

Part 1: ETS modelling update

Apse 21st May 2026

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- Background on ETS
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UK Emissions Trading Scheme

- Replaced the EU Emissions Trading System in 2021 following Brexit.
- Aims to incentivise decarbonisation - currently covers the power sector, energy intensive industries and aviation.
- Due to include incineration from 2028 (or possibly later if align with EU ETS).
- Cap and trade system – participants buy allowances and surrender them annually to cover their GHG emissions.
- No ring fencing of allowances per sector, banking allowed.



Fossil carbon in residual waste

- Plastic packaging – bags & wrapping, bottles, pots, tubs & trays
- Rigid/dense plastic items, such as disposable cutlery, plastic toys, vending cups, seed trays, flowerpots, disposable razors, plastic casing etc.
- Clothing and textiles, including carpets & underlay
- Absorbent hygiene products
- Small electrical items

Fossil carbon – fossil fuel based and adds 'new' carbon to the atmosphere

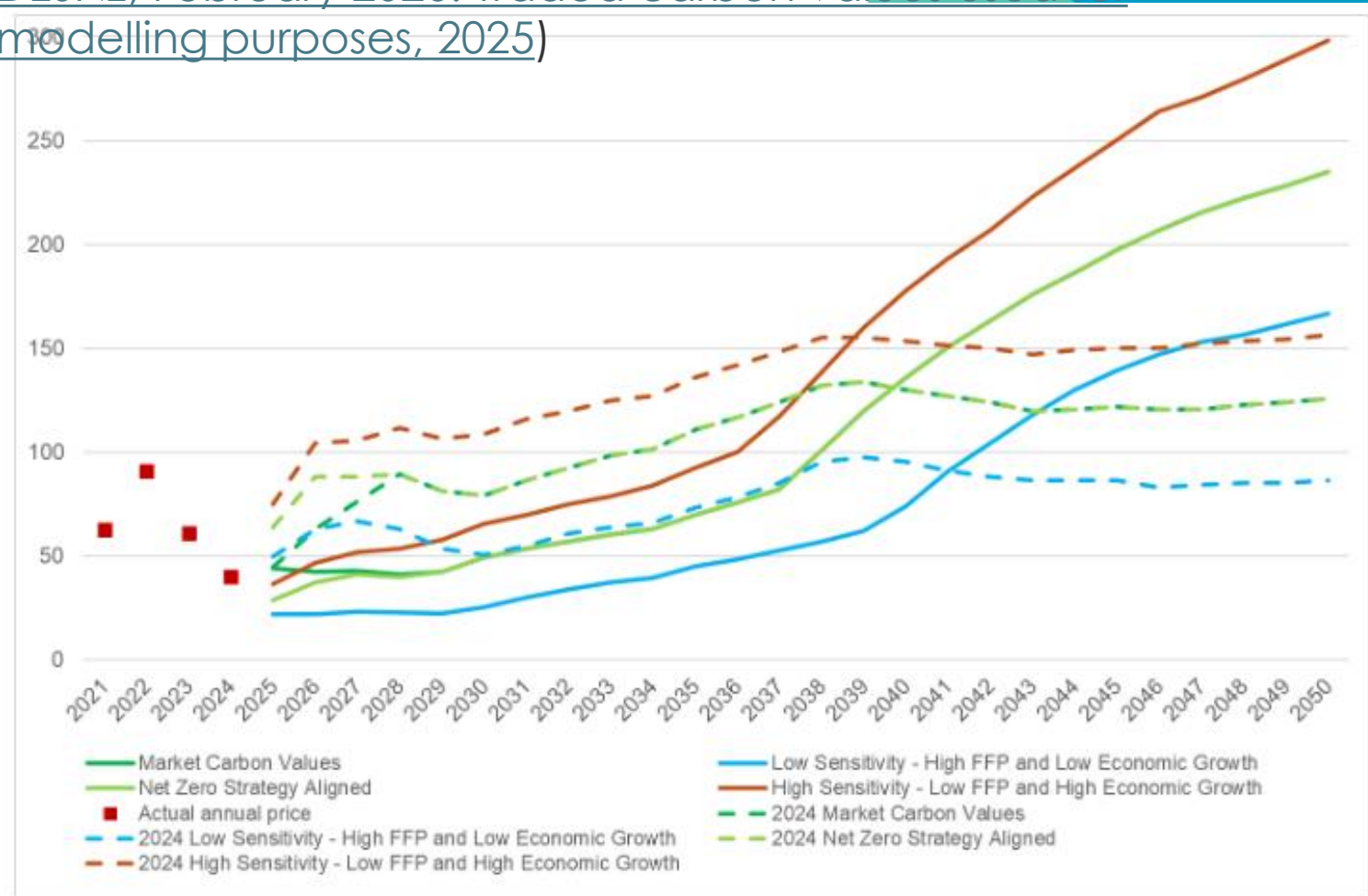
Biogenic carbon - part of the natural carbon cycle, e.g. paper, card, wood, food, garden waste etc.



