



Improving Recycling performance

Lessons learned from the UK and elsewhere

ALBAN FORSTER

(Director, Infrastructure Europe)

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global **environmental** and **advisory** solutions



CONTENTS

1. OVERVIEW

1.2 Introduction to SLR

2. WHAT LESSONS CAN BE LEARNT FROM EXPERIENCES IN SCOTLAND, WALES AND ENGLAND?

2.1 Background and Scope

2.2 Historical Performance Data

2.3 Policy in Wales

2.4 Policy in Scotland

2.4 Policy in England

3.1 DRIVING BETTER DIVERSION PERFORMANCE

3.1 Key Performance Barriers

3.2 Policy Intervention Impacts

3.3 European Best Practice

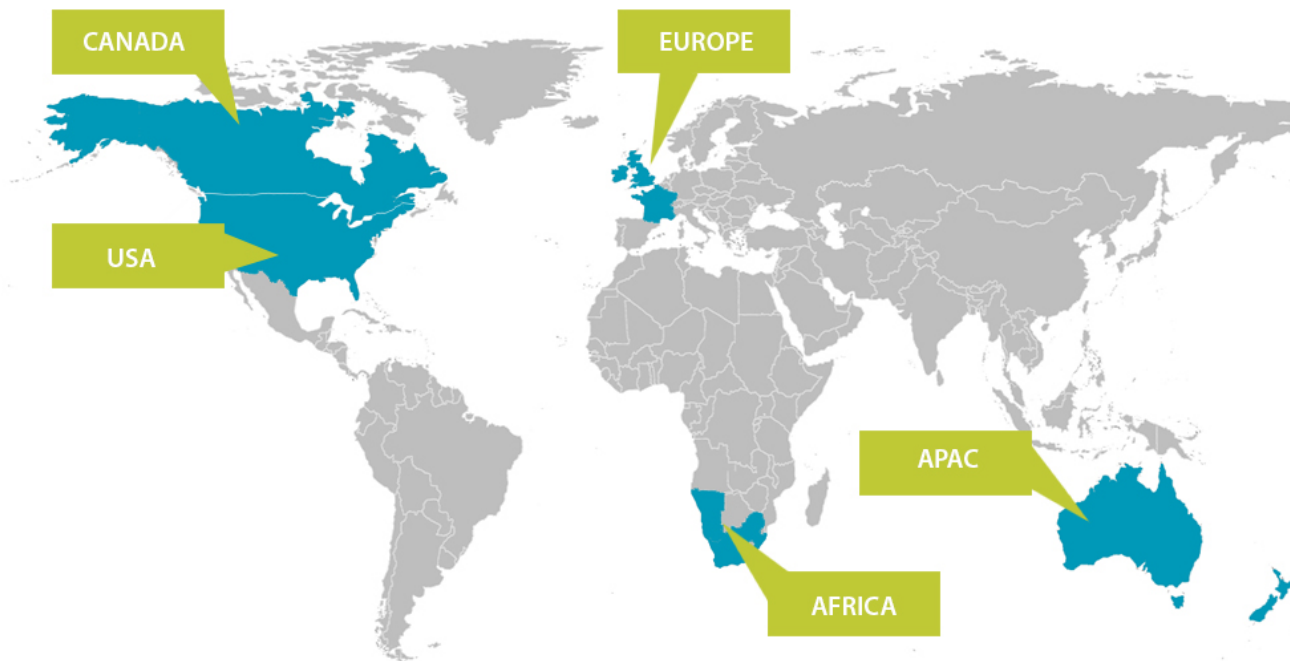
3.4 Global Cities Best Practice

3.5 Defining Performance?

4. SUMMARY FINDINGS

1. INTRODUCTION AND SCOPE – 1.2 SLR – 2017 Operating Locations

We deliver global environmental and advisory solutions from a network of offices in five regions covering Europe, the US, Canada, Asia-Pacific and Africa.



1. INTRODUCTION AND SCOPE – 1. 2 SLR Background – *Resources and Services*



SLR delivers global **environmental** and **advisory** solutions

We provide advice and services to clients in the oil and gas, mining and mineral infrastructure, built environment, industry, and power sectors.

