



# Report on Farm Hazardous Waste Collections 2014



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## Published by the Environmental Protection Agency

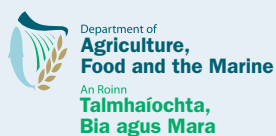
May 2015

**Edited and produced by:** Jane Brogan, EPA

**Authors:** Jane Brogan, EPA, Gordon Rennick and Donal Lynch, DAFM,  
Tim Hyde, Teagasc

### ENVIRONMENTAL PROTECTION AGENCY

An Ghníomhaireacht um Chaomhnú Comhshaoil  
PO Box 3000, Johnstown Castle Estate, Co. Wexford, Ireland  
Telephone: +353 53 9160600 Fax: +353 53 9160699  
Email: [info@epa.ie](mailto:info@epa.ie) Website: [www.epa.ie](http://www.epa.ie)  
LoCall 1890 33 55 99



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# Project/Operational Teams and Acknowledgements

The following organisations collaborated in 2014 to organise and operate 10 farm hazardous waste collection centres and to assist in the preparation of this report. The participation, professionalism and enthusiasm of all involved is gratefully acknowledged.

## Project Team

- Environmental Protection Agency
- Teagasc
- Pesticide Control Division (PCD), Department of Agriculture, Food and the Marine

## Operational Team

- Project Team
- RILTA Environmental Ltd
- WEEE Ireland
- European Recycling Platform (ERP)
- Kilkenny County Council
- Offaly County Council
- Fingal County Council
- Cavan County Council
- Donegal County Council
- Mayo County Council
- Waterford City and County Council
- Cork County Council
- Limerick City and County Council
- Wexford County Council

In addition, the operational team wishes to sincerely thank the owners of the cattle marts; co-operatives and agri-businesses who gave their sites to facilitate the bring centres; the Irish Farm Film Producers Group (IFFPG) for their assistance, expertise and promotion of the campaign; the Irish Farmers' Association (IFA) and Irish Creamery Milk Suppliers Association (ICMSA) and Bord Bia for promoting the bring centres to their members; and finally to all the farmers who engaged positively with the scheme in both the 2013 and 2014 collections.

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ISBN: 987-1-84095-600-9



# Section 1

## INTRODUCTION

The Environmental Protection Agency (EPA); Teagasc; the Department of Agriculture, Food and the Marine (DAFM); local authorities in Kilkenny, Offaly, Dublin, Cavan, Donegal, Mayo, Waterford, Cork, Limerick and Wexford; WEEE Ireland; European Recycling Platform (ERP); and RILTA Environmental Ltd collaborated in 2014 in a joint initiative to facilitate the collection, recovery and disposal of hazardous waste from farms.

The farm hazardous campaign was also promoted and supported by the IFA, ICMSA, Bord Bia, Irish Farm Film Producers Group (IFFPG), some agricultural co-operatives and agricultural merchants. In 2014, 10 collection centres were operated, with over 2000 farmers using the centres to dispose of their farm hazardous wastes in a manner that protects human health, livestock and the environment.

This report provides information on the farm hazardous waste collections that were undertaken in 2014. An interim report on *Pilot Farm Hazardous Waste Bring Centres in 2013* provides detailed information on the six collections that were operated across the country in that year, and is available at [www.epa.ie](http://www.epa.ie). In addition, a synthesis report will be prepared to provide an overview and summary of the farm hazardous waste collections for both 2013 and 2014. The synthesis report will provide information on the objectives of this joint agency collaboration; a summary of the types and quantities of hazardous wastes collect and disposed; farmer participation, feedback and farm survey results; the policy relevance of this work; and the health and safety and environmental benefits of the farm hazardous waste collections. It will also provide a national estimate of the types and quantities of farm hazardous waste currently being stored on farms and make recommendations relating to the establishment of a scheme to assist farmers to manage these wastes in an environmentally sound manner.

The success of the farm hazardous collections to date provides clear evidence that there is a need for a long-term sustainable and affordable national collection scheme for farm hazardous waste.

## The need for a national farm hazardous waste collection scheme

Farm hazardous waste has the potential to cause harm to farmers, livestock and environment due to properties such as being toxic, irritant, flammable and ecotoxic. Farmers want to manage these wastes in a manner that protects both their livelihoods and the environment. The safe disposal of farm hazardous waste is important for every farmer in producing quality assured products for consumers and in supporting the green and smart ambitions of the farming sector.

The operation of, and information gathered during, the farm hazardous waste collections also contributes to and supports many national legislative and policy requirements and objectives, such as the National Hazardous Waste Management Plan 2014 - 2020, Food Harvest 2020, Common Agricultural Policy (CAP), Basic Payment Scheme (BPS) and Cross-Compliance.

The farm hazardous waste collections in 2014 facilitated the removal of hazardous wastes from farms, assisted in identifying the type and quantity of hazardous wastes being generated and stockpiled on farms and provided a collaborative platform for multi-agency co-operation in assisting farmers in removing these wastes from farms. The collections received overwhelming support from farmers who demonstrated their willingness to contribute financially to the environmentally sound management of their waste when presented with a practical and accessible opportunity to do so. The success of the collections, which depended largely on the considerable engagement of the farming community to avail of the opportunities provided, shows that there is a clear demand and need for a long-term sustainable and affordable national collection scheme for farm hazardous waste. In addition, farm survey data was collected during the 2014 campaign which will assist in deriving accurate national estimates on the quantity and types of farm hazardous waste that are generated and stored on different farm types. This information will be useful in guiding the design and delivery of a national scheme for the collection of farm hazardous wastes.