Implications

- Carbon price – market defined & not sector specific
- Cost-pass-through methodology - TBC
- pEPR payments – accurate representation of ETS cost-pass-through?
- Impact of change-in-law contract clauses
- Implementation date -

Figure - DESNZ 2025 traded carbon values for modelling purposes compared to 2024, £/tCO_{2e} (real 2025) (Source: [DESNZ, February 2026: Traded carbon values used for modelling purposes, 2025](#))



Gather modelling

- Emissions
 - How much fossil carbon from incinerating LA collected residual waste?
 - What are the sources of biggest emissions?
- Costs
 - How much will this cost LAs?
 - How much of these costs should be covered by pEPR?
- Decarbonisation
 - How can LAs decarbonise cost-effectively and with most impact?

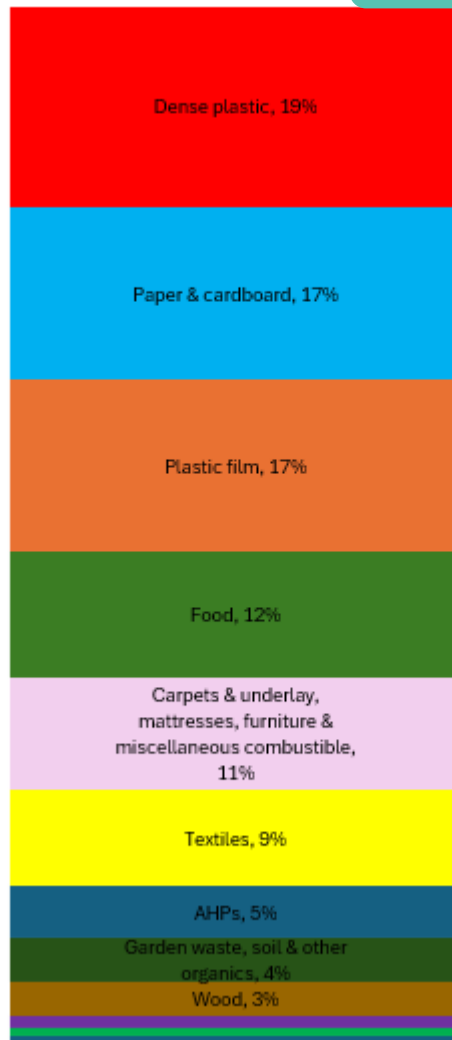


Results - emissions and sources

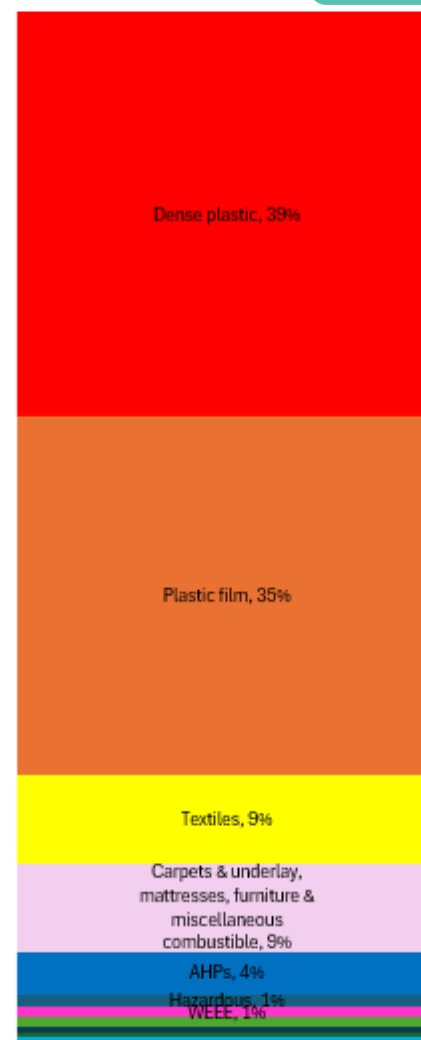
Weight of residual waste - 1.4m tonnes



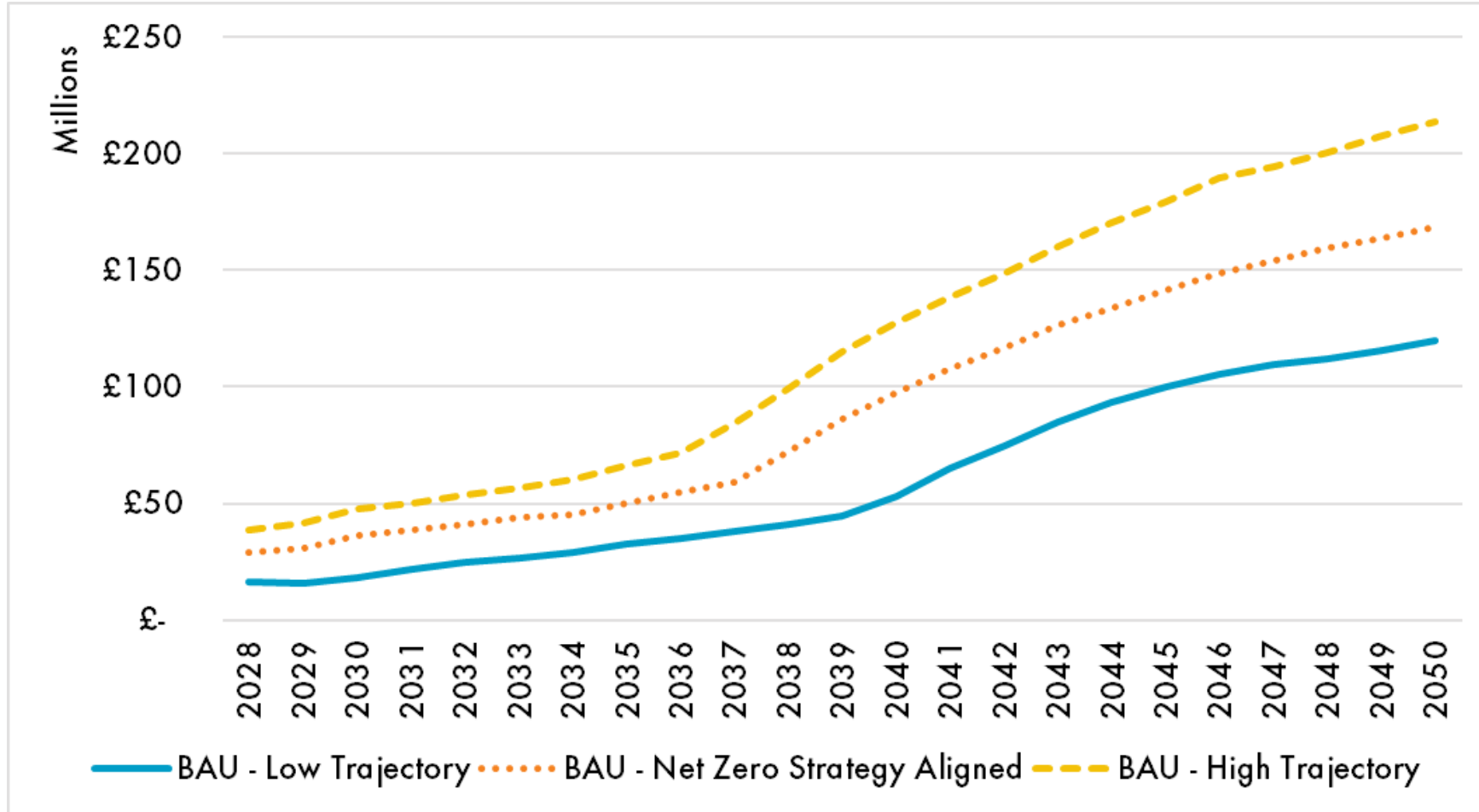
Total carbon emissions at stack 1.5m tonnes CO_{2e}



