

Pollution incidents

2013 evidence summary

March 2015

Introduction

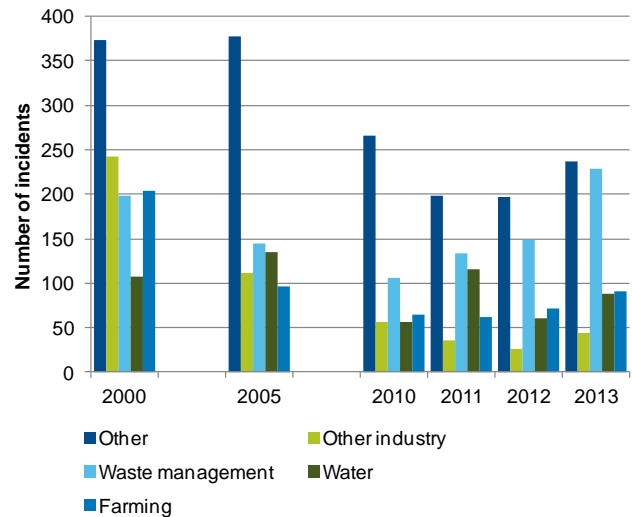
Following a reduction in pollution incidents in recent years, numbers of serious and significant pollution incidents are increasing.

We classify pollution incidents according to their impact on the environment and people, from category 1 (the most serious) to category 4 (little or no impact). We investigate reported pollution incidents to limit their impact and, where appropriate, we take action against those responsible for the pollution.

This summary is about the most serious pollution incidents, categories 1 and 2.

In the summary, sites or activities that are referred to as 'permitted' are permitted by the Environment Agency under the Environmental Permitting Regulations (EPR). No-one is allowed to cause pollution, and we take action against offenders. Some of the industries and businesses that we don't permit under EPR will be regulated under other legislation, such as the Water Framework Directive.

All serious pollution incidents (caused by activities we permit and those we don't) in England



The impact of pollution incidents

Serious pollution incidents can harm people and the environment as well as damage businesses. A major incident can have a significant financial impact on a business in clean-up and enforcement costs. The Environment Agency spends about £12 million a year in time, materials and support responding to pollution incidents.

Pollution incidents which damage business reputations can affect their ability to secure contracts. This is because major companies are increasingly sourcing goods and services from environmentally responsible suppliers.

The director of a Derbyshire-based wood recycling firm was jailed for 8 months and his company ordered to pay £15,500 after a fire at its site polluted a nearby canal. It killed thousands of fish over a 6km distance in September 2012 and led to a £200,000 clean-up operation. In imposing his sentence, the judge noted the harm suffered by neighbouring businesses and the environment. Read more at: [Recycling Director Jailed Following Wood Waste Fire | CIWM Journal Online](#)



The majority of the 323 incidents in 2013 caused by sites we permit affected air (61%) or water (34%).¹

1. Impact on air

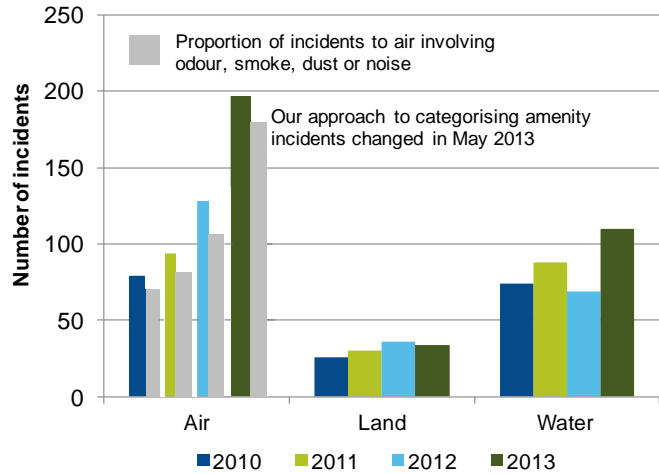
Of the 197 incidents affecting air, the majority (182) involved the amenity pollutants odour, smoke, dust and noise. Of these:²

- 131 were odour-related (an increase of 68% since 2012)
- 24 were noise-related (an increase of 71% since 2012)
- 19 were smoke-related (an increase of 36% since 2012)
- 13 were dust-related (an increase of 160% since 2012)