## Inter-agency collaboration

The successful operation of the bring centres required significant collaboration between the project teams: the EPA; Teagasc; DAFM; local authorities in Kilkenny, Offaly, Dublin, Cavan, Donegal, Mayo, Waterford, Cork, Limerick, and Wexford; RILTA Environmental Ltd (hazardous waste contractor); WEEE Ireland and European Recycling Platform (ERP) from planning through to delivery and implementation on the ground. Many other organisations assisted in the promotion of the collections through their membership, such as the IFA, ICMSA, Bord Bia, agri-merchants and livestock co-operatives. Farmers also assisted in the efficient operation of the sites by ensuring that their wastes were segregated, packaged and transported to the sites in a manner that allowed for easy off-load.

## Promotion and advertising

The farm hazardous waste campaign was extensively advertised and promoted by many of the operational partners. Teagasc advertised through its advisory service and farmer discussion groups both nationally and locally. Adverts were placed by the EPA in national papers including the *Farmers Journal*, *Farming Independent* and *Farming Examiner*. The EPA LoCall number 1890 33 55 00 was provided to assist farmers with any additional queries they had in relation to the waste types, dates, locations etc. This received over 100 queries from farmers. The local authorities advertised extensively in local papers, on local radio and at various locations throughout their functional areas. The local livestock marts and co-operatives also participated. Text alerts were sent to farmers as reminders prior to the events by Teagasc, IFA and Bord Bia. The operational partners' websites, Facebook and Twitter were also used. The collections were promoted at the National Ploughing Championships.

## Media coverage

There was significant coverage in the media during and after the five week campaign. There were articles in local newspapers, numerous radio interviews and the RTE TV programme *Ear to the Ground* filmed a section that followed the collection of hazardous waste off a farm, the transport of the waste to the centre in Wexford and its handling and onward disposal. It would appear that coverage on local radio stations contributed significantly to the turnout of farmers at the centres.



## Section 2

# SITE OPERATIONS

The operational team ran a total of 10 bring centres for the collection of farm hazardous waste across the country in 2014. The locations and dates are given in Table 1 below.

**Table 1: Location and dates for farm hazardous waste collections.**

Location	Date
Cillin Hill Mart, Co. Kilkenny	Wednesday, 29 October
Tullamore Mart, Co. Offaly	Friday, 31 October
Whites Agri, Lusk, Co. Dublin	Tuesday, 4 November
Ballyjamesduff Mart, Co. Cavan	Thursday, 6 November
Raphoe Mart, Co. Donegal	Tuesday, 11 November
Balla Mart, Co. Mayo	Wednesday, 12 November
Dungarvan Mart, Co. Waterford	Tuesday, 18 November
Kanturk Mart, Co. Cork	Thursday, 20 November
Abbeyfeale Mart, Co. Limerick	Tuesday, 25 November
Enniscorthy Mart, Co. Wexford	Thursday, 27 November

The bring centres were mostly held in livestock marts or in the premises of agri-business merchants, which were kindly made available to the operational team by the owners or co-operatives.



All the sites were assessed in advance to ensure that they could facilitate the significant activities that occurred each day, i.e., tractors, cars and trailers, off-loading, segregation and the weighing of hazardous wastes at the three designated stations for (1) waste oils, (2) hazardous wastes (e.g., pesticides, veterinary healthcare wastes, waste paints, oil filters, biocides, acids and bases) and (3) waste electrical and electronic equipment (WEEE) and batteries. Waste oils, WEEE and batteries were accepted free of charge. All other hazardous waste was charged at €2/kg. The types of wastes accepted and the charges applied are listed in Table 2.

**Table 2: Wastes accepted and charges applied.**

Waste types accepted	Charges applied
Out of date pesticides and biocides; veterinary medicines and animal health-care wastes; needles and syringes; waste paints; aerosols; corrosives (acids, detergents); oil and air filters; oily wastes; brake fluids; brake pads; antifreeze; adhesives; coolants	All charged at €2/kg (excl. VAT@ 13.5%)
Waste packaging e.g., plastic and/or metal containers that are contaminated with hazardous materials	€8 per 200 litre drum €4 per 20/25 litre drum
Waste engine oil and waste hydraulic oil (do not mix with vegetable oil)	Free of charge
Waste electrical and electronic equipment (WEEE) (e.g., TVs, computers, fridges, freezers, power tools, kettles); all batteries and light bulbs	Free of charge

Important information and guidance was provided to farmers in advance of the collections on the requirement for safe handling, segregation, packaging and transport of farm hazardous waste to the bring centres. This assisted greatly in the efficient operation of the centres and in health and safety for everyone involved in the campaign. The main guidance provided included:

1. Each waste type must be clearly identifiable, segregated and packaged to avoid any spillages or leakages;
2. Mixed wastes will not be accepted;
3. All needles and syringes to be delivered to the centres in a separate sealed container;
4. Wastes cannot be dropped off before or after the designated collection date;
5. Farm plastics such as silage wrap and sheeting, clean fertiliser and feed bags will not be accepted (as these are non-hazardous wastes and can be recycled);
6. Triple rinsed pesticide containers will not be accepted as these are classified as non-hazardous waste and can be recycled through the existing farm plastics collection scheme; and
7. Payment can be made by cash, cheque or card and all farmers will be issued with a receipt of payment and a certificate of transfer of control of the waste.



## Section 3

# TYPE AND QUANTITY OF HAZARDOUS WASTES COLLECTED

A total 169,905kg of farm hazardous waste and 77,778kg of waste electrical and electronic equipment and batteries was collected over the five week period.

Over 1,875<sup>1</sup> farmers travelled to the bring centres at the 10 locations. The average weight per farmer was 91 kg of farm hazardous waste and 53kg of WEEE and batteries.

Enniscorthy in Co. Wexford was the busiest centre with 331 farmers, while Lusk in Co. Dublin was used by 85 farmers. Figure 1 provides a summary of the number of farmers using each centre and the average weight of hazardous waste they brought.