Fossil carbon emissions at stack 0.72m tonnes CO₂



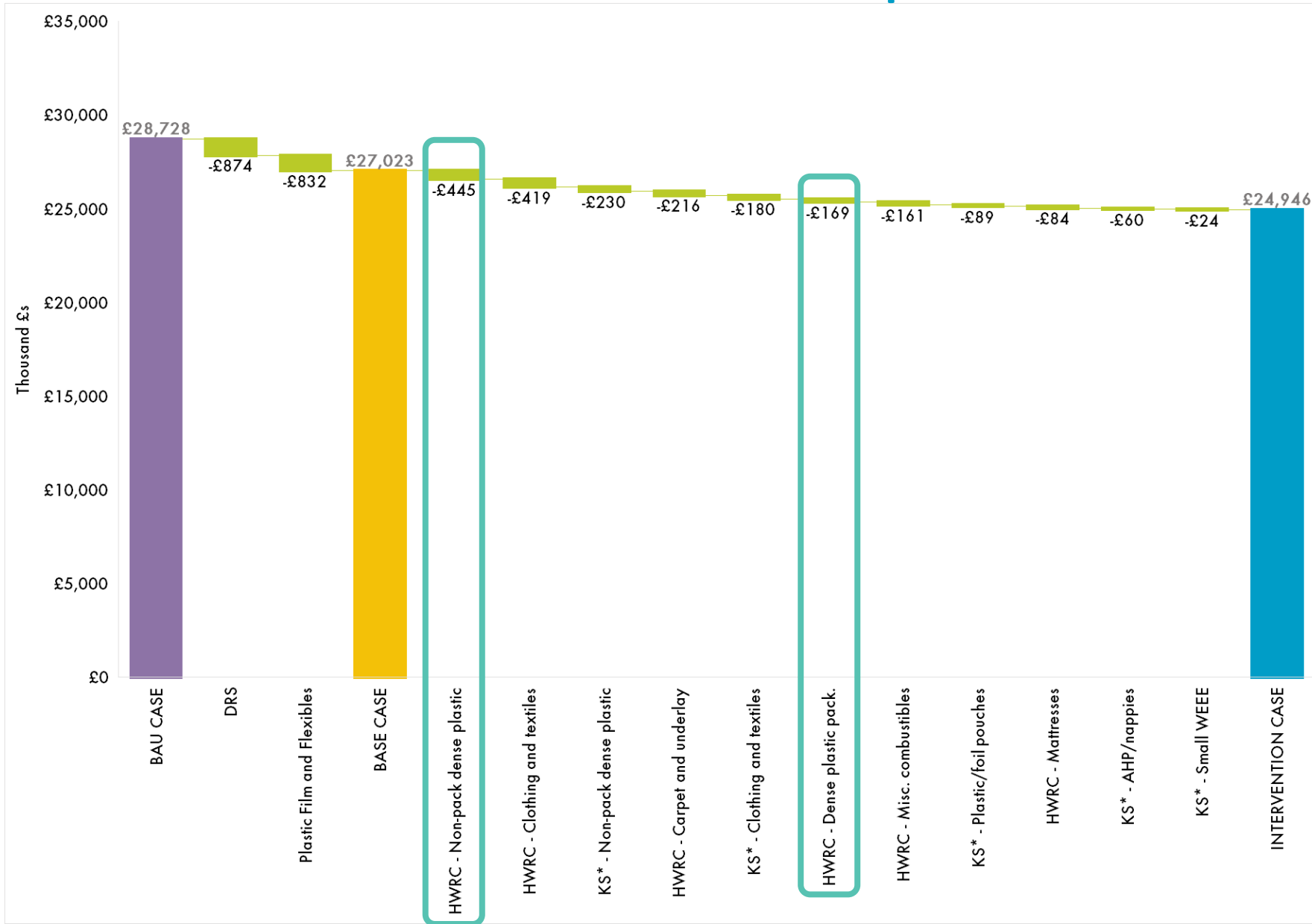
Results – gross costs - Scotland



Mid-line estimate:
 Year 1 - £28.7m
 Year 5 - £40.9m
 Year 10 - £72.5m
 +- 30-40%