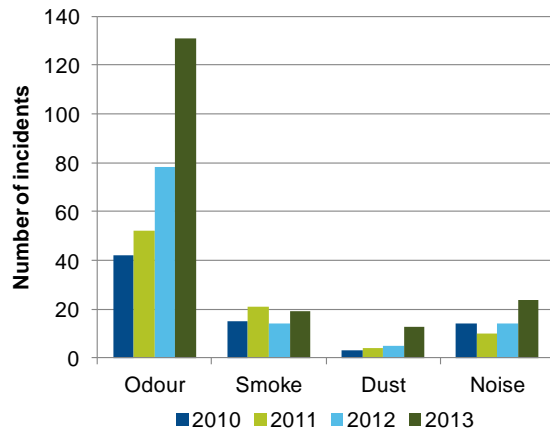
The number of reported amenity incidents has increased substantially in recent years, almost tripling since 2005, with the sharpest increase (69%) between 2012 and 2013. Reasons for this increase may include:

- changing waste management practices: the waste industry is responsible for most amenity incidents, and in recent years more waste has been re-used and recycled and less landfilled, with an associated increase in the use of above-ground storage³
- a total of 82 individual sites were responsible for the 182 amenity incidents, with 26 sites causing more than 1 incident; 66 of the 82 sites are part of the 3 waste sectors in the 'top 5 sectors' causing pollution incidents
- a change in reporting: in May 2013 we changed our approach to classifying ongoing amenity incidents, which made it easier to substantiate incidents and raised the impact level of some incidents to category 2 when they would have previously been reported as a number of category 3 events (correspondingly, there were more than 450 fewer category 3 amenity incidents in 2013 than in 2012)

Serious pollution incidents to air, land and water caused by the activities we permit (all sectors) in England



Serious pollution incidents involving odour, smoke, dust or noise in England



¹ A single incident may affect multiple environmental media (e.g. land, air, water).

² The individual totals do not add up to 182 (100%) because one incident may have more than one pollutant associated with it.

³ [Regulating the waste industry: 2013 evidence summary - Publications - GOV.UK](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/242422/Regulating_the_waste_industry_2013_evidence_summary_-_Publications_-_GOV.UK)

2. Impact on water

In 2013, 110 serious pollution incidents caused by permitted sites affected water, an increase of 59% since 2012. Of these, most were caused by:

- water companies: 88 incidents
- waste management activities:
 - 14 incidents (caused by the non-hazardous waste treatment, biowaste and landfill sectors), double the number in 2012 (7, caused by the hazardous waste treatment, waste treatment (metals recycling), landfill and biowaste sectors)
 - most were caused by containment and control failures (9) or fires (4)

Sources of serious pollution incidents

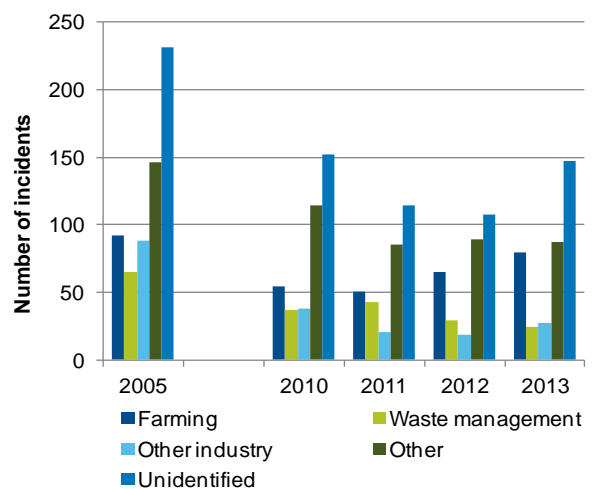
1. Activities not permitted and unidentified sources

The majority of serious pollution incidents were caused by non-permitted activities or by an unidentified source. Together these accounted for 53% of the total number of incidents – unidentified incidents alone are 21% of the total. There was an 18% increase in serious pollution incidents caused by these groups between 2012 (310 incidents) and 2013 (365 incidents). The most common causes of incidents were containment and control failures (118 of 365 incidents, 32%) and unauthorised activities (109 of 365 incidents, 30%).⁴

Where we have identified the source, the non-permitted activities that caused the most pollution incidents were:

- other sources (such as transport, domestic and residential, private waste water disposal and the service sector): 87 incidents, a decrease of 2% since 2012 (within this group, private waste water disposal such as private sewer failures and septic tank overflows were the most significant; 23 incidents, more than double the number in 2012)
- farming (non-intensive) activities: 80 incidents, an increase of 23% since 2012 (within this group, dairy (44 incidents) and arable (15 incidents) were the most significant)
- other industry: 27 incidents, an increase of 42% since 2012 (manufacturing industries caused 17 of these incidents, an increase of 55% since 2012)
- non-permitted waste management activities: 24 incidents, a decrease of 17% since 2012

Serious pollution incidents caused by unidentified sources and activities we do not permit in England



⁴ Containment and control failures include incidents such as abnormal process operations, pipe failures, spillages, plant failures, control system/measure failures, sewer failures or overflow and storage tank failures. Examples of unauthorised activities include unauthorised discharge or disposal, fly-tipping, illegal waste site activity and vandalism.