<sup>1</sup> 1,875 farmers were recorded as using the centres to dispose of farm hazardous wastes such as waste oils, pesticides, and veterinary meds. In addition some farmers used the centres to dispose of WEEE and batteries only ( this number was not recorded), so the figure of 1,875 under estimates the total number of farmers who used the centres. 1,476 farmers disposed of WEEE and batteries at the centres, however no cross record were kept of farmers who just used the centres for WEEE and batteries only. If 20% of these used the centres solely for WEEE and batteries, then ~ 2,170 farmers availed of the collections.

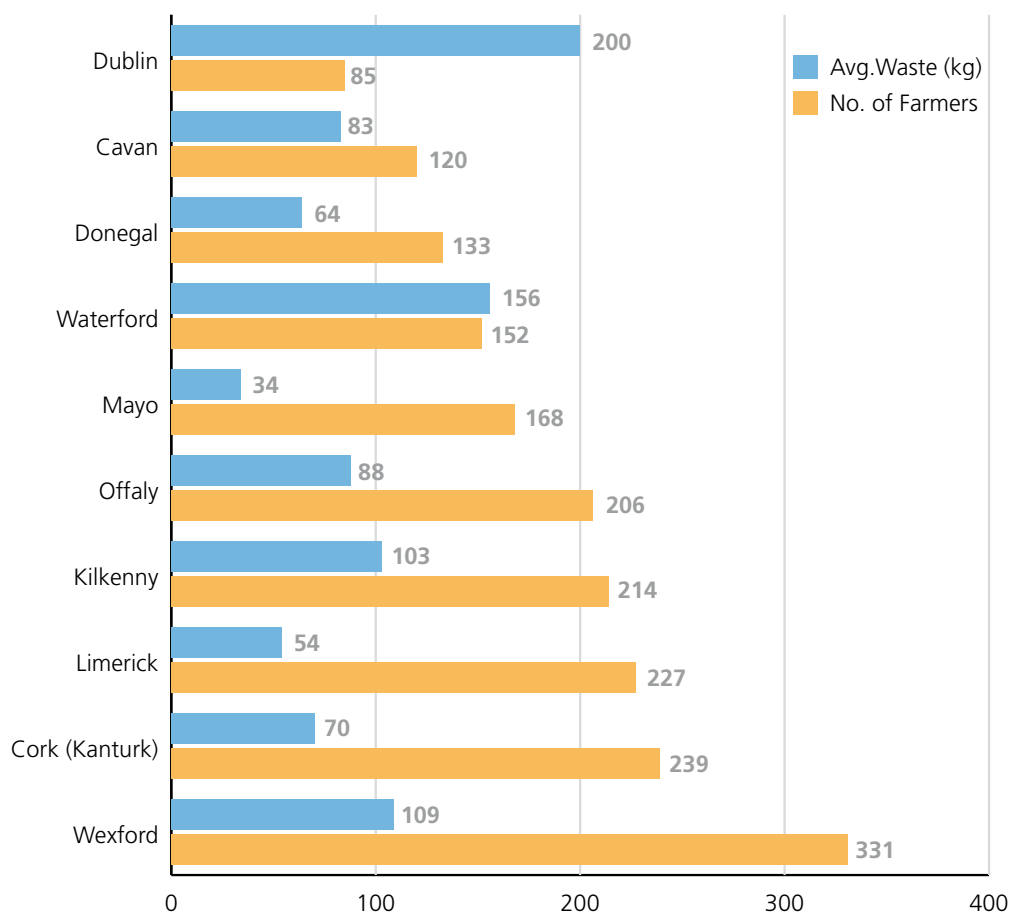


FIGURE 1: AVERAGE WEIGHT OF WASTE (KG) AND NUMBER OF FARMERS PER CENTRE.

The main hazardous waste types presented by the farmers on a weight basis at the bring centres were waste engine and hydraulic oil, at 102 tonnes, 18 tonnes of pesticides, 14 tonnes of contaminated empty containers,<sup>2</sup> 12 tonnes of waste paints (water, lead and solvent based), 11 tonnes of veterinary medicine wastes, 7 tonnes of oil filters, and 4 tonnes of corrosives such as acids and bases. Smaller quantities of other *hazardous wastes*, 6 tonnes in total, were also collected, which included a mix of wastes such as biocides, aerosols, adhesives, coolant, grease cartridges, household chemicals and medicines, waste petrol/diesel, creosote, expanding fillers, solid tar, silicone, and construction materials. Table 3 provides a summary of the wastes collected.

<sup>2</sup> These included 1 litre, 5 litre, 10 litre, 20 litre, 25 litre and 220 litre empty but contaminated containers which had residues of various wastes including pesticides, veterinary meds, waste engine oils and biocides.