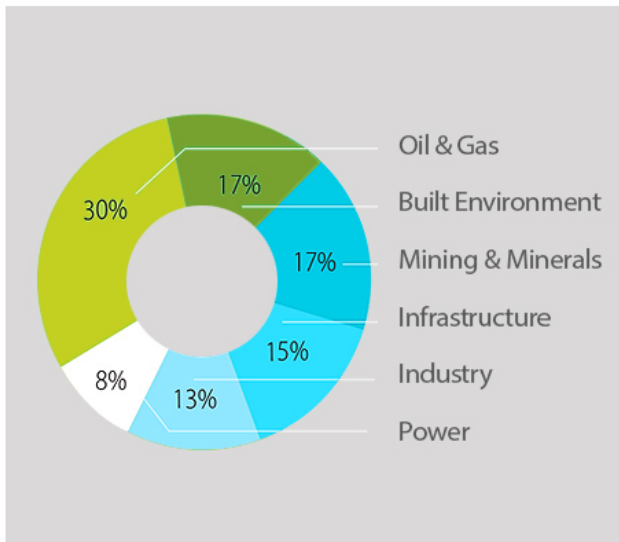


1. INTRODUCTION AND SCOPE – 1. 2 SLR Background – *Sectors and Regions*

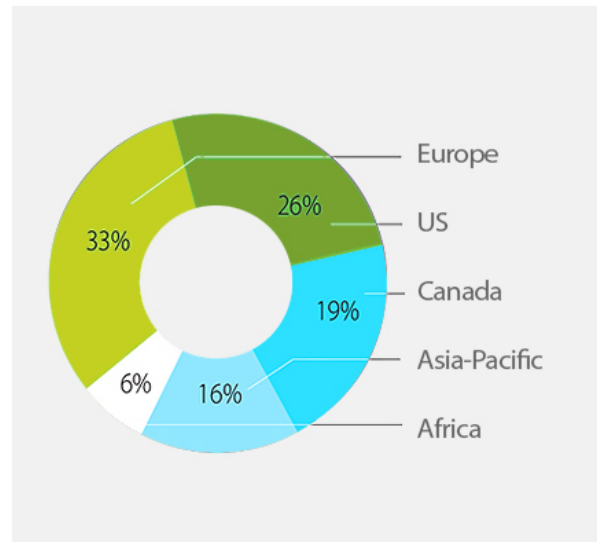
Our success is underpinned by a highly collaborative and supportive 'one team' culture. Our focus is on being responsive, flexible and adaptable.



