



Waste Recovery and Recycling in Ireland

– 20 Years of Progress

Conor Walsh, IWMA Secretary

Waste Day
Tallinn, Estonia
22nd November 2017

Presentation Covers:

1. IWMA Members and Services
2. Ireland in the 1990s
3. Developments in Waste Collection over 20 years
4. Ireland's Current Performance in Waste Management
5. Likely Future Management of MSW in Ireland
6. Development of Waste Recovery Infrastructure
7. Producer Responsibility Schemes (WEEE Ireland and REPAK)

IWMA Members – Non Hazardous



Patrick Logan & Sons



IWMA Members –Hazardous



Our Service

IWMA Members:

- ▶ Employ **4,287** people directly.
- ▶ Recover more than **80%** of the waste we collect.
- ▶ Collect **845 Kt/a** of C&I wastes (76% of total)
- ▶ Collect **170 Kt/a** of C&D waste.
- ▶ Collect and Manage **266Kt/a** hazardous waste.
- ▶ Service **874,000** houses (c.73% of market)
- ▶ Collect **1.02 tonnes** per household (**895Kt** total)
- ▶ Provide Recycling (Green or Blue) Bins to **all** customers
- ▶ Provide Organic (Brown) bins to **425,000** customers (c.50%) and growing



Ireland in the 1990s

Ireland in the 1990s

The economy was starting to grow strongly.....

- Development of the International Financial Services Centre in Dublin during the 1990s



Ireland in the 1990s

Peace came to Northern Ireland.....Good Friday Agreement signed in 1998



Ireland in the 1990s

We had a good football team.....



Ireland in the 1990s

Success at the Eurovision Song Contest.....4 wins in the 1990s



Waste Management in Ireland in the 1990s

Waste Management in Ireland in the 1990s

Disposed in poor standard landfills in Ireland in 1995 :

- ▶ 84.7% of commercial waste and
- ▶ 95.7% of household waste



Waste Management in Ireland in the 1990s

Litter Problem – plastic bags and street litter :



Waste Management in Ireland in the 1990s

Bin men strike in 1986 and again in 1997.



Waste Management in Ireland in the 1990s

Illegal Dumping was Rampant. 88 illegal dumps in one county – Wicklow

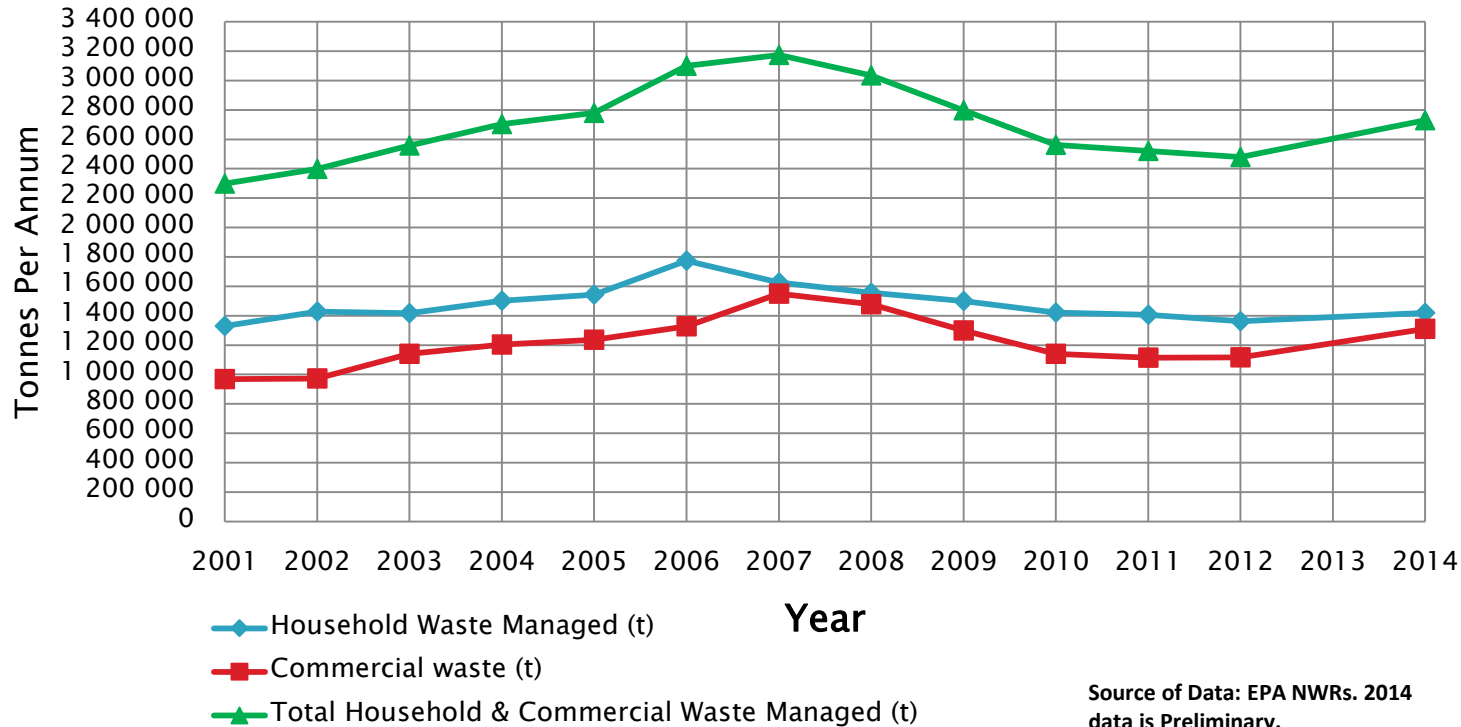


Key Developments in Waste Collection in Ireland (1)