**Table 3: Type and quantity (kg) of farm hazardous wastes**

Waste Stream	Kilkenny	Offaly	Dublin	Cavan	Donegal	Mayo	Waterford	Cork	Limerick	Wexford	Total
Waste Oil	12,785	11,324	13,005	6,382	6,081	3,110	14,282	9,078	6,450	19,092	<b>101,589</b>
Pesticides	2,754	2,255	1,900	223	265	160	2,238	1,414	334	6,002	<b>17,544</b>
Paint	1,645	1,394	439	854	348	799	1,056	633	1,114	2,915	<b>11,196</b>
Vet Meds	1,350	1,427	230	884	659	437	827	1,766	1,293	1,723	<b>10,594</b>
25&200L Drums	1,269	496	523	974	741	709	1,791	2,125	1,980	2,639	<b>13,247</b>
Oil Filters	1,115	565	273	256	189	141	836	815	443	1,859	<b>6,490</b>
Corrosives	621	56	38	106	22	5	2,143	165	215	536	<b>3,906</b>
Other <sup>3</sup>	39	166	481	83	29	84	285	114	58	423	<b>1,760</b>
Biocides	43	157	21	56	52	29	54	324	150	214	<b>1,099</b>
Aerosols	125	111	47	26	82	28	31	82	63	112	<b>704</b>
Needles	105	58	14	40	28	65	21	74	36	115	<b>554</b>
Adhesives	29	6	16	33	0	14	13	63	24	77	<b>273</b>
Anti-Freeze	52	38	17	5	0	18	23	66	9	45	<b>270</b>
Human Meds	13	1	0	0	0	113	0	25	13	35	<b>199</b>
Grease Cartridges	7	17	12	8	0	2	3	4	30	54	<b>137</b>
Oily Rags	5	0	0	27	0	0	0	9	3	85	<b>129</b>
Petrol	11	0	0	0	0	0	49	16	2	30	<b>108</b>
Brake Fluid	2	4	0	57	0	2	1	6	3	0	<b>74</b>
Creosote	0	17	0	0	0	0	1	15	2	3	<b>38</b>
<b>Total weight</b>	<b>21,967</b>	<b>18,088</b>	<b>17,012</b>	<b>10,012</b>	<b>8,496</b>	<b>5,713</b>	<b>23,653</b>	<b>16,791</b>	<b>12,219</b>	<b>35,958</b>	<b>169,906</b>

<sup>3</sup> Other includes small quantities of miscellaneous wastes such as fire repellents, plasticisers, silicone, sealants, milk clusters, rubber etc.

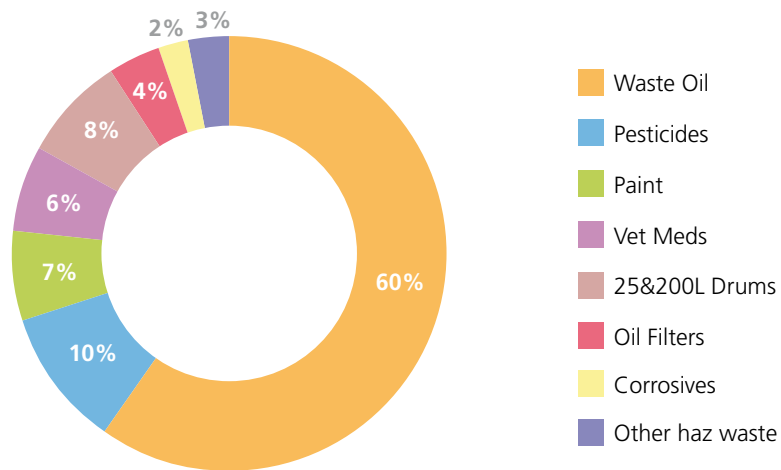


FIGURE 2: FARM HAZARDOUS WASTE TYPES BY PERCENTAGE - 2014

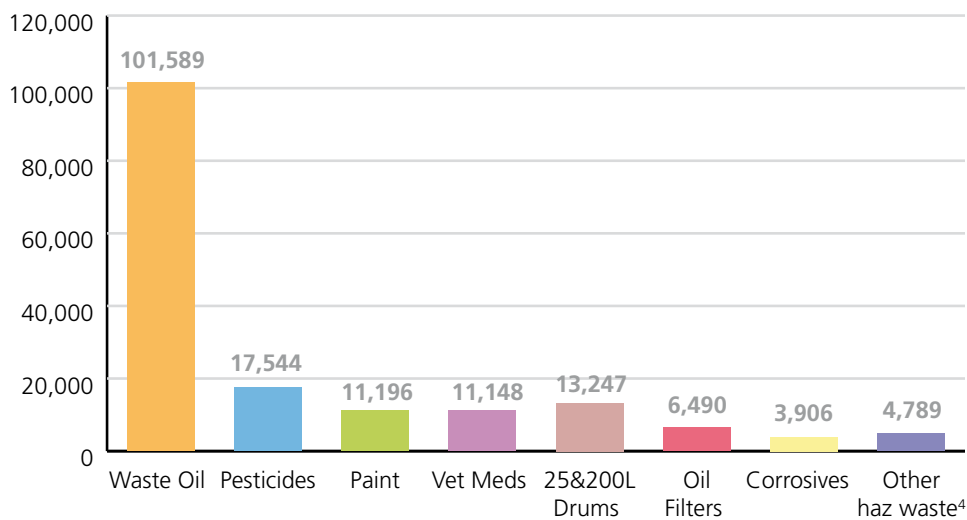


FIGURE 3: TOTAL FARM HAZARDOUS WASTE TYPES AND QUANTITIES COLLECTED (KG)