Results – decarbonisation options



DRS & plastic film collections – 6%

The rest - 7%

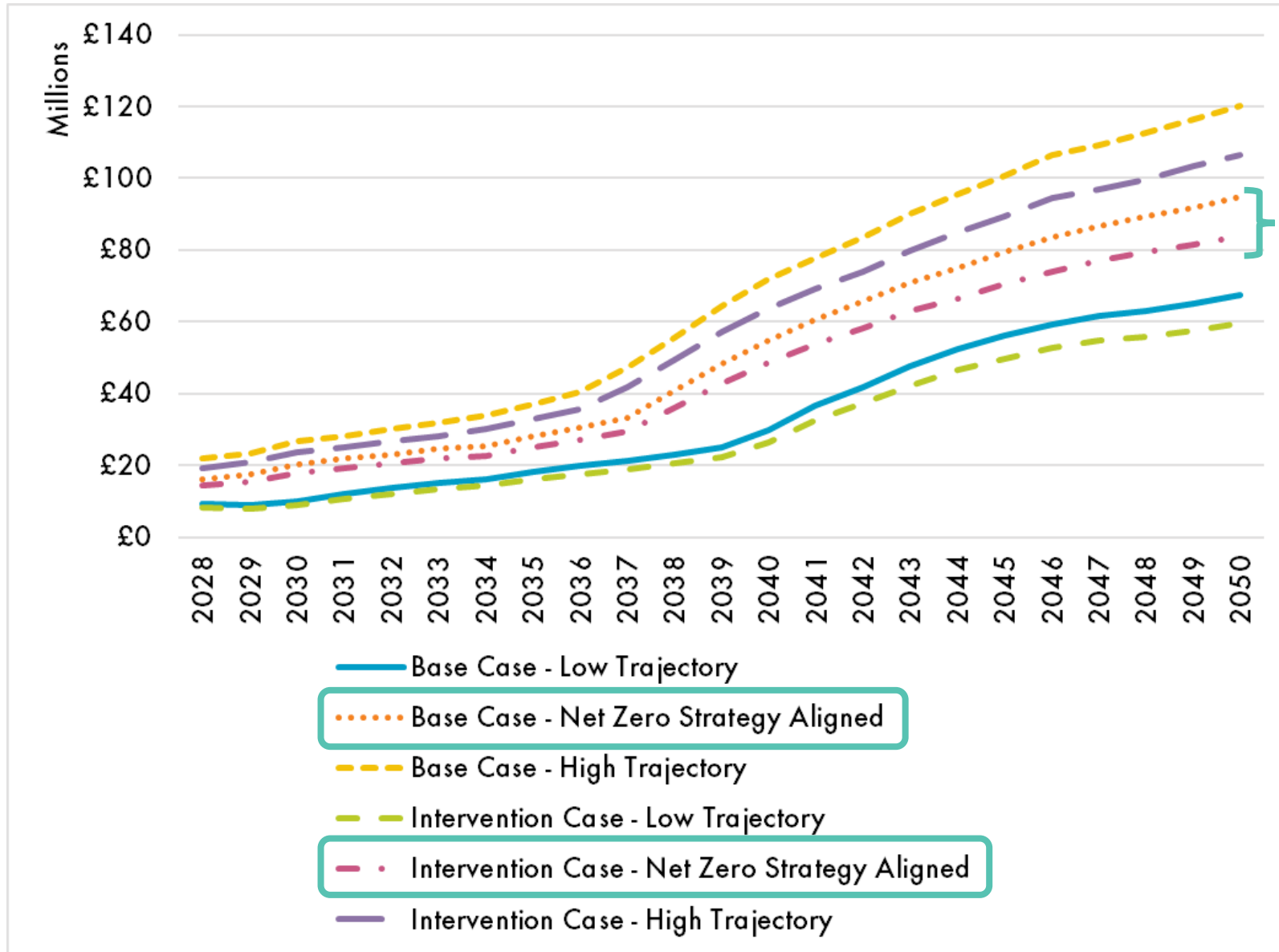


Results – impact of pEPR

- Around 40% of ETS should be covered by LA pEPR payments
- Due to significant proportion of ETS costs from plastic film & flexibles, pots, tubs & trays, and carrier bags



Results – net costs



2028:
£28.7m to £14.3m, most
cost reduction from
pEPR payments



What can LAs do now

1. Ensure you have accurate data