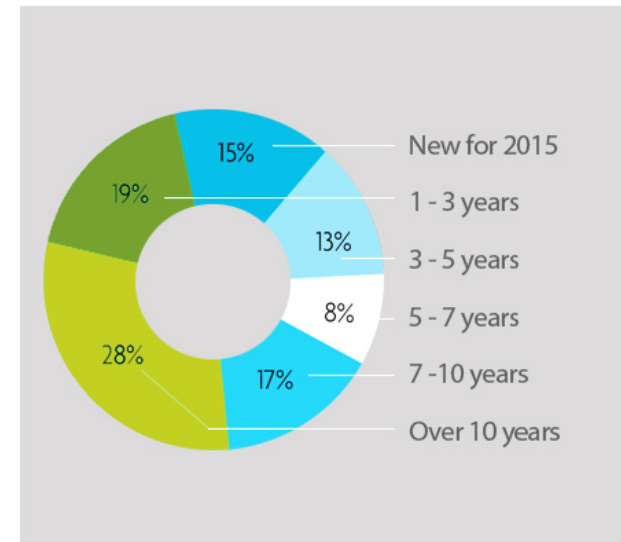
BY SECTOR



BY REGION



BY CLIENT RELATIONSHIP



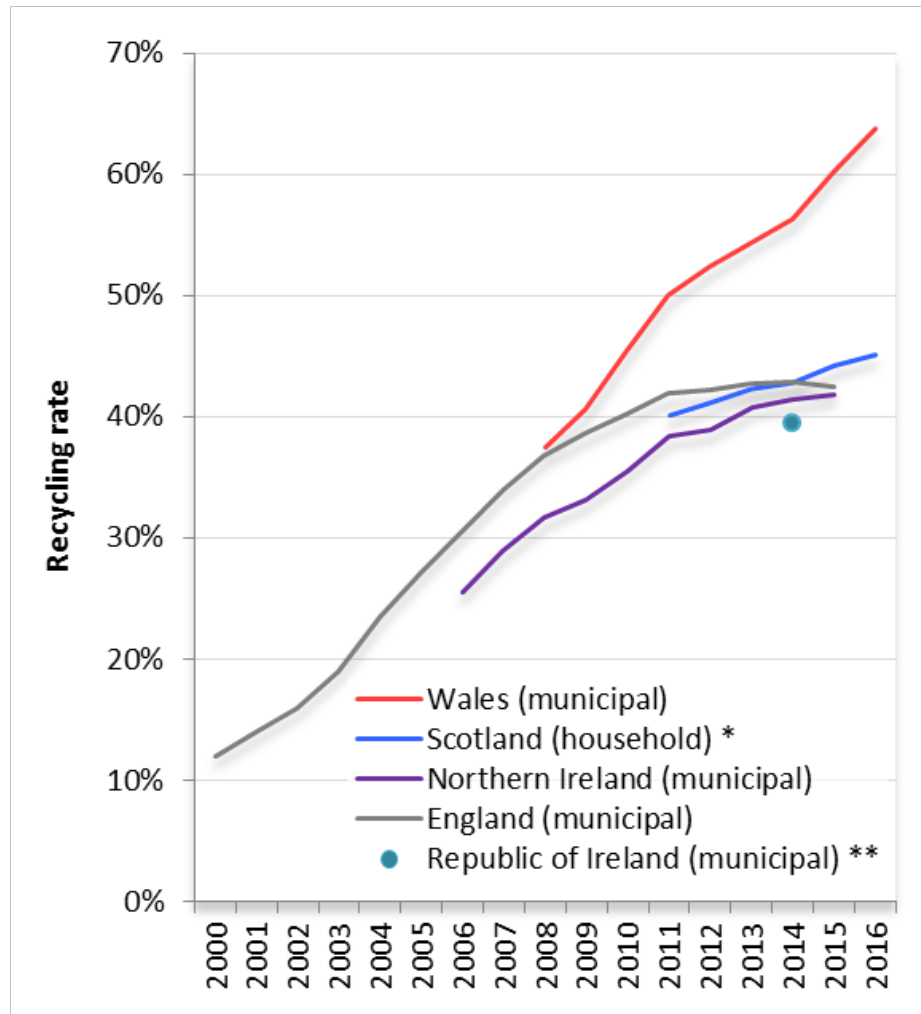
- In Ireland experience on IWMA, Stream Bioenergy, Poolbeg, Panda, Bord Na Mona, KWD recycling, Oxigen ... and others

2. WHAT LESSONS CAN BE LEARNT FROM EXPERIENCES IN SCOTLAND, WALES AND ENGLAND?

2. 1 Background and Scope

- UK devolved administrations & England have made substantial gains in waste management performance over the last 15 years.
- In many cases, progress has now started to slow – this is particularly the case of England, with recycling rates stalled between 42% and 43% since 2012.
- In this context, here will
 - look back at progress in each country,
 - identifying the main drivers to date in improving performance;
 - consider what may be done to maintain momentum for change,
 - particularly in light of EU Circular Economy targets.
- SLR’s understanding of these issues is informed by decades of support in the sector including
 - Waste strategy development for local authorities, and policy support to regional/national government.
 - Market due diligence studies for waste management companies and investors.

2. WHAT LESSONS CAN BE LEARNT FROM EXPERIENCES IN SCOTLAND, WALES AND ENGLAND? – 2.2 Historical Performance



* Please note that Scotland implemented changes in reporting practices in 2014, such that results in 2013 and prior years are not strictly comparable.