2. Permitted activities

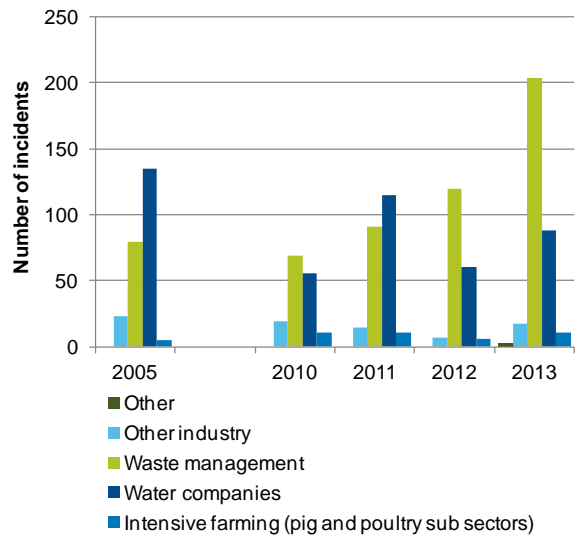
Serious pollution incidents caused by permitted activities increased by 67% between 2012 and 2013, from 193 incidents in 2012 to 323 in 2013.

The majority of these (204 of 323 incidents, 63%) were caused by containment and control failures.

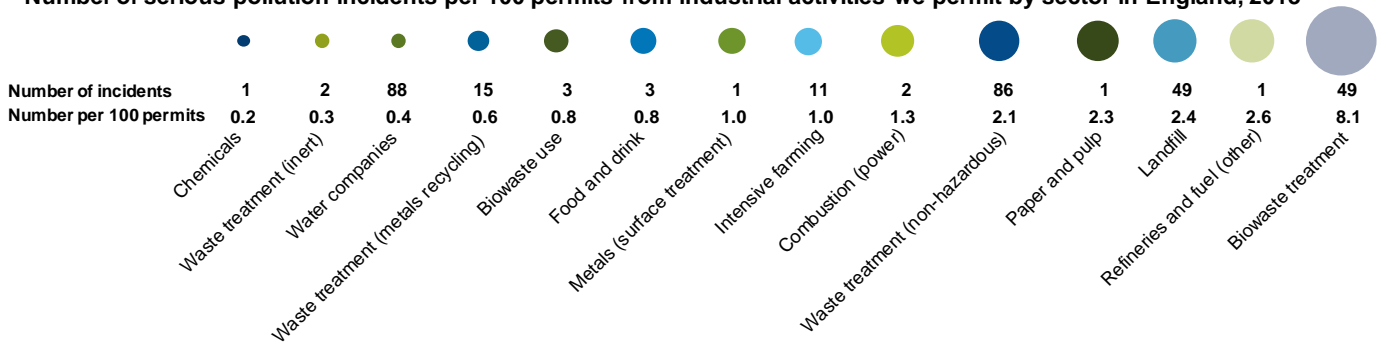
Of the 323 incidents, most were caused by waste management activities⁵ (204 incidents, 63%) and water companies (88 incidents, 27%). These activities were also responsible for much of the increase since 2012.

The number of serious pollution incidents per 100 permits shows the sectors that cause the most incidents compared with their overall size.⁶

Serious pollution incidents caused by the activities we permit in England



Number of serious pollution incidents per 100 permits from industrial activities we permit by sector in England, 2013



