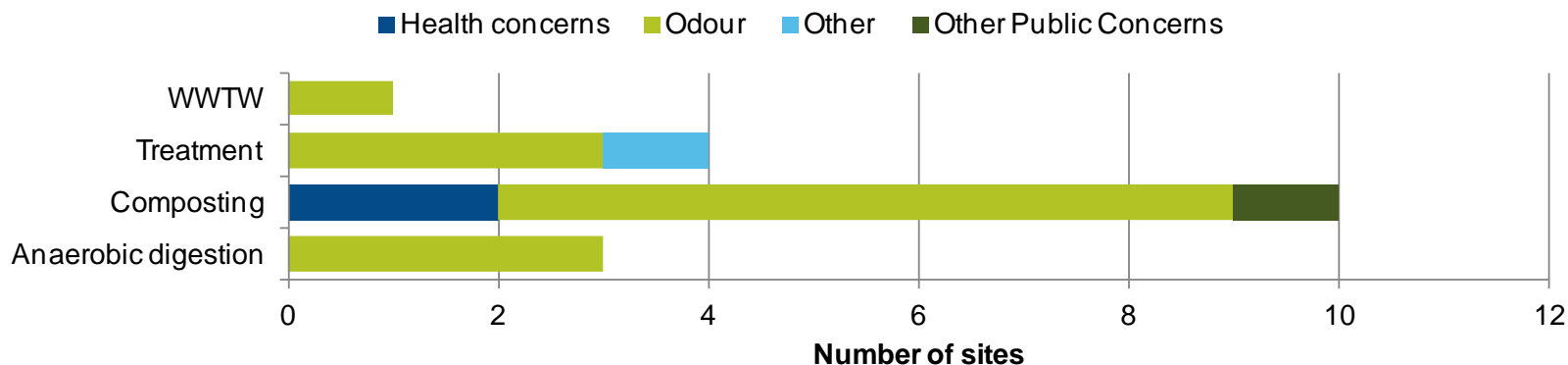


*Trendline included to represent recent growth in number of permits in Biowaste sector, based on England-only data: 550 permits in Q4 2011/13, 608 permits in Q4 2013/14.

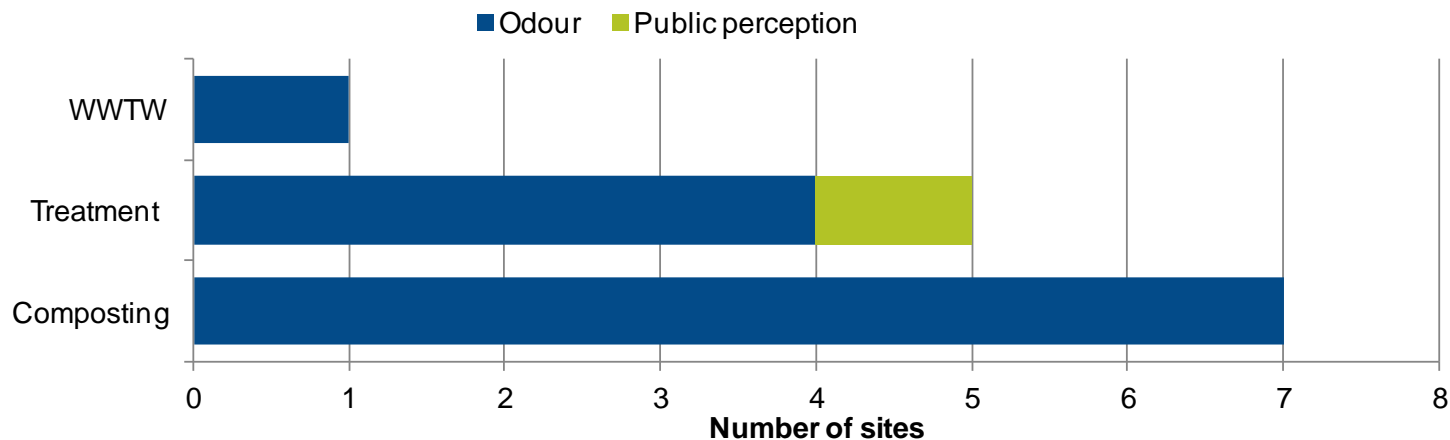
- Numbers decreased from 18 in Q3 2012/13 to 13 in Q3 2013/14.
- This is against a background rise in the number of permits in the Biowaste treatment sector from 550 to 608 over this period

Biowaste treatment: SHPI Q4 2012/13 and Q4 2013/14 by activity and cause

Permitted active biowaste treatment sites of high public interest Q4 2012/13 by activity and cause



Permitted active biowaste treatment sites of high public interest Q4 2013/14 by activity and cause