 - Ensure your tonnages are recorded and reported accurately (quantity and source).
 - Update your waste composition data.
 - If using pre-treatment, ask your contractor for data on extraction rates (to use in modelling).
2. Estimate your ETS costs using the ETS LA model – starting point for contract negotiations and pEPR payments.
3. Optimise performance of recycling services (in line with CoP).



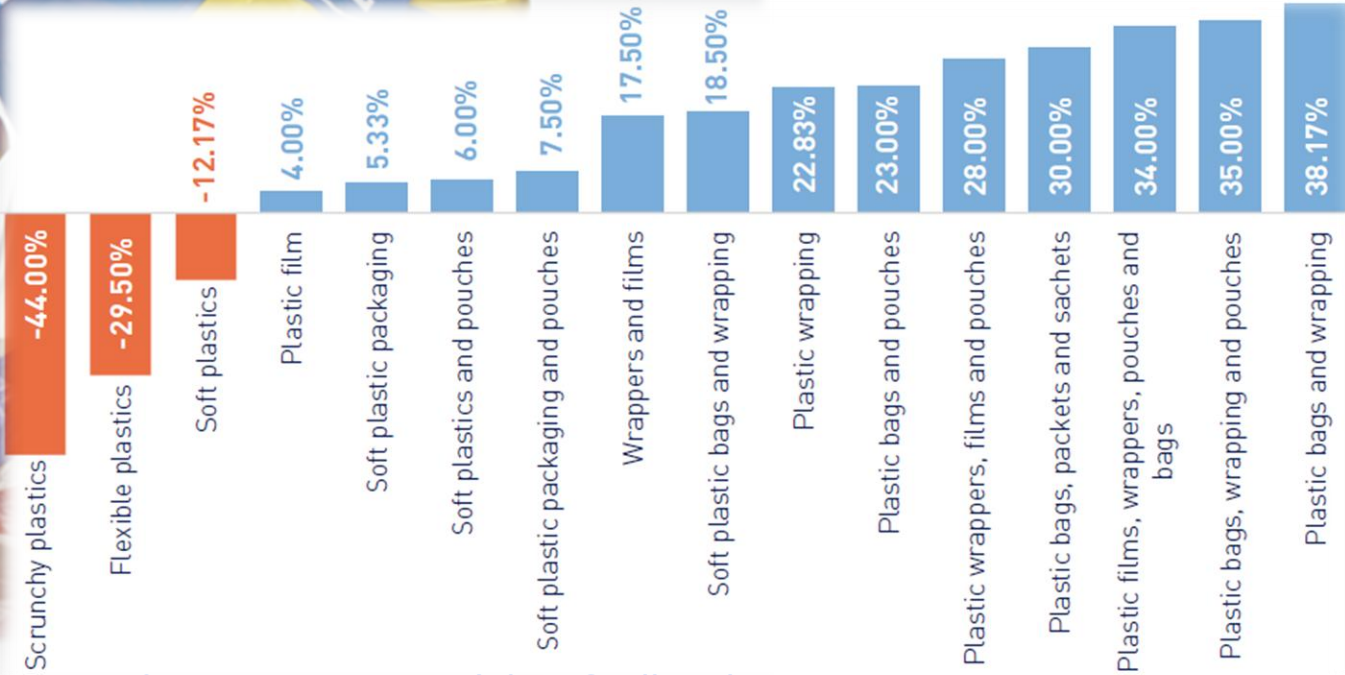
Reflections?