- ▶ **1970s** – Local Authorities (LAs) were collecting municipal waste for free. Private companies collecting commercial & industrial and C&D wastes for a charge.
- ▶ **1978** – Local taxes were abolished.
- ▶ **1980s & 1990s** – Local authorities withdraw from many rural areas and encourage private companies to collect household waste and to charge directly for the service.
- ▶ **1990s** – Local authorities start charging directly for waste collection in many areas . Pressure on LAs to charge the full cost (Polluter Pays Principle) so prices rise.
- ▶ **From 2006** – Private companies go head to head in direct competition with LAs for household customers and gain significant customer numbers as their prices are lower.
- ▶ **2007 to 2012** – Almost all LAs sell their waste collection businesses to private companies as they are considered unsustainable.
- ▶ **2011** – New policy for competitive tendering for household waste collection is introduced by Government – This was strongly opposed by the IWMA and was dropped in July 2012 with the publication of the latest waste policy document “*A Resource Opportunity*”.

MSW Growth in Ireland

Household and Commercial Waste Managed in Ireland 2001–2014



Household Waste Collection Companies in Ireland

	Company	Household Customers	Areas of Operation		Company	Household Customers	Areas of Operation
1	Panda / Greenstar	224,000	East and South plus Sligo	21	McGrath Industrial Waste	8,000	Mayo
2	Greyhound	125,000	Dublin	22	Donegal Waste	7,900	Donegal
3	BnM / AES	106,000	Midlands, Kildare, Meath, Wexford	23	Clonmel Waste	7,000	Tipperary
4	Country Clean	95,000	Cork	24	Logan	7,000	Donegal
5	Oxygen	65,000	Greater Dublin Area, Midlands, Waterford	25	Higgins	5,000	Kerry
6	Barna	64,000	Connaught	26	Walsh Waste	5,000	Galway
7	Thorntons Recycling	60,000	Greater Dublin Area	27	Moran's Refuse	5,000	Galway
8	City Bin Company	60,000	Galway and Dublin	28	Green Energy	5,000	Dublin
9	Wiser Bins	50,000	Cork	29	Wilton	5,000	Cavan
10	Mr Binman	35,000	Munster	30	Stanley Bourke	4,600	Mayo
11	Clean Ireland	30,000	Clare & Limerick	31	Derry White Skip hire	4,000	Limerick
12	KWD	25,000	Kerry	32	Ballinrobe Waste	4,000	Mayo
13	Mulleady	20,000	Longford, Westmeath	33	Sharkey	3,700	Donegal
14	Ray Whelan	20,000	Carlow	34	Gary Loftus	3,000	Mayo
15	Allied	16,000	Westmeath, Meath, Kildare	35	DM Waste	3,000	Donegal
16	Ryan Brothers	16,000	Tipperary	36	Ecological Waste Management	2,500	Louth
17	McElvaney	15,000	Monaghan	37	Ted O'Donoghue	2,000	Cork
18	Doheny	11,000	Kilkenny	38	Sweeney Recycling	1,500	Mayo
19	Ferry's Refuse	10,000	Donegal	39 to 64	25 Others	58,000	Nationwide
20	WERS	9,000	Galway		Total	1,197,200	

3 Bin System

WHAT CAN YOU PUT INTO YOUR BINS?