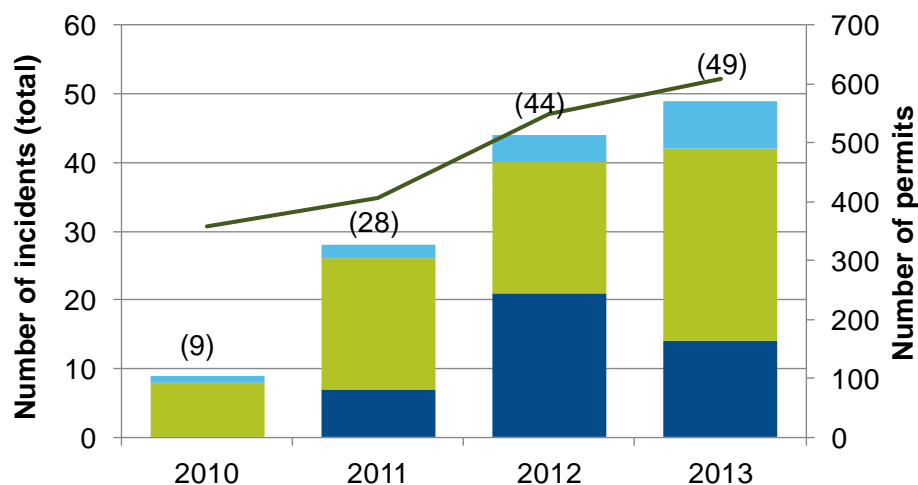
Biowaste treatment: Pollution incidents - numbers

- ➔ The number of serious pollution incidents at biowaste treatment sites has increased year on year from 2010 to 2013.
- ➔ This could be due in part to the increasing number of permitted sites in the sector.
- ➔ Biggest increase – composting
 - ➔ 2011 – 19, 2012 – 19, 2013 – 28

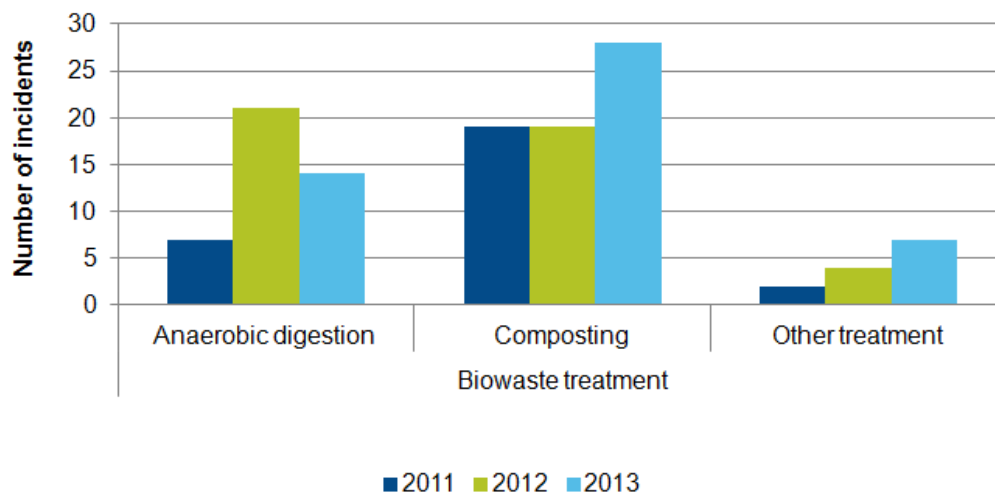
	Total
AD	14
Composting	28
Treatment	3
WWTW	4
Grand Total	49

- ➔ 10 of the 49 pollution incidents happened at one site, 5 at 2 others*.

Serious pollution incidents caused by the biowaste treatment sector in England



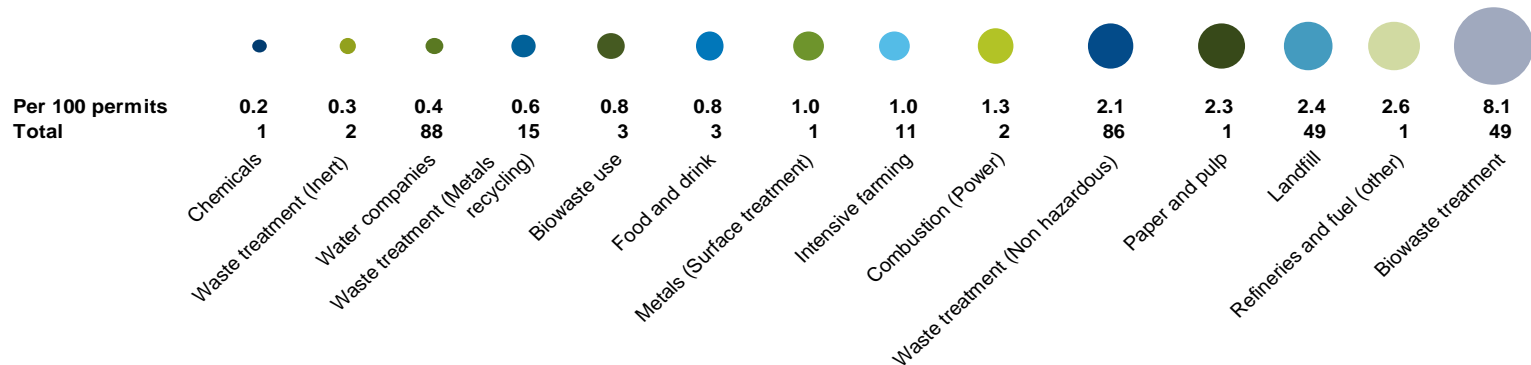
Serious and significant pollution incidents at biowaste treatment sites we regulate, England 2011-2013