Part 2: Flexible plastics – what we know so far

Apse 21 May 2026

Many names



Source: WRAP/FlexCollect, 2021



Requirements and timescales

- Requirement under pEPR to start collecting plastic film and flexibles **from** 31 March 2027.
 - From businesses – 31 March 2027.
 - From households – voluntary but incentivised start, compulsory when statutory Code of Practice (CoP) comes into force.
- Definition (for plastic film & flexibles from businesses) confirmed in March-26.
- Statutory CoP to confirm requirements for household collections.



It is happening already

- Significant MRF experience in Scotland.
- Fife, Perth & Kinross, Scottish Borders, Glasgow (loose in DMR or with containers stream).
- FlexCollect trials 2022-2024 – English LAs & MRFs, mostly bagged.
- FlexRecycle project – investigates end markets in the UK, report due late 2026.



Definition (in Doc CoP)

“Plastic films and flexible packaging means:

- Polyolefin plastic film packaging and plastic bags which contain a minimum of 90% by weight of mono-polyethylene, mono-polypropylene, or both, including any polyolefin plastic film that has been metallised through vacuum or vapour deposition.

Plastic films and flexible packaging do not include:

- any polyolefin plastic film which contains aluminium foil or paper.
- any plastic which contains any pigment which prevents the item from being near-infrared detectable
- any item which does not measure a minimum of 40mm by 40mm”



Interpretation (Simpler Recycling)

What can I now recycle?

All items should be **clean** and **free of food**.

	<p>All plastic bags carrier bags salad/fruit/vegetable bags frozen food bags bread bags cereal bags flower bags</p>	 <p>Cheese, fish, and meat wrapping</p>
	<p>Confectionary wrappers chocolate sweets biscuits cakes ice cream and chewing gum wrappers</p>	 <p>Outer layer bags and wrapping multipacks toilet and kitchen roll magazine and newspaper wrapping</p>
	<p>Foil lined packaging crisp/snack packets coffee bags</p>	 <p>Plastic film and sleeves removeable film lids plastic sleeves for bottles and jars</p>
		 <p>Bubble wrap and cling film maximum 1m sections</p>
		 <p>Fruit and vegetable net bags</p>

DO NOT recycle:

For the full list of items that can be recycled, please scan the QR code below

- ✘ Pouches, sachets and packets - microwaveable food, baby/pet food, cosmetics, detergent and cleaning
- ✘ Balloons
- ✘ Blister packs, pills, and tablets packaging
- ✘ Compostable or biodegradable bags and wrapping
- ✘ Crisp tubes
- ✘ Disposable gloves or masks
- ✘ Foam or polystyrene of any kind
- ✘ Plastic straws or cutlery
- ✘ Textiles and clothing - put these in a bag at the side of your bin