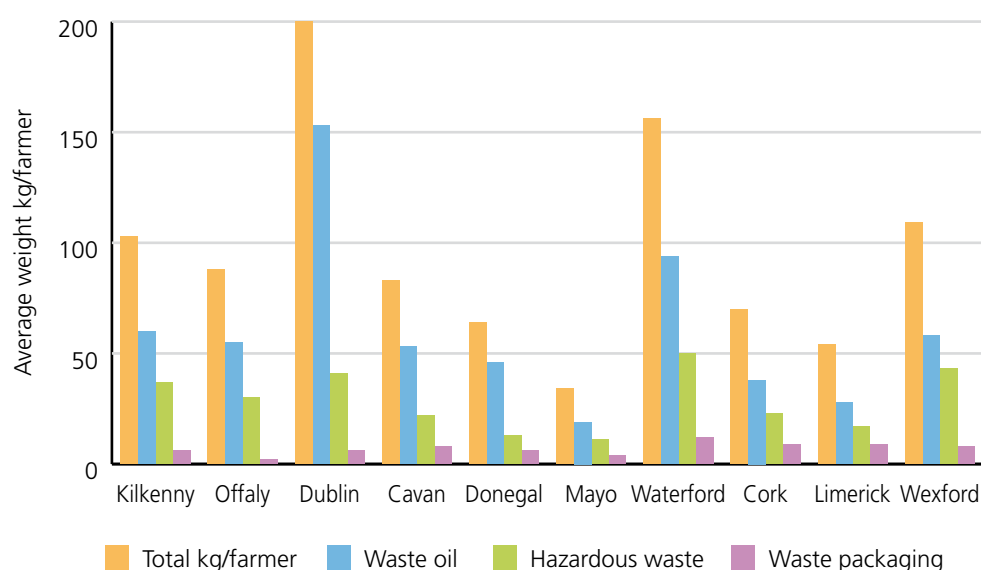
4 Other haz waste includes biocides, aerosols, needles, adhesives, anti-freeze, human meds, grease cartridges, oily rags, petrol, brake fluid, creosote and miscellaneous other waste.

Table 4 provides a summary of the average weight of waste brought by each farmer to the bring centres, sub-divided into three main categories, i.e., waste engine and hydraulic oils; farm hazardous wastes (which include waste pesticides, paints, veterinary medicines, oil filters, acids and bases and other hazardous waste; and contaminated waste packaging (i.e., 1, 5, 10, 20, 25, and 220 litres plastic containers).

**Table 4: Quantity of hazardous waste per centre and per farmer (kg)**

Location	Total waste collected (kg)	No. of farmers	Waste/farmer (kg)			
			Total	Waste oil	Hazardous waste	Waste packaging
Kilkenny	21,967	214	103	60	37	6
Offaly	18,088	206	88	55	30	2
Dublin	17,012	85	200	153	41	6
Cavan	10,012	120	83	53	22	8
Donegal	8,496	133	64	46	13	6
Mayo	5,713	168	34	19	11	4
Waterford	23,653	152	156	94	50	12
Cork	17,146	239	70	38	23	9
Limerick	12,219	227	54	28	17	9
Wexford	35,958	331	109	58	43	8
<b>Total</b>	<b>169,906</b>	<b>1,875</b>	<b>91</b>	<b>54</b>	<b>29</b>	<b>7</b>

Figure 4 illustrate the average total quantity per farmer per centre and shows the breakdown of this waste into waste oils, hazardous wastes (i.e., pesticides, veterinary medicines, waste paints, oil filters) and waste packaging.



**FIGURE 4: QUANTITY (KG) TOTAL WASTE, WASTE OIL, HAZARDOUS WASTE AND WASTE PACKAGING PER FARMER**

The quantity of waste engine and hydraulic oil per farmer was the highest at 153kg for the centre in Dublin<sup>5</sup>, followed by Waterford at 94 kg/farmer. Farmers in Kilkenny, Offaly, Cavan, and Wexford brought between 50 and 60kg of waste oil each to these centres.

In relation to pesticides, veterinary medicines, paints, contaminated containers, oil filters, acids and bases and other hazardous waste, Waterford had the highest quantity of hazardous waste/farmer at 50kg, followed by Wexford at 43kg, Dublin at 41kg, Kilkenny at 37kg, Offaly at 30kg, Cork 23kg, Cavan 22kg, Limerick 17kg, Donegal 13 and Mayo 11kg.

## Comparison across the bring centres

The 10 bring centres were geographically spread across the country, and the waste collected reflected the nature of the farming activities in the locality. Further information on the farm type, farm size and average distance travelled by farmers to each centre is given in the synthesis report for the 2013 and 2014 collections.

Wexford received the greatest quantity of waste and the largest number of farmers. However, highest amount of waste per farmers recorded was from the Dublin collection, at 200kg (Table 4). This was followed by farmers from the Waterford centre who deposited 156 kg on average; Wexford farmers deposited 109 kg each, Kilkenny farmers 103 kg each, Offaly farmers 87 kg each, Cavan farmers 83 kg each, Cork farmers 70 kg each, Donegal farmers 65 kg each, Limerick farmers 54 kg each, and Mayo farmers 34 kg each.

Figure 5 illustrates the type and quantity of waste collected at each centre, while Figure 6 illustrates the quantity collected with the waste oil category removed to show more clearly the other categories of hazardous waste collected.

Approximately 102 tonnes of waste engine and hydraulic oil<sup>6</sup> was collected; Wexford had the greatest weight collected at 19 tonnes, with Waterford next at 14 tonnes; Dublin and Kilkenny had 13 tonnes each, Cork 9 tonnes, Limerick, Cavan and Donegal approximately 6 tonnes each and Mayo 3 tonnes.

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5 Only six farmers accounted for approx. 70% of the waste oil collected.

6 All tonnages for the main waste types, i.e., oil, pesticides, waste paints, veterinary medicines, contaminated empty containers, oil filters, corrosives and other hazardous waste, are rounded to the nearest tonne.