** Unofficial IWMA estimate based on AERs & TFS data.

Historical recycling time series chart for UK:

- England - long term dataset
 - From 12% in 2000/01,
 - reaching 42% in 2011/12
 - plateaued between 42% and 43%.
- Wales
 - From 37% in 2008/9,
 - to a reported 64% in 2016/17
 - Including IBA
- Northern Ireland's
 - achieved parity with that of England in 2015/16.
- Scotland
 - Household waste dataset
 - recycling now achieves a 45% rate
 - Not including IBA

2. WHAT LESSONS CAN BE LEARNT FROM EXPERIENCES IN SCOTLAND, WALES AND ENGLAND? – 2.3 Policy in Wales

- Wales published Towards Zero Waste,
 - plans to recycle 70% of waste by 2025 and
 - be a zero waste, one planet nation by 2050.
- Municipal Sector Plan
 - published in March 2011 and
 - provided further clarity regarding the strategy for municipal waste management
 - Implementation of Sector Plans has resulted in significant improvements

LACW Performance Indicators	2009/10	2016/17	
Total LACW (Mt)	1.67Mt	1.59Mt	5% reduction in total LACW arisings
Total per capita LACW (kg/inh.)	550	511	7% reduction in per capita waste arisings
LACW Recycling Rate (%)	40%	64%	c.24% increase in recycling rate
LACW Landfill Diversion Rate (%)	44%	90%	c. 46% increase in landfill diversion rate

Source: StatsWales

- Wales is now considered to be the 3rd best recycling nation in the world and 2nd in Europe

2. WHAT LESSONS CAN BE LEARNT FROM EXPERIENCES IN SCOTLAND, WALES AND ENGLAND? – 2.3 Policy in Wales

- Wales
 - 1st country in the world to legally commit to promoting sustainable development
 - May 2009 - Welsh Government published One Wales, One Planet, Sustainable Development Scheme
- Wales Waste Plan (including TZW and sector plans) provided clear strategic direction, supported with resources, advisory support and funding, including:
 - Clear targets and definitions
 - Maintained LAS penalties
 - Mandated collection of food waste from households
 - Coordinated (a prescriptive) implementation of strategy
 - Funding support across whole waste management supply chain

2. WHAT LESSONS CAN BE LEARNT FROM EXPERIENCES IN SCOTLAND, WALES AND ENGLAND? –

2.3 Policy in Wales

- Wales has truly created better waste management through:
 - providing clear, strategic, long term goals and objectives;
 - implementation of legislative measures to overcome create clarity and certainty;
 - co-ordinated effort by the Welsh Government with support from stakeholders; and
 - funding and advisory support to local authorities.
- Future plans include
 - 70% municipal waste recycling target by 2024/25,
 - with consideration of a higher recycling target (80%) by 2034/35
 - Greater influencing on non-municipal waste through legislative measures
 - Recent legislative developments are likely to result in more ambitious plans. For example:
 - Environment (Wales) Act 2016 proposes 80% emissions reduction target;
 - Well-being of Future Generations (Wales) Act - sustainable development

2. WHAT LESSONS CAN BE LEARNT FROM EXPERIENCES IN SCOTLAND, WALES AND ENGLAND? – 2.4 Policy in Scotland

- The five key recycling policy drivers in the form of legislation, and guidance in Scotland:
 - Scotland Zero Waste Plan ,
 - the Waste (Scotland) Regulations 2012,
 - SEPA Thermal Treatment of Waste Guidelines 2014,
 - Code of Practice Household Recycling Scotland 2016 and
 - the Deposit Return Scheme future legislation 2017



2. WHAT LESSONS CAN BE LEARNT FROM EXPERIENCES IN SCOTLAND, WALES AND ENGLAND? – 2.4 Policy in Scotland

- **Zero Waste Plan (2010)** - sets a range of targets for all waste stream, including;
 - 60% recycling/composting/reuse of household waste by 2020;
 - no more than 5% of all waste to go to landfill by 2025; and
 - 70% recycling/composting/reuse of all waste by 2025.
- **The Waste (Scotland) Regulations 2012** – Set out the following key requirements

Date	Requirement
2013	<ul style="list-style-type: none"> • local authorities: minimum recycling service to householders (glass, metals, plastics, paper/card)
2014	<ul style="list-style-type: none"> • Businesses :minimum recycling service (glass, metals, plastics, paper/card). • Food businesses (except in rural areas) which produce over 50 kg of food waste per week are required to present that food waste for separate collection • A ban on any metal, plastic, glass, paper, card and food collected separately for recycling from going to incineration or landfill
2016	<ul style="list-style-type: none"> • food businesses (except in rural areas) >5 kg of food waste/week need to present for separate collection • Local Authorities: mandatory household food waste collections
2020	<ul style="list-style-type: none"> • Overall Recycling and Composting targets 60% for household waste
2021	<ul style="list-style-type: none"> • A ban on biodegradable municipal waste going to landfill
2025	<ul style="list-style-type: none"> • Overall Recycling and Composting targets 70% for all waste