'Plastic bags and wrapping'



Quantities in Scotland

- Put in household residual waste:
 - around 60,000 tonnes (plastic film packaging & carrier bags)
 - >80,000 tonnes (incl. laminated pouches and bin bags)¹

- How much of this could be collected:
 - Modelling: <7,000 tonnes²
 - FlexCollect trials: Around 8,500 tonnes in 2027, doubling by 2033³
 - **Scottish operations: 11,000-16,000 tonnes (84-120g/hh/week)**⁴

¹ Zero Waste Scotland, 2023: [Household Waste Composition Analysis](#)

² Zero Waste Scotland, 2025: [Introduction of New Materials to Kerbside Waste Collections](#)

³ The Flexible Plastic Fund FlexCollect Project, 2025: [The future of recycling flexible plastic packaging in the UK](#)

⁴ Recycling Improvement Fund monitoring data extrapolated to the whole of Scotland



Collections insights – from trials and operations

- Householders love recycling plastic film & flexibles, it can boost recycling of other materials too.
- Compacts really well – no changes to collections.
- Can be collected bagged or loose – to match MRF capabilities.
- More frequent collections result in higher yields.
- Significantly reduces volume in refuse bins – potential to review collection frequency.
- Gate fees – TBC (varied market, £80+ per tonne in FlexCollect trials).



Bagged or loose

Bagged

- Works with all service types.
- Supply bags to increase participation, avoid litter/contamination & make identification at MRF easier – increased collection costs.
- Minor changes

Loose

- Typically with containers stream, no additional collection cost.
- Takes volume in recycling bin – some hhs might need additional recycling bins.
- MRF sorting capability



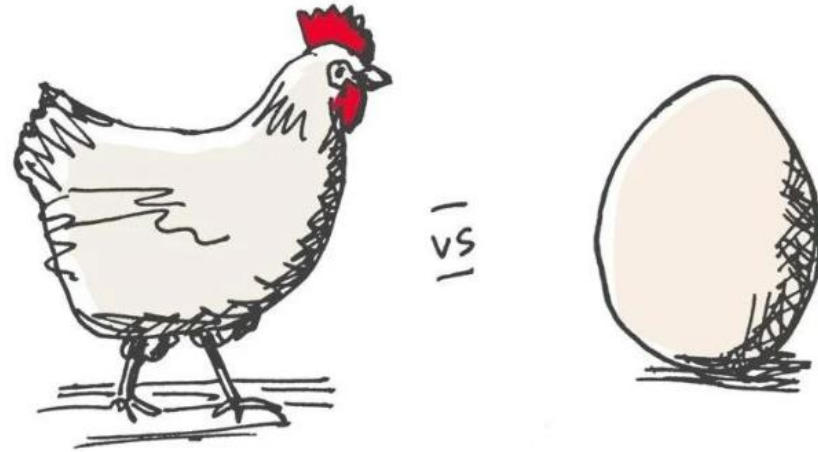
MRF readiness

- Less than half ready or with plans & finance in place.
 - DRS, ETS & pEPR – change to MRF inputs, process and costs.
 - Unlocking uncertainties:
 - Definition – material collected.
 - CoP & collection method – sorting technology choice.
 - Implementation timescales – impact on investment decisions.
 - Short-term LA contracts – funding risk.
- ➔ Start discussions with your MRF operator go.



End markets

- Number of reprocessors, but currently insufficient domestic end market capacity to meet expected demand.
- Volatility of plastic markets.
- Complex material - need for secondary processing between MRFs and reprocessors.
- No investment without feedstock.
- FlexRecycle reporting in late 2026.



Part 3: Discussion

How do we make this happen in Scotland?