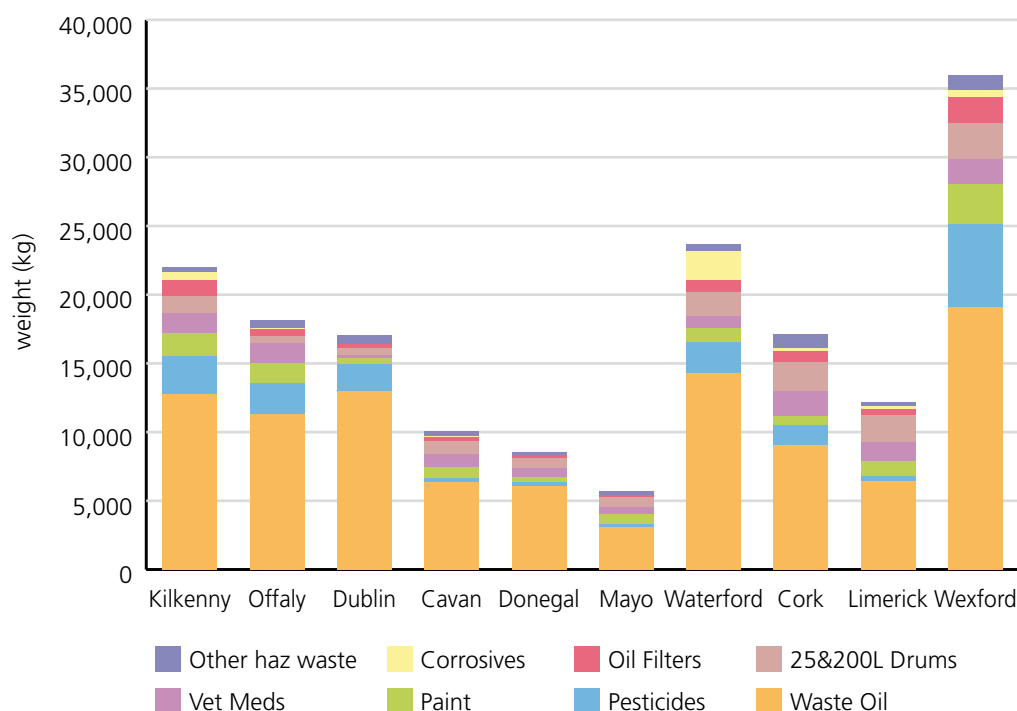


FIGURE 5: TYPE AND QUANTITY (KG) OF HAZARDOUS WASTE COLLECTED AT THE 10 CENTRES

Approximately 18 tonnes of pesticides was collected; Wexford had the greatest weight collected at 6 tonnes, with Kilkenny at approximately 3 tonnes, Waterford, Offaly and Dublin at around 2 tonnes each, Cork at 1.5 tonnes, and the remaining counties has less than 400kg per collection. A significant quantity of highly toxic pesticides classified as persistent organic pollutants (POPs) - approximately 360 kg – was also collected.

Approximately 12 tonnes of waste paints, including water, solvent and lead based was collected over the 10 bring centres. A significant quantity was water based and therefore not deemed to be hazardous waste; however, given the operational constraints of the bring centres, the waste paints were not segregated between hazardous and non-hazardous waste. Farmers were advised of this but many decided to avail of the services on the day.

Just over 11 tonnes of waste veterinary medicine, syringes and needles was collected. Approximately 2 tonnes was collected in both Cork and Wexford; around 1.5 tonnes in Limerick, Offaly and Kilkenny, 0.9 tonnes in Cavan; 0.8 tonnes in Waterford, 0.7tonnes in Donegal, 0.5 tonnes in Mayo, and 0.2 tonnes in Dublin.

Over 13 tonnes of contaminated plastic and metal containers was collected. These were mixed and varied in capacity: 1litre, 5 litre, 10 litre, 20 litre, 25 litre and 220 litre. All containers had some level of residue contamination such as pesticides, veterinary medicines, oil or detergents. Approximately 2.7 tonnes was collected in Wexford, 2.2 tonnes in Cork, 2 tonnes in Limerick, 1.8 tonnes in Waterford and 1.3 tonnes in Kilkenny. Less than 1 tonne was collected in the remaining centres.



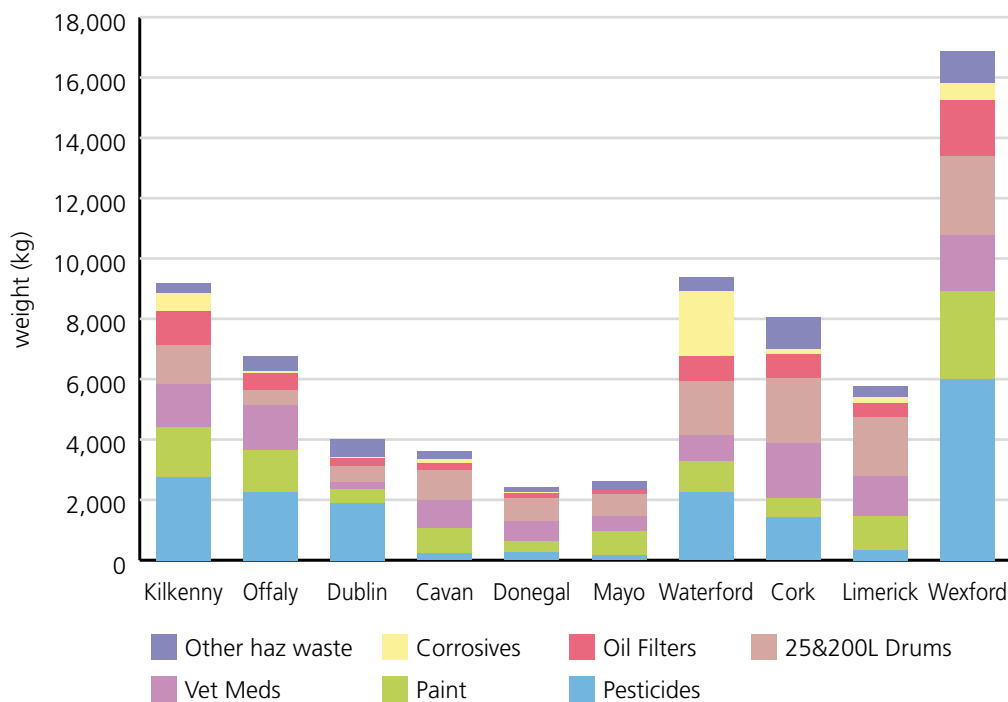


FIGURE 6: TYPE AND QUANTITY (KG) OF HAZARDOUS WASTE COLLECTED AT 10 CENTRES (EXCLUDING WASTE OIL)

Over 6.5 tonnes of waste oil filters was collected in total. 1.8 tonnes was collected in Wexford and 1.2 tonnes was collected in Kilkenny. Nearly 4 tonnes of corrosives such as acids and bases was collected. Over 2 tonnes of this originated from one farm and was brought to the centre in Waterford.