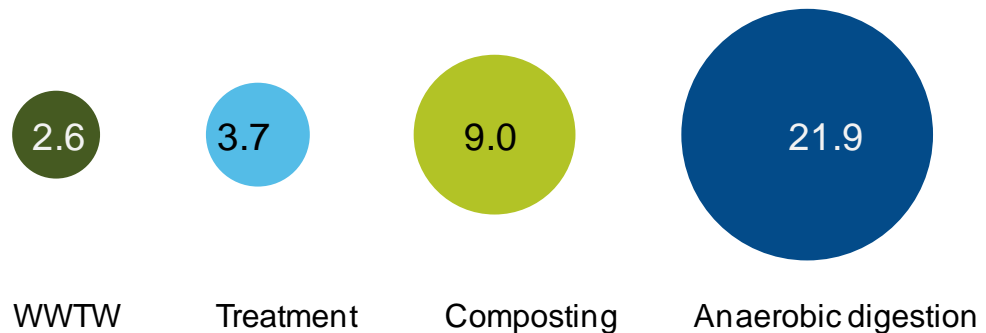
Biowaste treatment: Pollution incidents – per 100 permits

- ➔ In 2013, the biowaste treatment sector had the highest proportion of serious and significant pollution incidents of any sector (8.1 incidents per 100 permits). This has increased from 8.0 incidents per 100 permits in 2012 and 6.9 incidents per 100 permits in 2011.

Number of serious and significant pollution incidents per 100 permits



- ➔ Pollution incidents per 100 permits for 2013, AD plants 21.9 (58.3 in 2012), composting 9 (6.3 in 2012*).



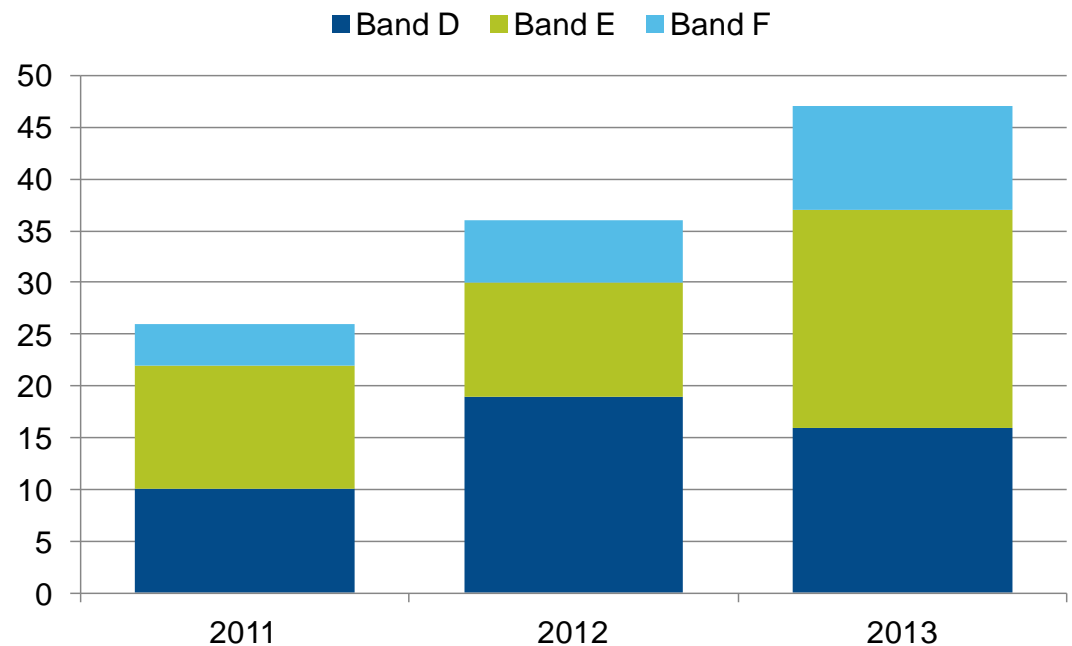
Biowaste treatment: Permit compliance at biowaste treatment sites, 2011 to 2013

- ➔ The biowaste treatment sector had 8% (47) of permits in compliance bands D, E or F – this in one of the largest proportions of any sector.
- ➔ ...and is up from 7% in 2012.