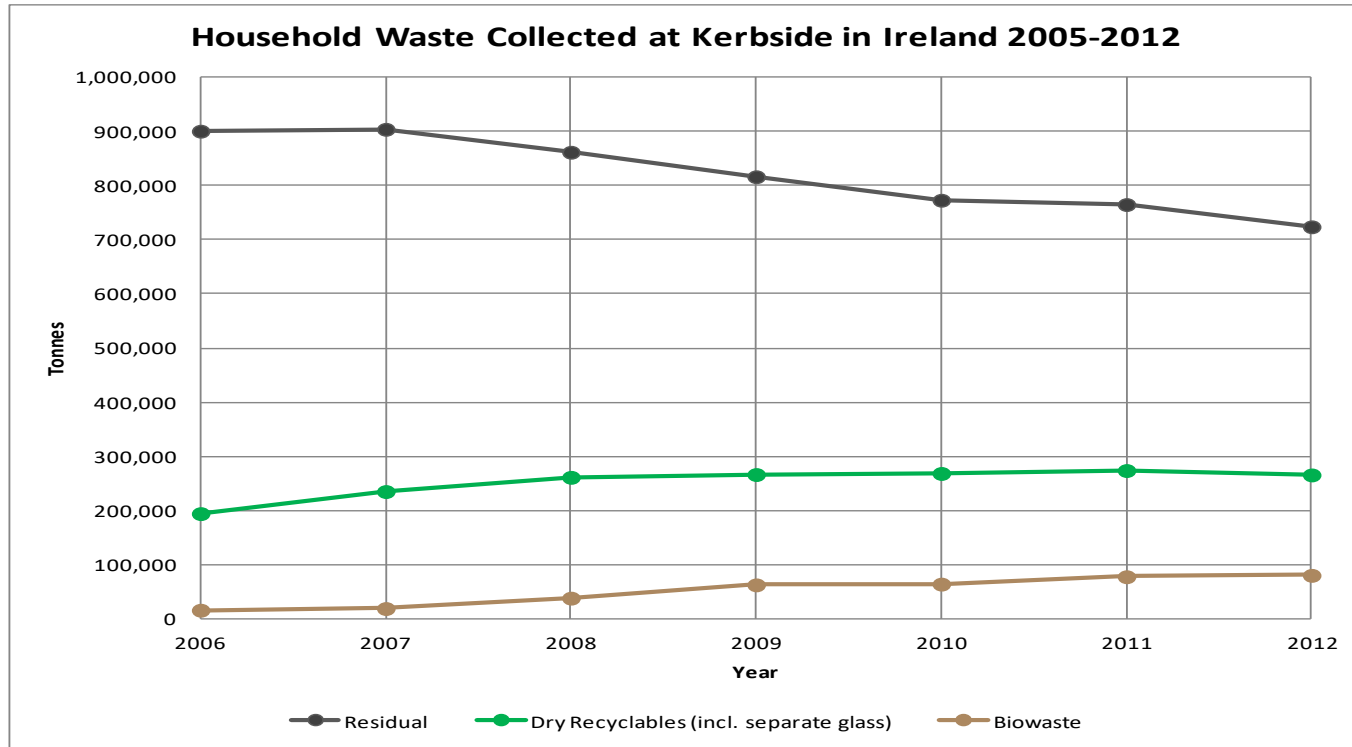
Household Waste Collection in Ireland

Innovative Waste Collection:

- ▶ Every bin lift is weighed – very good data
- ▶ Customers informed monthly of weights collected in each bin
- ▶ Separate Glass Collections in some areas (4th bin/box)
- ▶ Good communications with customers via text messages and emails
- ▶ Multi-compartmental vehicles in some rural areas
- ▶ Camera system used in some areas to identify contamination in recycling bins
- ▶ Bin-washing service in some areas



Household Waste Collection in Ireland



Ireland's Performance – EU Targets

2012 EPA Data:

- ✓ MSW Recycling = **45%** (2020 target of 50%)
- ✓ Household Waste Generation = **344 kg** per person
- ✓ Packaging Waste Recycling = **74%** (target was 55% by 2011)
- ✓ Packaging Waste Recovery = **87%** (target was 60% by 2011)
- ✓ WEEE Recycling = **7.5 kg/person** (target was 4kg in 2008)
- ✓ Batteries = **28%** collection rate (target was 25% in 2011)
- ✓ Diversion of Biodegradable MSW from Landfill = 2016 target met in 2013
- ✓ C&D Waste Recycling = **97%** (target is 70% by 2020)
- ✓ We also Achieved the individual targets for Packaging, WEEE and Batteries