Serious pollution incidents: the top 5 sectors

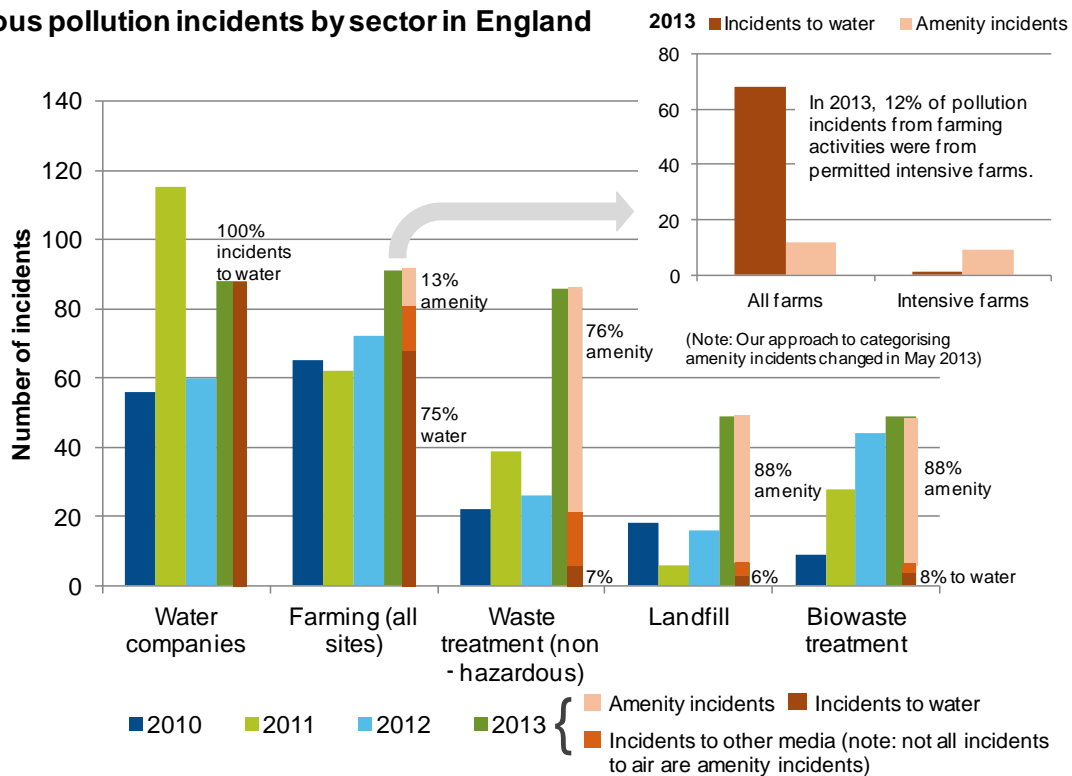
There were 688 serious pollution incidents in 2013. The sectors causing the most incidents were:

1. farming: 91 incidents (80 caused by the non-permitted sector; 11 by permitted intensive farms), 13% of the total
2. water companies: 88 incidents, 13% of the total
3. permitted non-hazardous waste treatment: 86 incidents, 13% of the total
4. permitted landfill: 49 incidents, 7% of the total
5. permitted biowaste treatment: 49 incidents, 7% of the total

⁵ 'Waste management' includes waste treatment (all sub sectors), landfill, biowaste (treatment and use) and incineration with energy recovery. In 2013, the incineration with energy recovery sector did not cause any pollution incidents.

⁶ In this assessment, the number of permits held by a sector is used to give an approximation of its size. However, a small sector causing one incident will appear 'disproportionate' in this analysis.

Serious pollution incidents by sector in England



Sector 1: Farming

The whole farming sector caused 91 serious incidents in 2013; 12% were caused by permitted activities (intensive pig and poultry farms) and 88% by non-permitted (non-intensive) farming activities.

Dairy farms caused the most incidents (44 incidents, 48% of the whole sector's incidents).

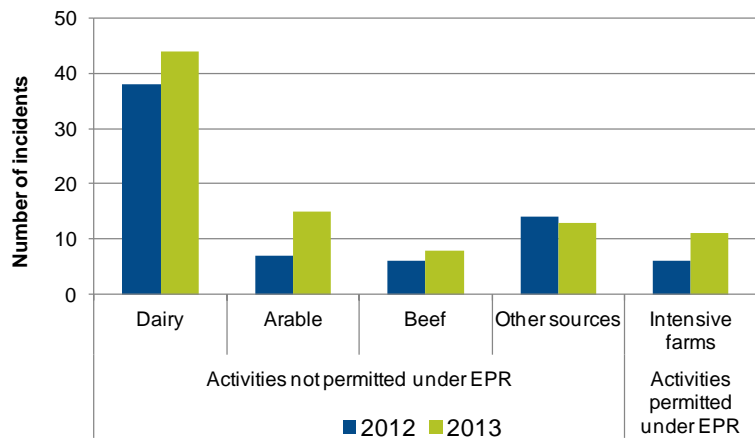
Farming-related pollution incidents mainly affected water (75%).