➔ 1.6% (10) of biowaste treatment sites were in band F cf. 0.6% of all permits across all sectors.

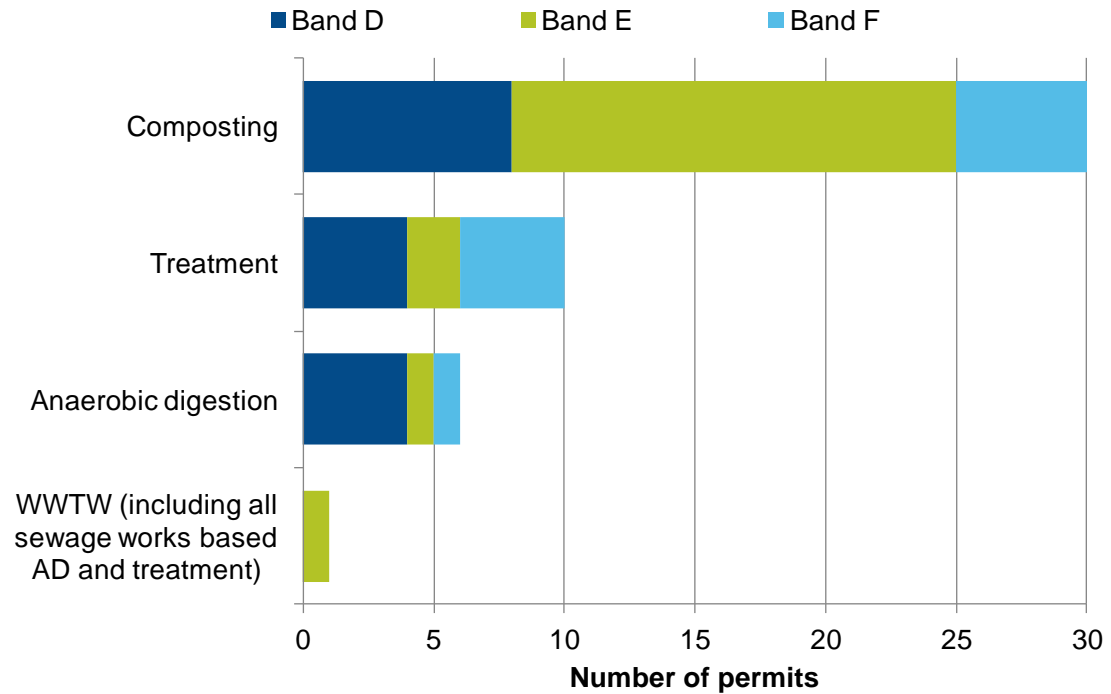
➔ There were 20 biowaste treatment sites in bands D, E or F across both 2012 and 2013.

Permit compliance, biowaste treatment sites we regulate, England 2011 - 2013



Biowaste treatment: Poor permit compliance by activity, 2013

Permit compliance, biowaste treatment sites we regulate by activity, England, 2013