MSW Management in 2014 & 2015

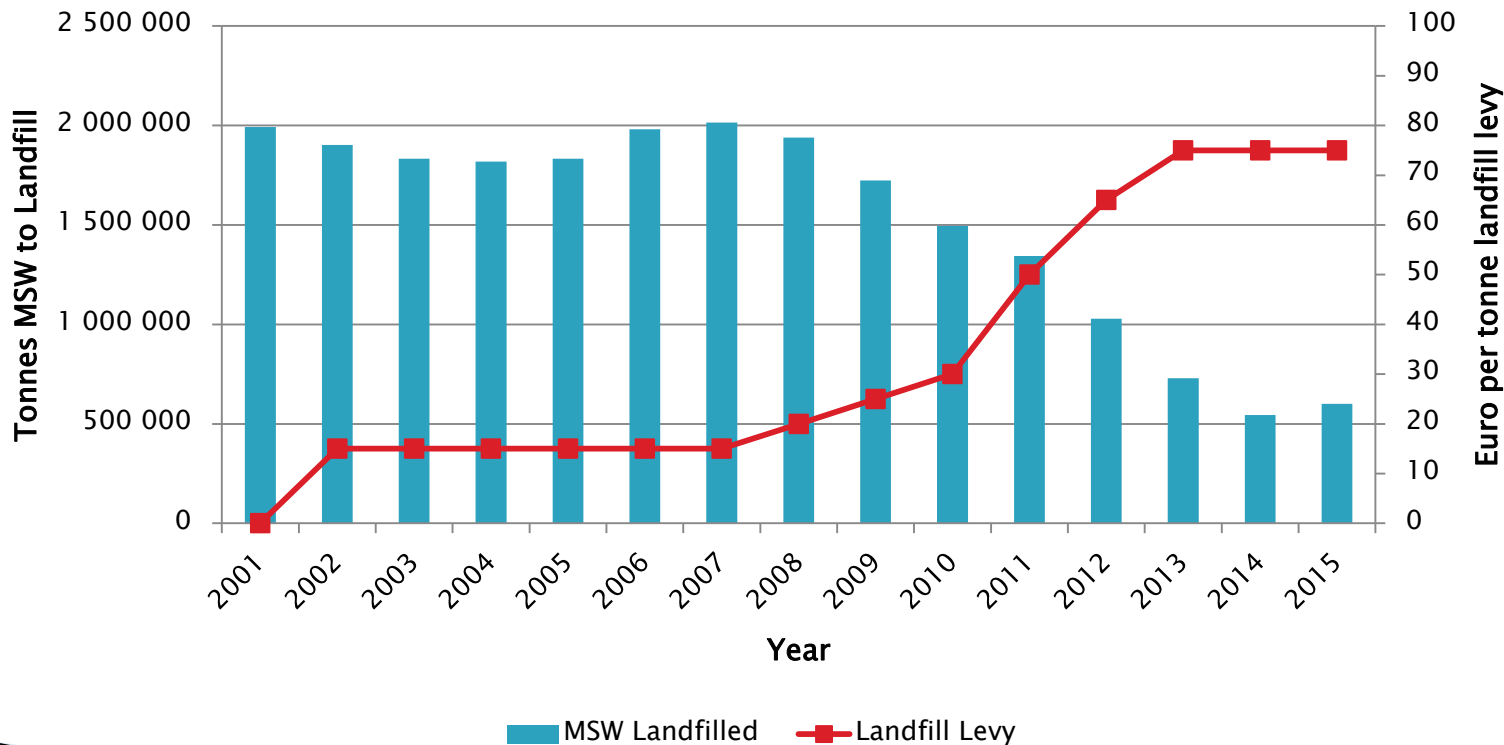
Landfill Disposal in 2014 & 2015 (from AERs)

Site Name	County	2014 Tonnage	2015 Tonnage
Drehid	Kildare	284,930	324,126
Ballynagran	Wicklow	111,437	85,868
Rathroeen	Mayo	47,290	52,332
Powerstown	Carlow	47,230	55,751
Scotch Corner	Monaghan	45,591	28,807
Gortadroma	Limerick	44,749	0
Knockharley	Meath	7,391	54,335
North Kerry	Kerry	4,521	0
Donohill	Tipperary	2,410	0
	Total =	595,549	601,219

Drehid Landfill
Co. Kildare



MSW Landfilled and Landfill Levy Rate 2001 to 2015



MSW Management in 2014

MSW Treatment in 2014 (unofficial IWMA estimate based on AERs & TFS data)

Treatment	2014 Tonnage	%	Comments
Waste to Energy Recovery	914,008	35.5%	from AERs & TFS data
Other Recovery (organic fines)	50,000	1.9%	assumed (based on RDF production)
Landfill Disposal	595,549	23.1%	from AERs
Recycling	1,017,688	39.5%	calculated (total minus disposal & recovery)
Total =	2,577,245	100%	assumed growth of 1.5% per annum from 2012 plus 24Kt from NI.

Millenium Park
Dublin



MSW Management in 2014 & 2015

Waste to Energy in 2014 & 2015 (from AERs & TFS data)