## Pesticides

In relation to the 17.5 tonnes of pesticides collected many are extremely toxic to both human health and the environment. For example in 2014, 370 kg of the pesticides collected are classified as POPs. POPs are a group of toxic chemical that persist in the environment, bioaccumulate in the food chain and can be transported long distances, mainly by water and air<sup>7</sup>. While the use of POPs is no longer permitted with many of them being banned since 1981, the 370 kg collected is a significant quantity. The POPs collected included DDT, lindane (gamma – HCH), dieldrin and endosulfan, which were used as insecticides and are very toxic. It is likely that this figure of 370kg is an under estimation of the actual quantity collected over the 10 centres.

So hazardous are these chemical that, for example, if two 5 litre containers of 25% concentrate DDT accidentally spilled into the daily Dublin city water supply, it would make this supply unsafe for drinking for 50 days (without any dilution). Or, for example, if only one of these 5 litre container accidentally spilled into the reservoir at Poulaphouca, Co. Wicklow it would pollute the reservoir twice over and destroy this freshwater ecosystem.

The condition of many of the older containers was very poor and demonstrates the length of time that these pesticides have been stored on farms (20 to 30 years). This increases the urgency of their removal from farmyards and their destruction. Typical example of the deleterious condition of many of the POPs containers collected during the farm hazardous waste collections are shown below.



## Waste electrical and electronic equipment (WEEE) and batteries

Waste electrical and electronic equipment (EEE) often contains hazardous components and substances which can be damaging to the environment and have adverse effects on human health. For example, fluorescent tubes contain mercury. Asbestos has been used in older appliances such as electric coffee pots, toasters and irons. Fluids that are typically found in heating and cooling appliances can contain ozone depleting substances particularly fridges 10 to 15 years old. Some appliances can contain explosive gases such as ammonia. Lead and other hazardous substances can be released from TV/computer monitor screens if these are damaged or cracked. Lead acid batteries are typically used in tractor and fences and there are many documented cases of livestock deaths as a result of lead poisoning due to the ingestion of chemicals from these batteries.

7 Recognising the need to protect human health and the environment from POPs the global Stockholm Convention on POPs was adopted and entered into force in 2004. In November 2010 Ireland became a party to the convention, which includes the requirement to control POPs by banning their use, restricting production and implementing measures to reduce or eliminate their release.

In total 77.8 tonnes of WEEE and batteries was collected at the 10 bring centres, of which over 55 tonnes was WEEE and 22 tonnes was batteries. The number of farmers who used the centres to dispose of WEEE and batteries was recorded at 1,476. Table 5 provides a summary of the type and quantities of WEEE and batteries collected.



**Table 5: Type and quantity (kg) of WEEE and batteries collected**

Location	WEEE (kg)				Batteries (kg)			Totals (kg)	No. of farmers
	FL Tubes	Large HH appliances	Mixed WEEE	TV/ Computer monitors	Automotive	Fence	Portable		
Kilkenny	38	2,819	2,598	1,430	3,164	2,001	54	12,104	220
Offaly	39	1,249	1,594	735	923	1,026	80	5,646	123
Dublin	0	760	470	752	371	788	531	3,672	23
Cavan	20	4,240	3,230	3,500	325	680	454	12,449	218
Donegal	44	1,056	905	1,917	626	1,010	6	5,564	107
Mayo	24	1,286	1,596	1,384	1,819	650	92	6,851	134
Waterford	18	413	938	680	200	560	50	2,859	47
Cork (Kanturk)	53	1,743	1,903	1,340	1,394	429	92	6,954	137
Limerick	105	5,050	2,085	3,715	324	686	600	12,565	167
Wexford	38	2,084	1,980	1,470	2,139	1,288	115	9,114	300
<b>Totals</b>	<b>379</b>	<b>20,700</b>	<b>17,299</b>	<b>16,923</b>	<b>11,285</b>	<b>9,118</b>	<b>2,074</b>	<b>77,778</b>	<b>1,476</b>

WEEE collected included large household appliances such as fridges, freezers, washing machines and cookers; mixed WEEE such as kettles, power drills, hedge trimmers; and TV and computer monitors. The batteries collected included over 11 tonnes of car and tractor batteries, over 9 tonnes of fence batteries and over 2 tonnes of small portable batteries. Figure 7 and 8 show the type and quantity of WEEE and batteries collected at the 10 bring centres in kilograms and in percentages.