Between 2012 and 2013, incidents caused by:

- the whole sector increased by 28% (71 to 91)
- non-permitted farming activities increased by 23% (65 to 80)
- dairy farms increased by 16% (38 to 44)
- arable farming increased from 7 to 15

The most common reasons for pollution incidents were containment and control failures (54% of all farming incidents) and unauthorised activity (24%). Some 80% of dairy farming incidents were containment and control failures, mainly due to the release of slurries.

Serious pollution incidents caused by farming activities in England

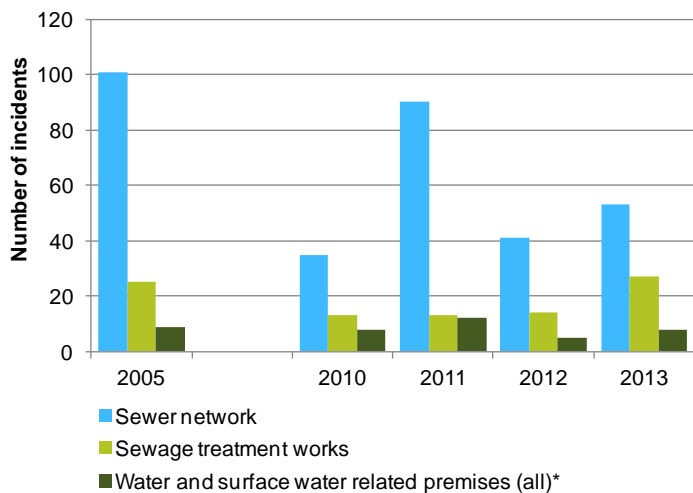


Sector 2: Water companies

In 2013, water company activities were responsible for 88 (27%) of the total serious pollution incidents caused by permitted activities. All 88 affected water.

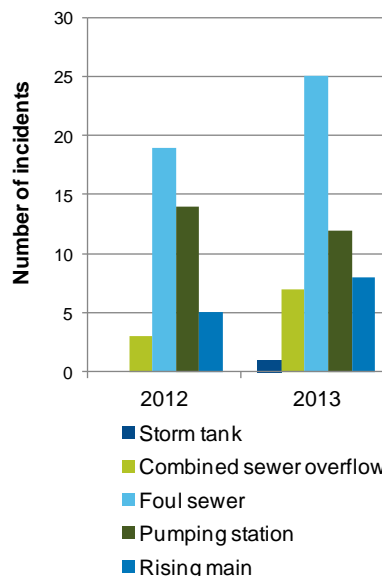
The water companies' record of pollution incidents is variable and increased from 60 in 2012 to 88 in 2013.

Serious pollution incidents caused by water company activities in England



*Water and surface water related premises includes water treatment works, the water distribution system, and surface water outfalls.

Causes of serious pollution incidents in the sewer network



The majority (53 of 88, 60%) of serious pollution incidents caused by water companies in 2013 were on the sewer network. There were 29% more incidents on the sewer network in 2013 than in 2012 (41 incidents in 2012 and 53 in 2013):

- the largest number of serious pollution incidents in both 2012 and 2013 involved foul sewers (18 incidents in 2012 and 25 incidents in 2013)
- most of the serious pollution incidents (50 of 53, 94%) on the sewer network in 2013 were due to containment and control failures

Serious pollution incidents at sewage treatment works also increased substantially, from 14 in 2012 to 27 in 2013.

Sectors 3 to 5: Non-hazardous waste treatment, landfill and biowaste treatment

Of the top 5 sectors, serious pollution incidents caused by the non-hazardous waste treatment and landfill sectors increased the most between 2012 and 2013. Incidents from both these sectors more than doubled in this time – the non-hazardous waste treatment sector from 26 to 86 and the landfill sector from 16 to 49. Incidents caused by the biowaste treatment sector also increased from 44 in 2012 to 49 in 2013 (11%).