2. WHAT LESSONS CAN BE LEARNT FROM EXPERIENCES IN SCOTLAND, WALES AND ENGLAND? – 2.4 Policy in Scotland

- **Thermal Treatment of Waste Guidelines (2014)** –
 - set out SEPA’s approach to permitting thermal treatment of waste facilities.
 - SEPA make provision for recyclate market failure as follows:

“The ban [on separately collected recyclates being disposed of to landfill] applies only in so far as the material is “capable of being recycled”.

For example, subject to agreement with SEPA, energy recovery may be permitted in the following circumstances:

- rejects or ‘fines’ from sorting co-mingled recyclate at Material Recovery Facilities.

- recyclate which is grossly contaminated and cannot find a market;

- material with no prospect of being recycled due to severe and/or prolonged market downturn/collapse.”

2. WHAT LESSONS CAN BE LEARNT FROM EXPERIENCES IN SCOTLAND, WALES AND ENGLAND? – 2.4 Policy in Scotland

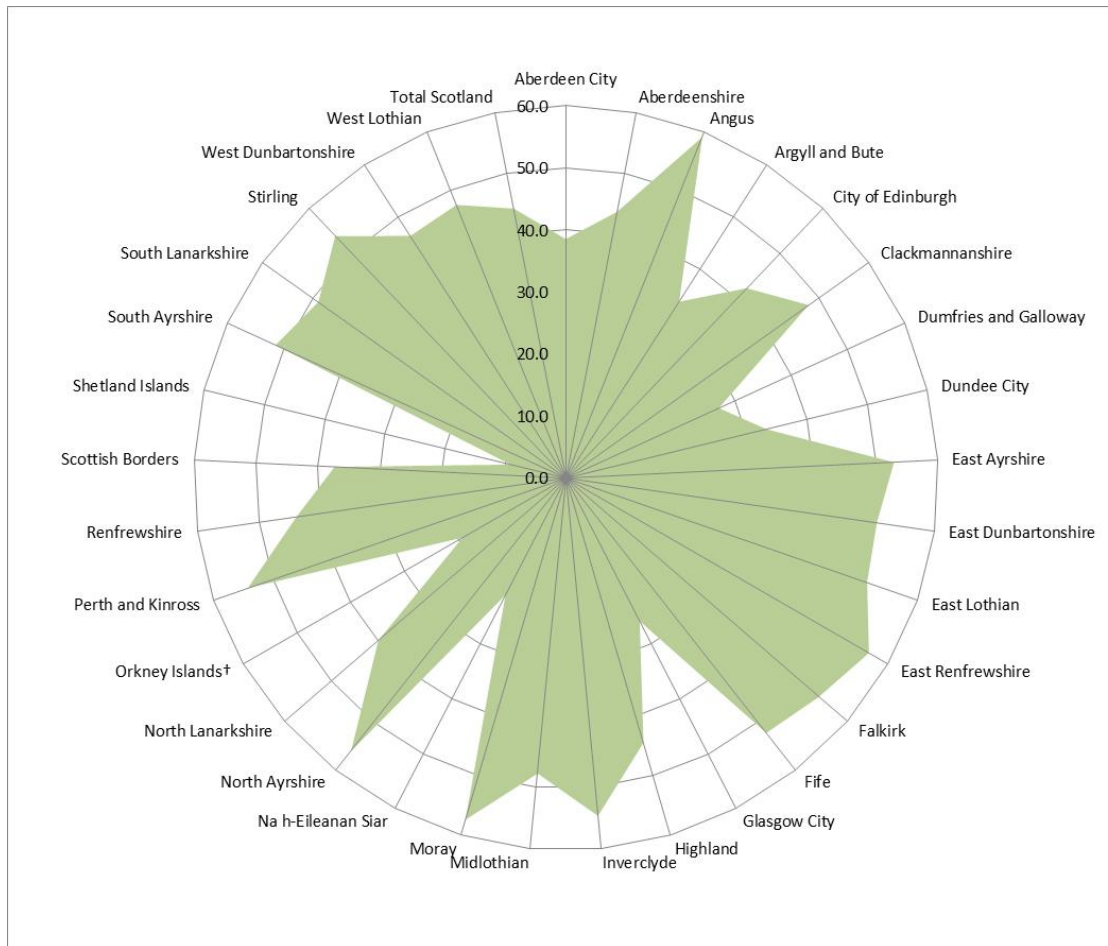
- **Code of Practice Household Recycling Scotland (2016)**
 - a voluntary charter for all local authorities to improve “household waste and recycling services to maximise the capture of, and improve the quality of, resources from waste stream”
 - No glass with plastics
 - No green with food