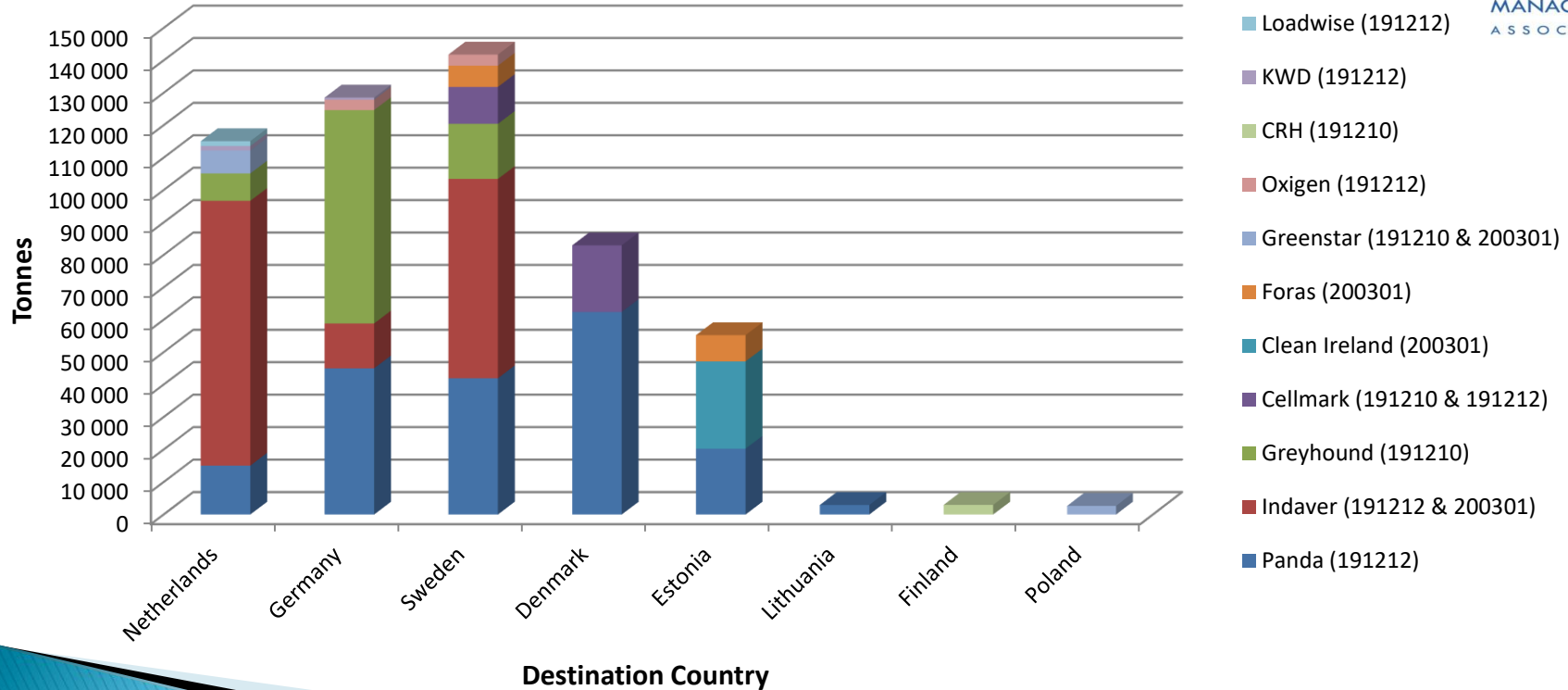
Site Name	County	2014 Tonnage	2015 Tonnage
Carranstown	Meath	226,285	211,034
Cement Kilns	Meath / Cavan	149,881	209,438
Export to Incinerators	Abroad	531,064	529,212
Export to Cement Kilns	Abroad	6,778	2,967
	Total =	914,008	952,651

Carranstown WtE
Co. Meath



MSW Management in 2015

Residual MSW & RDF Exports from Ireland 2015



Likely 2020 Management of MSW in Ireland

Management Route	Tonnage	%	Destination
Recycling (including biowaste)	1,400,000	50%	Biowaste treated in Ireland (north & south). Other recyclables sorted in Ireland with export of paper, plastic, metals, etc.
WtE Incineration in Ireland	830,000	29.6%	Carranstown & Poolbeg Incinerators
WtE SRF use in Ireland	280,000	10%	Cement Kilns in Ireland
Other Recovery (Organic Fines)	50,000	1.8%	Biological Treatment & Landfill after stabilisation
Landfill Disposal	240,000	8.6%	2 or 3 Landfills in Ireland (some may be exported for WtE or managed by new WtE plants in Ireland)
Total =	2,800,000	100%	

Development of Waste Recovery Infrastructure in Ireland

Development of Waste Recovery Infrastructure in Ireland – MRFs

- 9 MRFs accepting Mixed Dry Recyclables
- Size ranges from 30Kt/a to 100Kt/a



Panda MRF Movie.mp4

Development of Waste Recovery Infrastructure in Ireland – Biological Treatment

- 18 Active Composting Plants - Size ranges from 5Kt/a to 40Kt/a
- A few Existing AD Plants <10Kt/a
- 4 Large AD Plants are planned – 60Kt/a to 90Kt/a (1 almost constructed)



Huntstown AD Plant in Dublin 90Kt/a
(Construction Expected February 2018)

Development of Waste Recovery Infrastructure in Ireland – WtE

Dublin Waste to Energy Plant
(Covanta) on line in 2017 – 600Kt/a

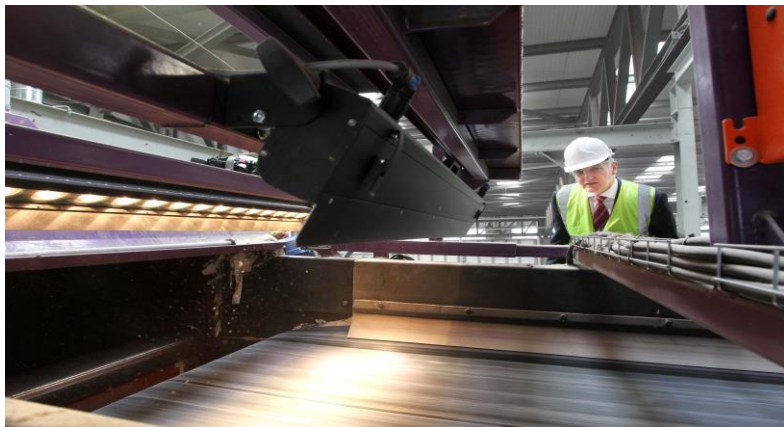


Meath Waste to Energy Plant (Indaver)
on line in 2011 – 230Kt/a



Development of Waste Recovery Infrastructure in Ireland – SRF

- 3 Cement Kilns taking a total of 240Kt/a SRF



Greenstar SRF Production



SRF (Shed 3).mp4

Producer Responsibility Schemes

Packaging Producer Responsibility Scheme

Compliance: Repak v's Self Compliance

European Union (Packaging) Regulations – 2014

- Obligated if turnover is greater than €1 million and you place greater than 10 tonnes of packaging onto ROI market in a given year