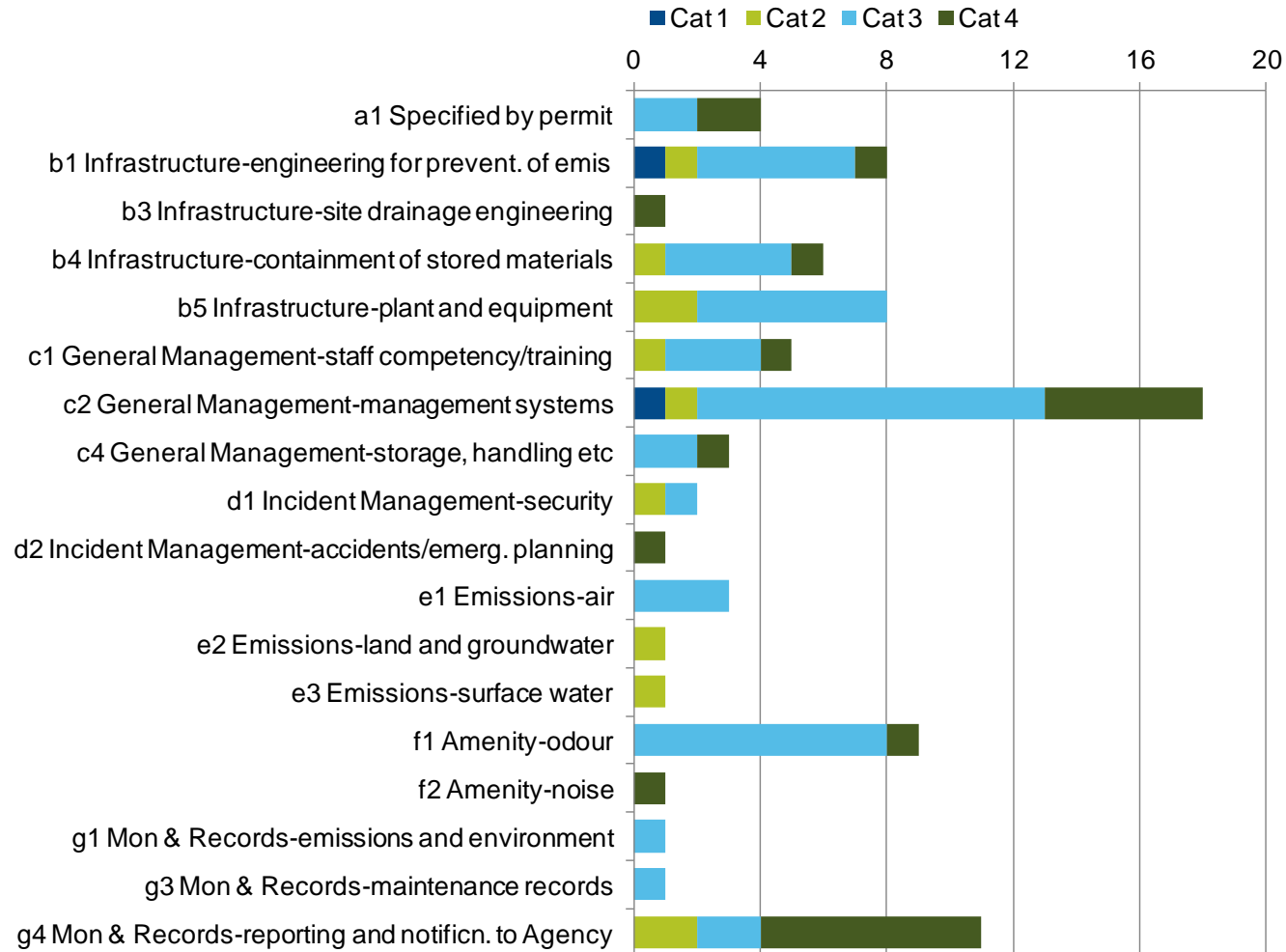


	Permits	No. D-F	% D-F 2013 (2012)
Composting	312	30	10 (9)
Anaerobic digestion	64	6	9 (6)
WWTW	148	1	1 (0)
Other treatment	84	10	12 (9)

Biowaste treatment: Permit breaches at biowaste treatment AD sites 2013

Permit breaches, anaerobic digestion (AD) sites we regulate by reason for breach, England, 2013

- ➔ 28% were due to general management – management system.
- ➔ 17% were due to reporting and notification.
- ➔ 14% were due to odour..