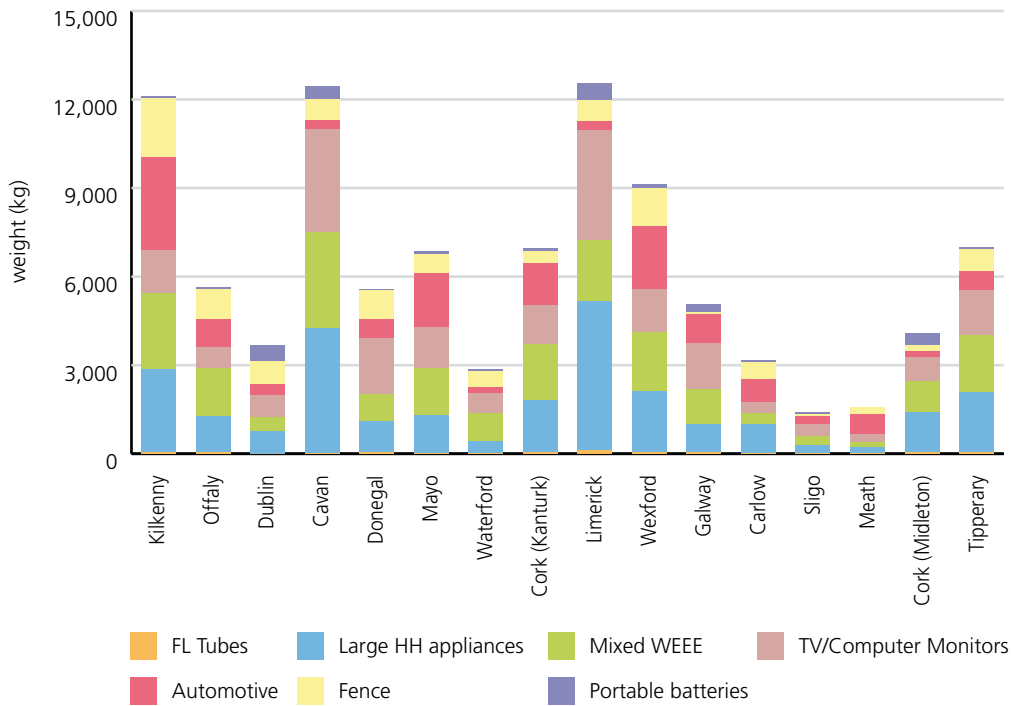


FIGURE 7: TYPE AND QUANTITY OF WEEE AND BATTERIES (KG) PER CENTRE

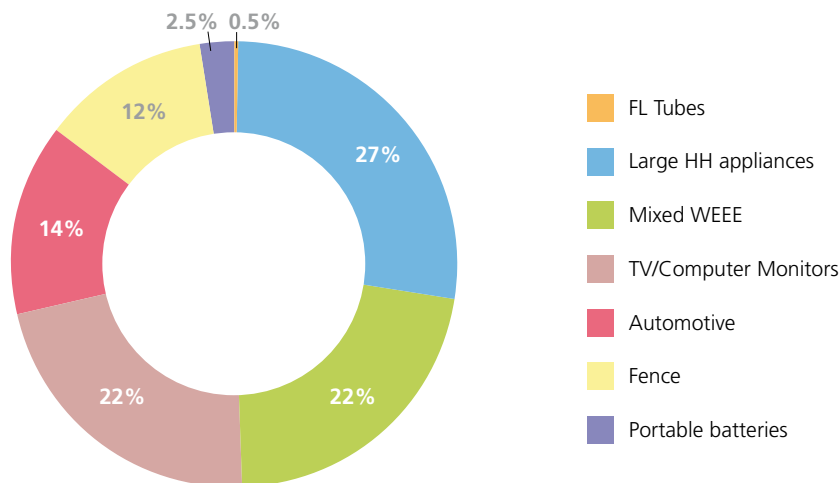


FIGURE 8: TYPE AND QUANTITY OF WEEE AND BATTERIES (%)

Over 12 tonnes of WEEE and batteries per centre were collected in Limerick, Cavan and Kilkenny. Over 9 tonnes was collected in Wexford, 7 tonnes in both Cork and Mayo, 5.5 tonnes in Mayo and Offaly, nearly 4 tonnes in Dublin and 3 tonnes in Waterford. The average quantity of WEEE and batteries recycled per farmers was 53 kg. Dublin had the largest quantity per farmers at 160 kg, followed by Limerick at 75 kg, between 50 to 60 kg was recycled by farmers from Waterford, Cavan, Kilkenny, Donegal, Mayo, and Cork; and 30 kg by Wexford farmers.

Overall, the quantity of WEEE and batteries collected is significant and possibly indicates that the farming community is unaware of the existing collection regime that is funded by the producers of these products and has been in place since 2005 for the environmentally sound management of WEEE and batteries. It also reflects that on most farms, space for the storage of these bulky items is not an issue. Farmers can bring their waste batteries back to where they purchased the batteries from, for recycling free of charge. No new purchase of batteries is required to avail of this recycling. WEEE can be brought back to the retailer free of charge when purchasing a replacement item.





## Section 4

# CONCLUDING COMMENTS

The 2014 farm hazardous waste campaign has confirmed that there are substantial quantities of farm hazardous waste on farms (both legacy and current) which poses a potential risk to farmers, their livestock and the environment.

The campaign also clearly confirms that farmers want to manage these wastes in an appropriate manner as evident in their participation in the collections in such large numbers and contributing financially to the safe recovery and disposal of these wastes.

Over 170 tonnes farm hazardous wastes; 55 tonnes of WEEE (which contains hazardous components) and 22 tonnes of batteries has been removed out of the Irish environment during a five week period in 2014. The farm hazardous waste collections of 2013 and 2014 combined probably represent the largest ever voluntary bulk removal of highly toxic pollutants out of the Irish environment in such a concentrated period of time. The initiative also clearly demonstrates the benefits and added value of inter-agency collaboration and co-operation, and active and voluntary farmer participation.

The farm hazardous waste campaign has clearly identified the need for a suitable and affordable national scheme for the management of farm hazardous waste. The relevant Government Departments and their agencies, the farming industry and farming organisations are currently working together to ensure that such a national scheme is established. Further analysis and recommendations in relation to this will be included in the forthcoming Synthesis Report on the Farm Hazardous Waste Collections 2013-2014 (in-press).