You can comply by:

Becoming a member of Repak (2,097 registered)

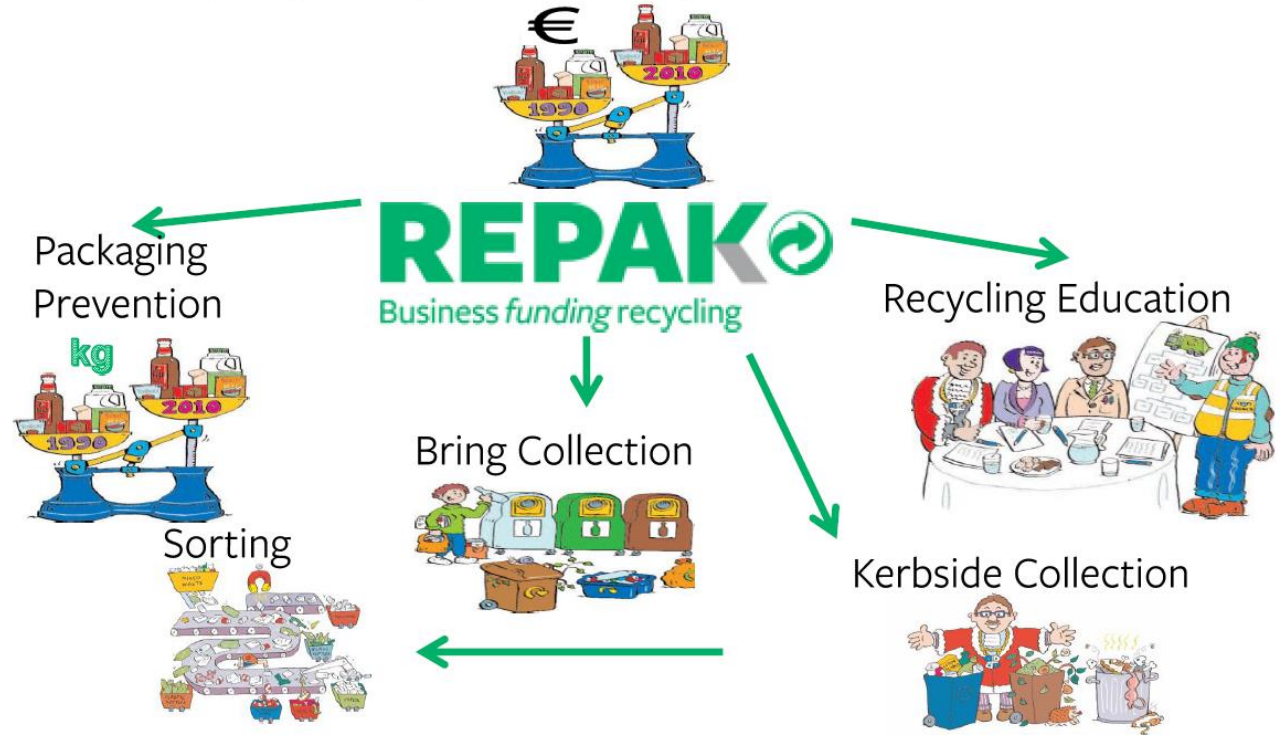
Or

Self-compliance with Local authority (125 registered)

How It Works

Repak a for purpose organisation that supports packaging recycling through the following with our members fees