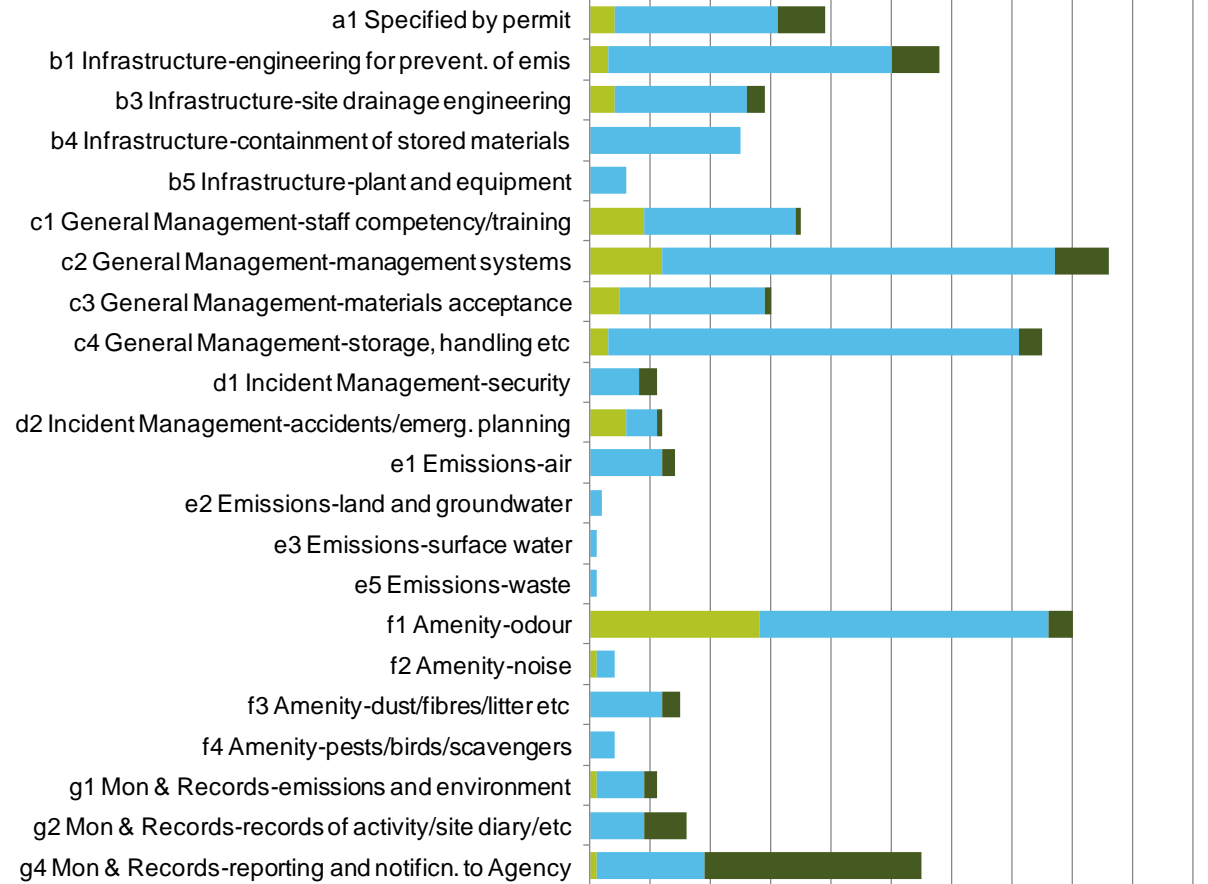


Biowaste treatment: Permit breaches at biowaste treatment composting sites

Permit breaches, composting sites we regulate by reason for breach, England, 2013