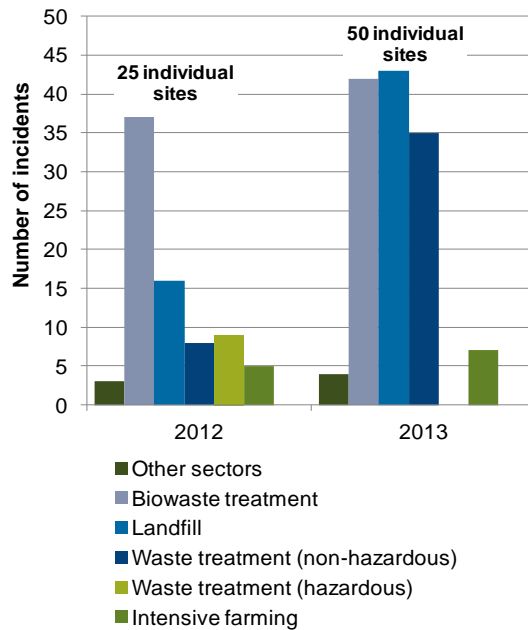
Factors contributing to pollution incidents at waste sites are:

- poor management, including ignoring regulatory advice or enforcement
- excessive amounts of waste or poor storage arrangements

The majority of the incidents caused by these sectors are amenity incidents, most commonly involving odour. In 2013:

- the non-hazardous waste treatment sector caused 65 amenity incidents
 - 39 individual sites were responsible, 8 of which caused multiple incidents
 - 35 of these incidents (54%) involved odour
- the landfill sector caused 43 amenity incidents
 - 12 individual sites were responsible, 5 of which caused multiple incidents
 - 43 of these incidents (100%) involved odour
 - 2 sites were responsible for 70% of the incidents
- the biowaste treatment sector caused 43 amenity incidents
 - 15 individual sites were responsible, 10 of which caused multiple incidents
 - 42 of these incidents (98%) involved odour

Number of serious pollution incidents where odour was recorded as a pollutant, in England



Reducing pollution incidents

1. Prevention

We provide advice and guidance on pollution prevention⁷ to businesses to help them reduce the risk of causing environmental pollution and the costs of clean up.

We also designate certain facilities as sites of high public interest (SHPI) and allocate additional resource to ensure the operators of such sites respond to community and our concerns.⁸ In 2013:

- 27 sites that caused serious pollution incidents were also designated as SHPI and in Operator performance risk appraisal (Opra) compliance bands D, E or F⁹ (25 of these 27 sites are in the ‘top 5 sectors’: 13 in the non-hazardous waste treatment sector, 6 in the landfill sector, 4 in the biowaste treatment sector and 2 intensive farms¹⁰)
- there were 25 sites in the ‘top 5 sectors’ that caused multiple pollution incidents (11 of these were also SHPI, and 19 were in Opra compliance bands D, E or F)

⁷ See for example ‘Pollution prevention pays in England and Wales, January 2013’ [Preventing industrial and commercial pollution: pollution prevention pays - Publications - GOV.UK](#)

⁸ For 2014 we extended this to include other high risk sites.

⁹ This analysis excludes water companies because they aren’t rated under Opra.

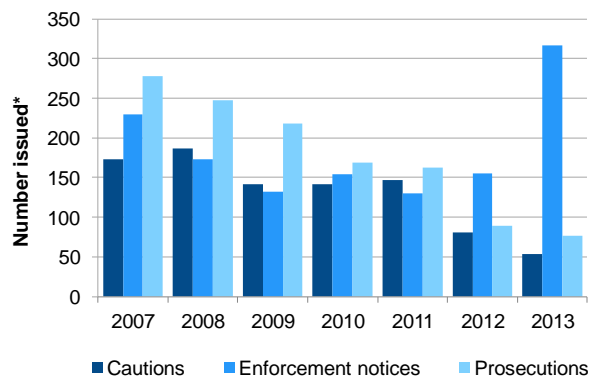
¹⁰ The 2 sites that weren’t in the ‘top 5 sectors’ were in the food and drink sector and waste treatment (metals recycling) sector.

2. Enforcement activity

To cause or allow pollution is against the law.¹¹ We will prosecute serious or persistent offenders, but there are other enforcement actions we may take if a pollution incident does happen. These include:

- cautions: intended to deter offenders, and suitable for cases where, although we could prosecute, there are other factors that we're taking into account
- enforcement notices: used to bring sites we permit back into compliance and put right any damage they've caused to the environment
- civil sanctions: seeking to change behaviour by requiring offenders to pay to clean up the damage they've caused and improve the environment, rather than paying fines

Enforcement actions used (businesses in all sectors) in England, 2007 to 2013



*Note: this data is for businesses, not individuals

LIT10103

¹¹ Pollution prevention pays in England and Wales January 2013: [Preventing industrial and commercial pollution: pollution prevention pays - Publications - GOV.UK](#)