8



Business Model 2016



Business funding recycling

REPAK®

Cost to Members

Repak fee structure per tonne

Materials Manufacturer

€2.05

Converter

€2.05

Distributor

€2.05

Retailer

€4.10

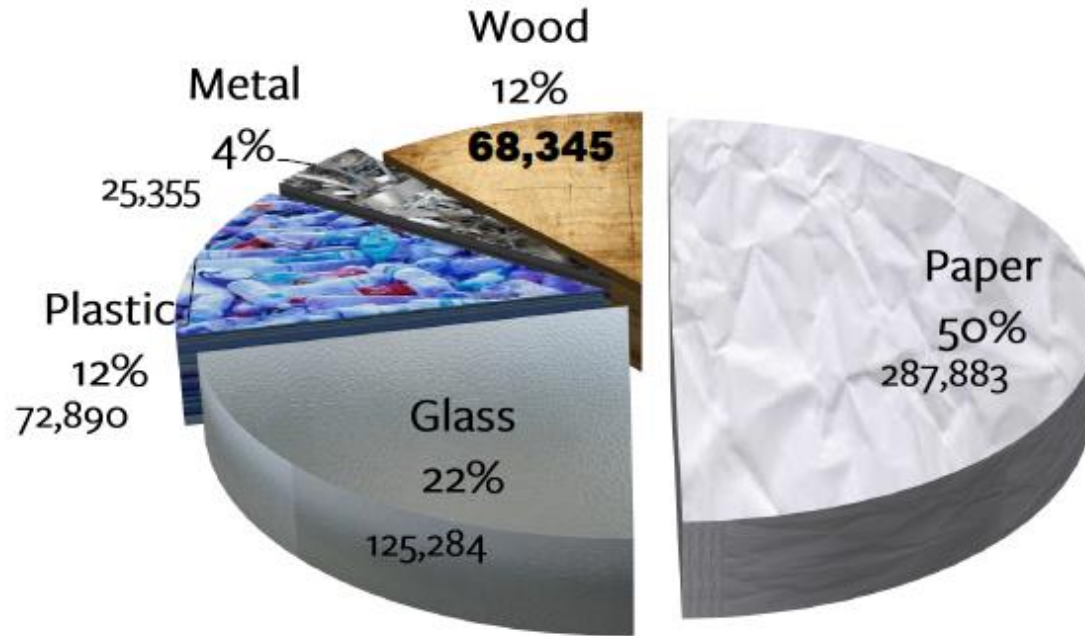
Brand holder/Importer (Material Specific)

Paper	Glass	Alum	Steel	Plastic	Wood	P.Comp	M.Comp
€22.70	€9.20	€83.70	€78.50	€89.16	€10.16	€75.80	€111.50