■ Cat 1 ■ Cat 2 ■ Cat 3 ■ Cat 4

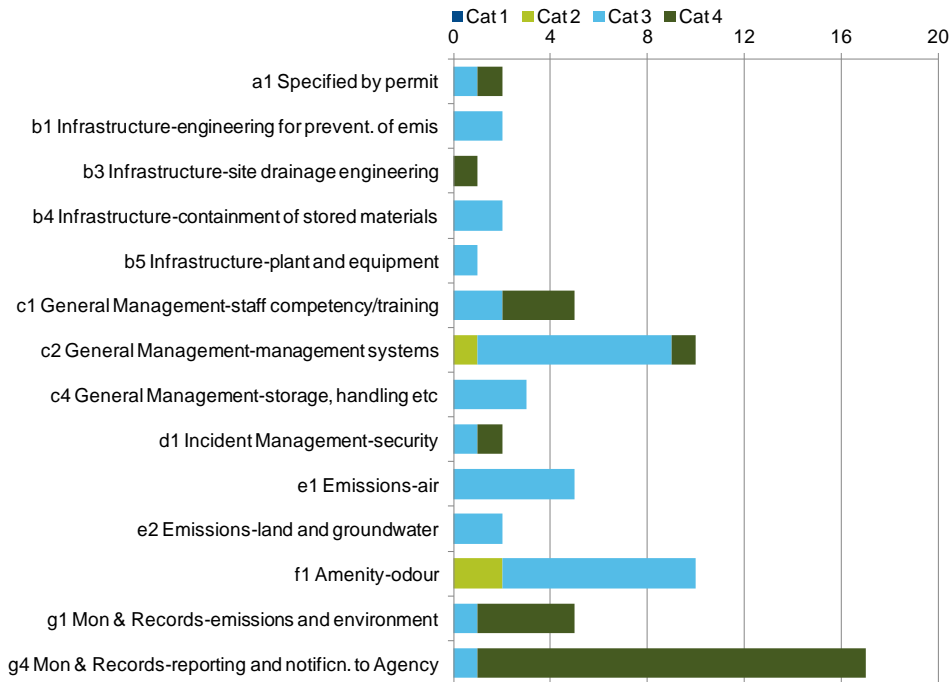
0 10 20 30 40 50 60 70 80 90 100



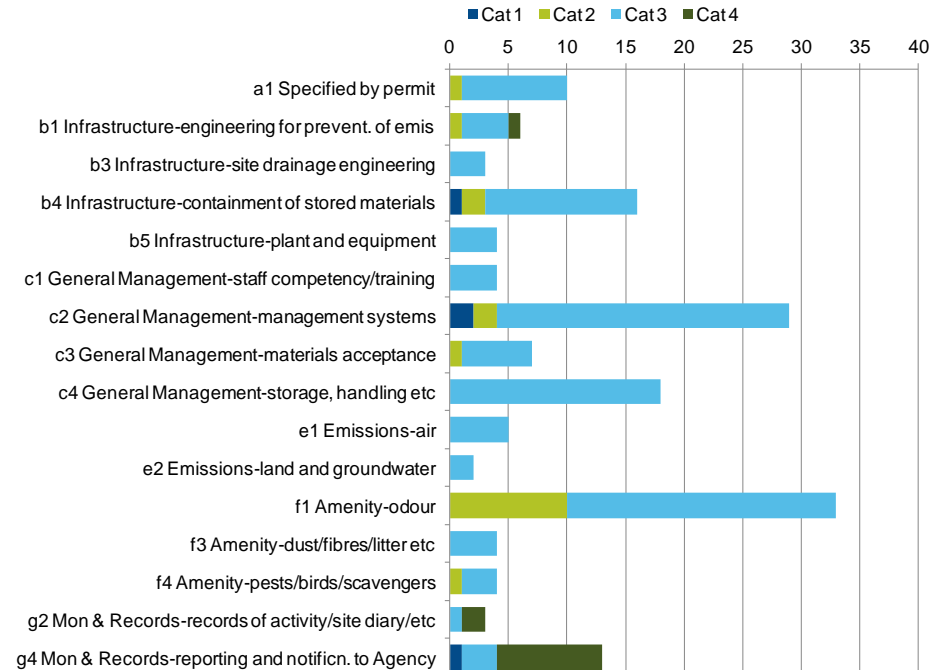
- ⇒ 14% were due to general management systems.
- ⇒ 36% due to cat 2 odour breaches, 11% to cat 3 odour breaches and 4% to cat 4 odour breaches.