Repak – some typical fees



Commodities Recycled



Repak Achievements in Partnership Since 1997



Met all EU targets
5th in EU league



90% Recovery
70% Recycling

795,000 tonnes
recovered 2016



10m tonnes
diverted from
landfill



5,000 waste
sector jobs



Circa 250,000
tonnes
saved annually

€410m invested in
recycling

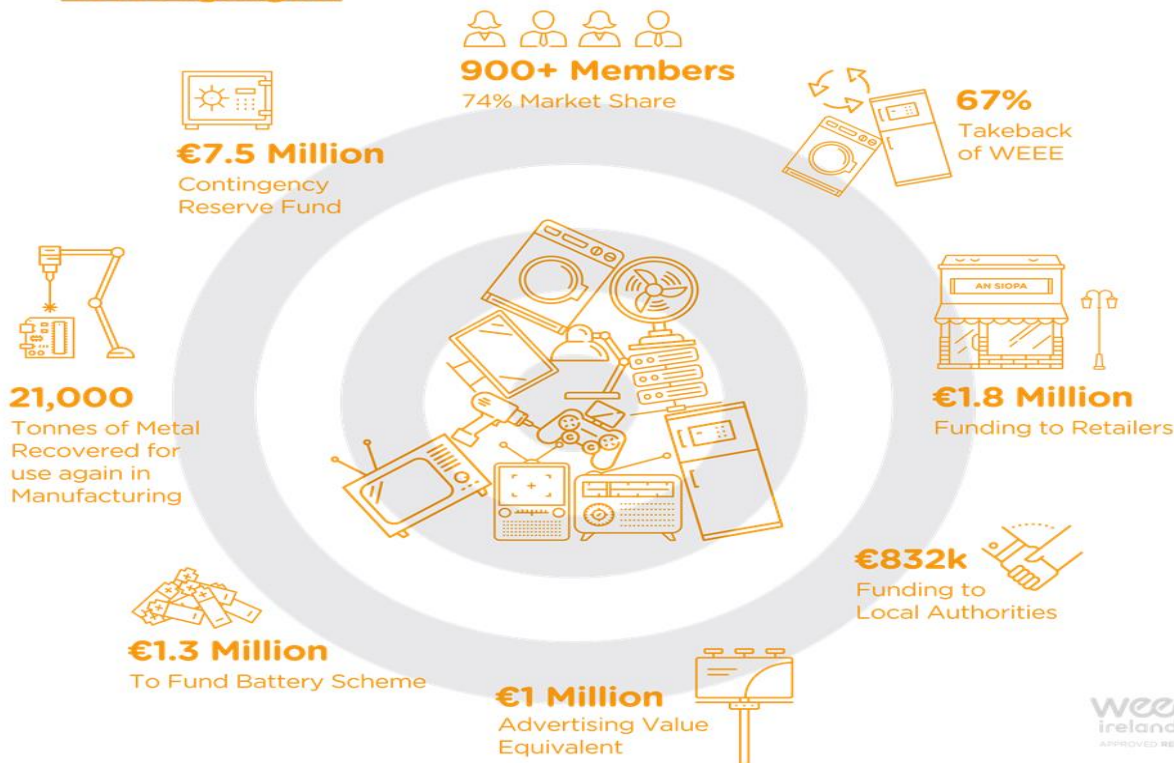


WEEE Ireland



WEEE Ireland

2016 Highlights



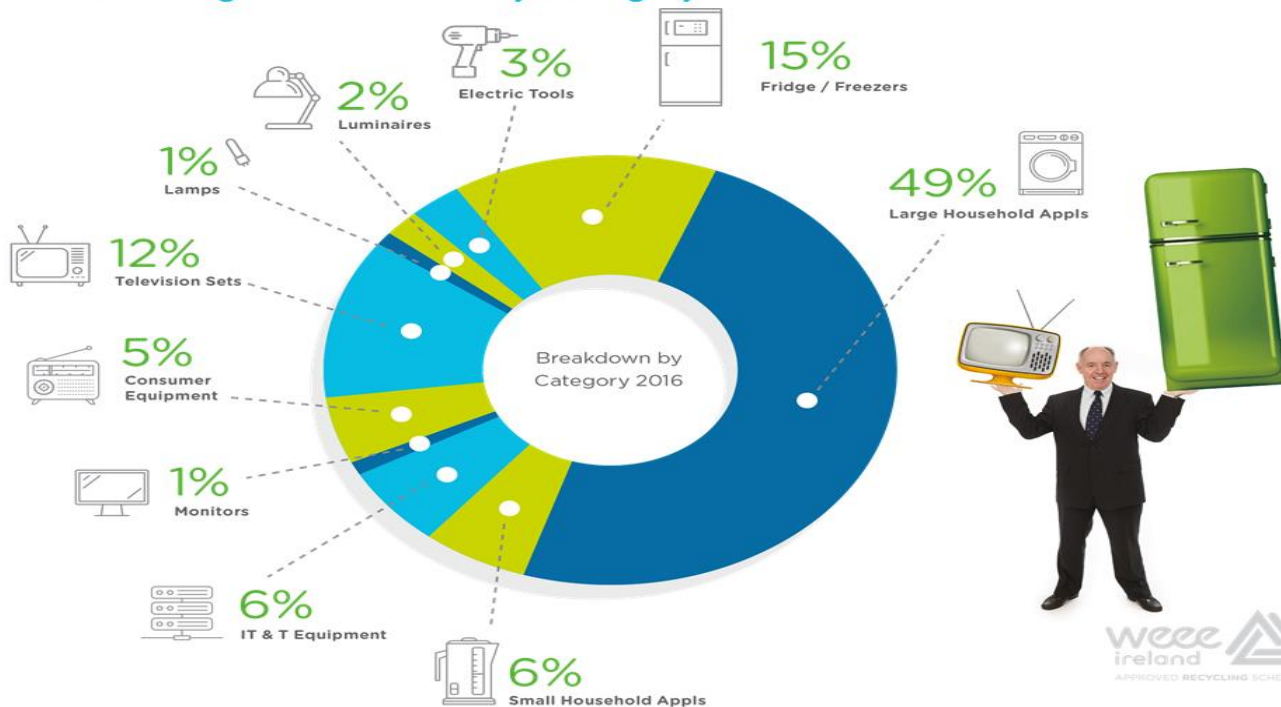
WEEE COLLECTED

Tonnes By WEEE Ireland 2005-2016



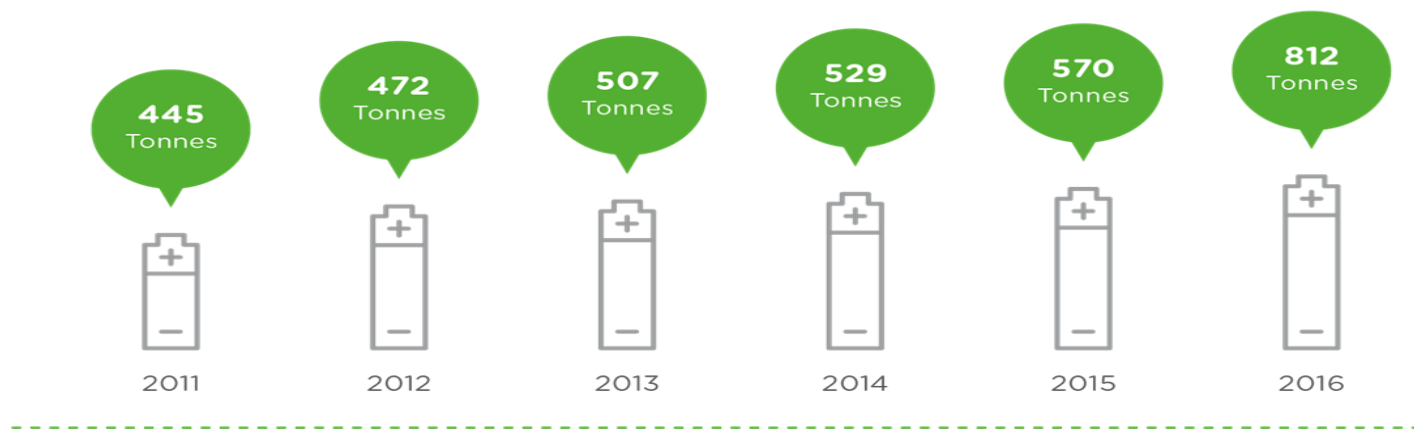
WEEE COLLECTED

Percentage Breakdown By Category



WASTE BATTERIES COLLECTED

Tonnes By WEEE Ireland 2005-2016



Thank You for Listening