Biowaste treatment: Permit breaches at biowaste WWTW and other treatment sites

Permit breaches, WWTW sites we regulate by reason for breach, England, 2013

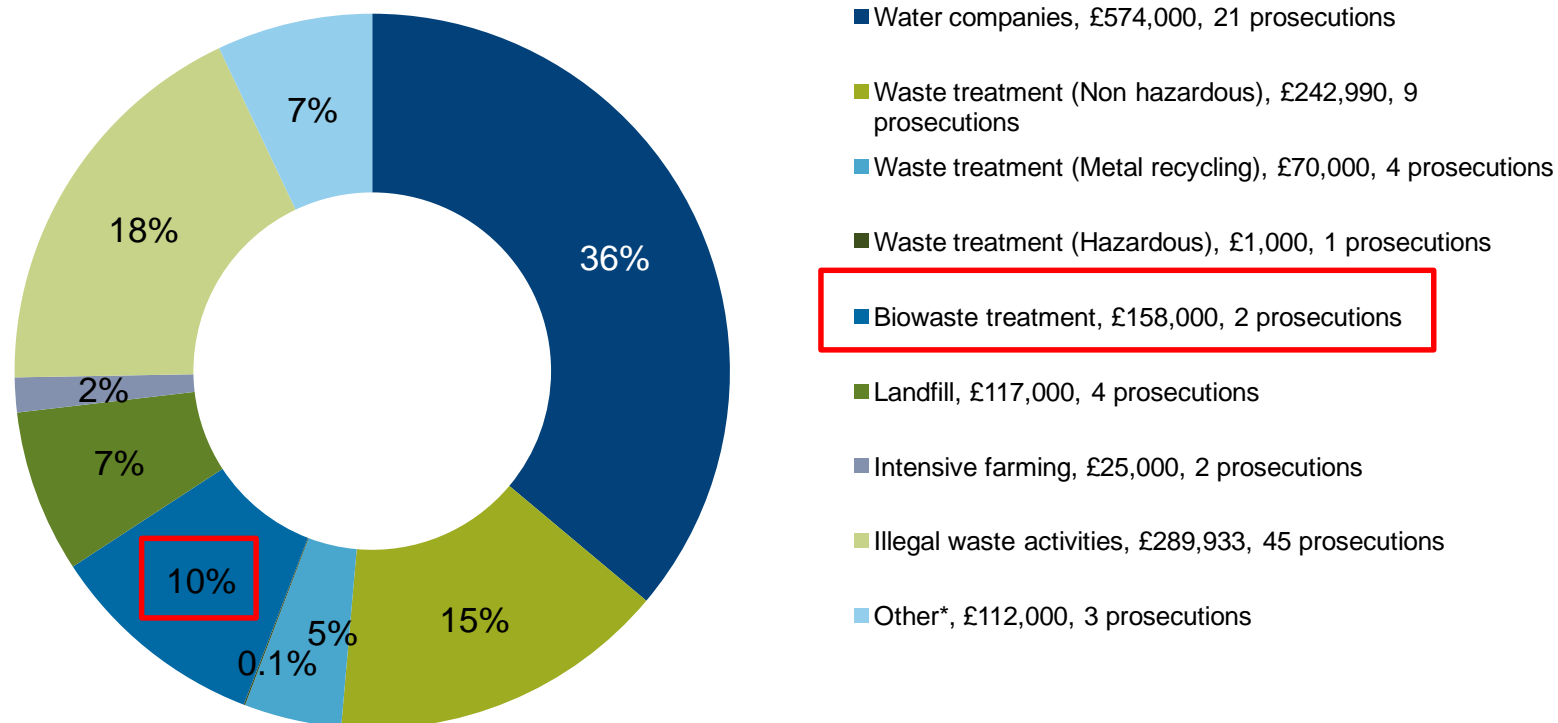


Permit breaches, other treatment sites we regulate by reason for breach, England, 2013



Biowaste treatment: Prosecutions by sector

Prosecutions imposed on businesses for environmental offences, England 2013

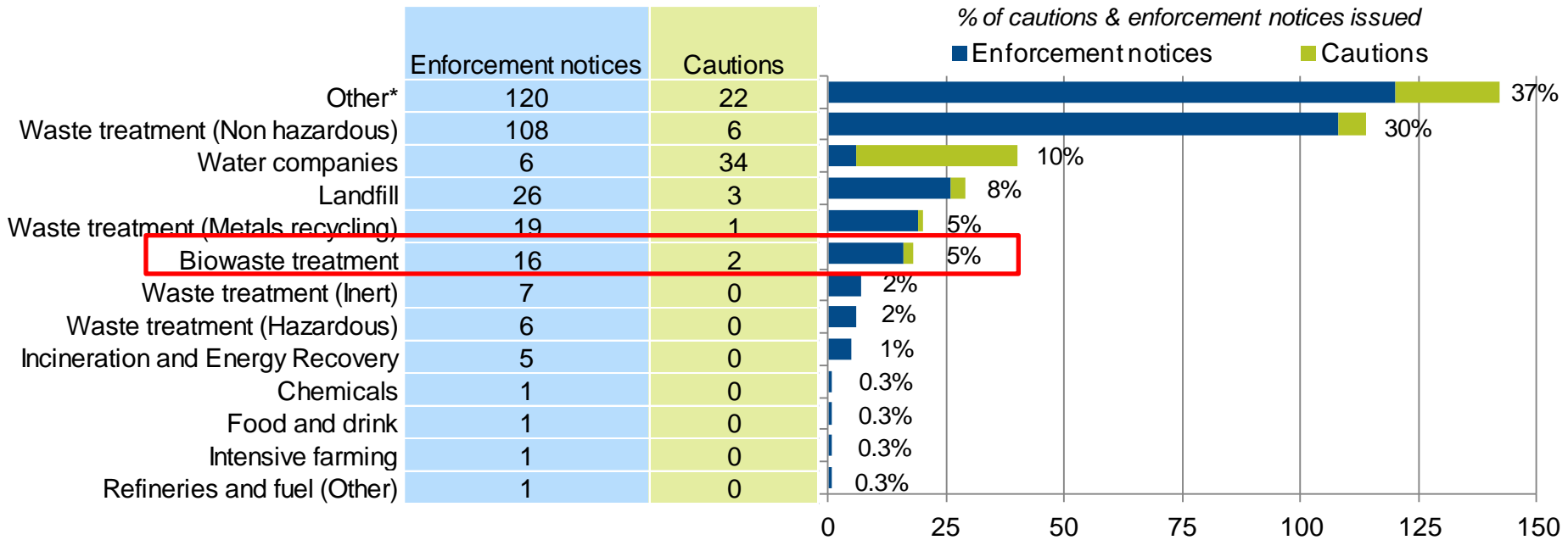


*Other industries not regulated under the Environmental Permitting Regulations, and are not illegal waste sites.

- ⇒ We fined businesses £1.58million in 2013, 16% less than the £1.86 million in 2012.
- ⇒ In 2013, there were two operators from the biowaste treatment sector prosecuted with fines totalling £158,000. Fines of £152,000 were due to a breach of permit conditions, £2,000 due to operating without a permit and £4,000 due to unlawful disposal of controlled waste.

Biowaste treatment: Cautions and enforcement notices by FAR sector

Company cautions and enforcement notices by sector, England.



- In 2013 we issued 183 separate businesses with 385 enforcement notices and cautions.
- In 2013, there were 16 enforcement notices, two cautions and eight warning letters issued to biowaste treatment sites. There were 4 companies receiving more than one caution or enforcement notice in 2013.
- 16 notices were issued to 14 sites; 14 for permit breaches, one to remove controlled or extract waste and one for a revoked permit.
- Two cautions issued to one site; both for permit breaches.