- **Deposit Return Scheme (2017)**
 - Zero Waste Scotland to develop an evidence base for a deposit return scheme for plastic bottles.
 - Consultation to come out in 2018

© Zero Waste Scotland

2. WHAT LESSONS CAN BE LEARNT FROM EXPERIENCES IN SCOTLAND, WALES AND ENGLAND? – 2.4 Policy in Scotland

- LA's in Scotland
 - mixed level of success in recycling
 - 45% in 2016 ... against 38% in 2011/12



Best performing Council Overall -
Angus 59%

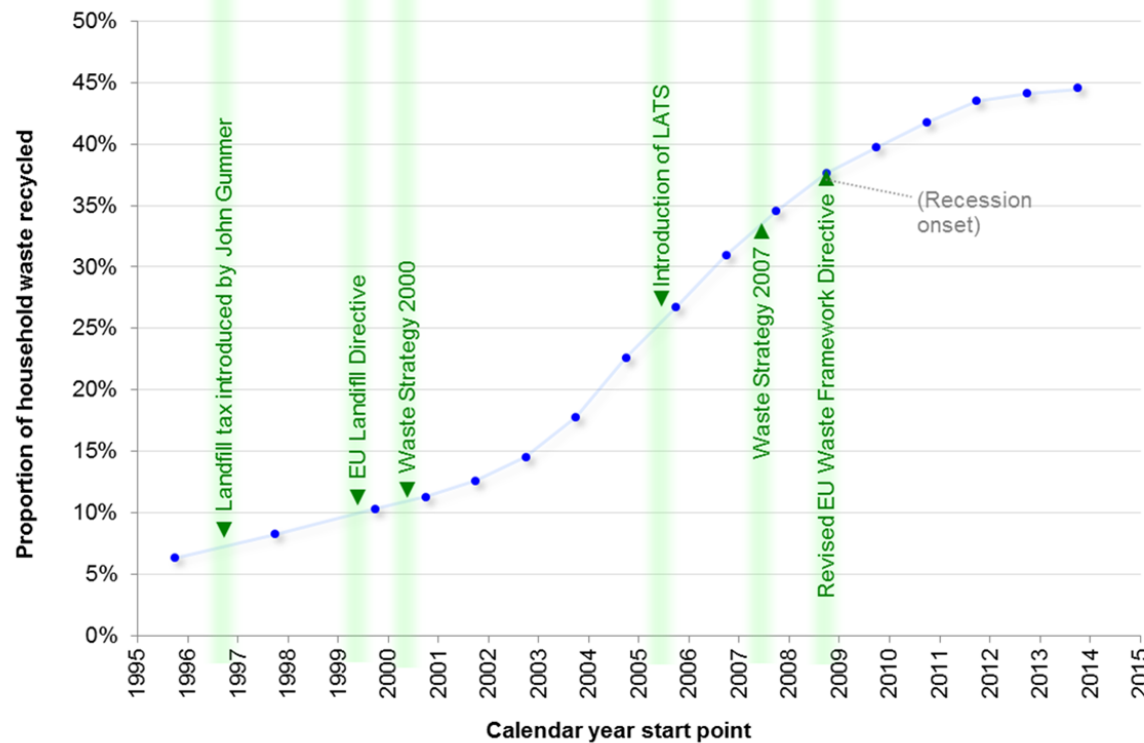
Poorest performing Council Overall –
Shetland Island at 9%

Best Performing City –
City of Edinburgh 42%

Poorest Performing City –
Glasgow City 26%

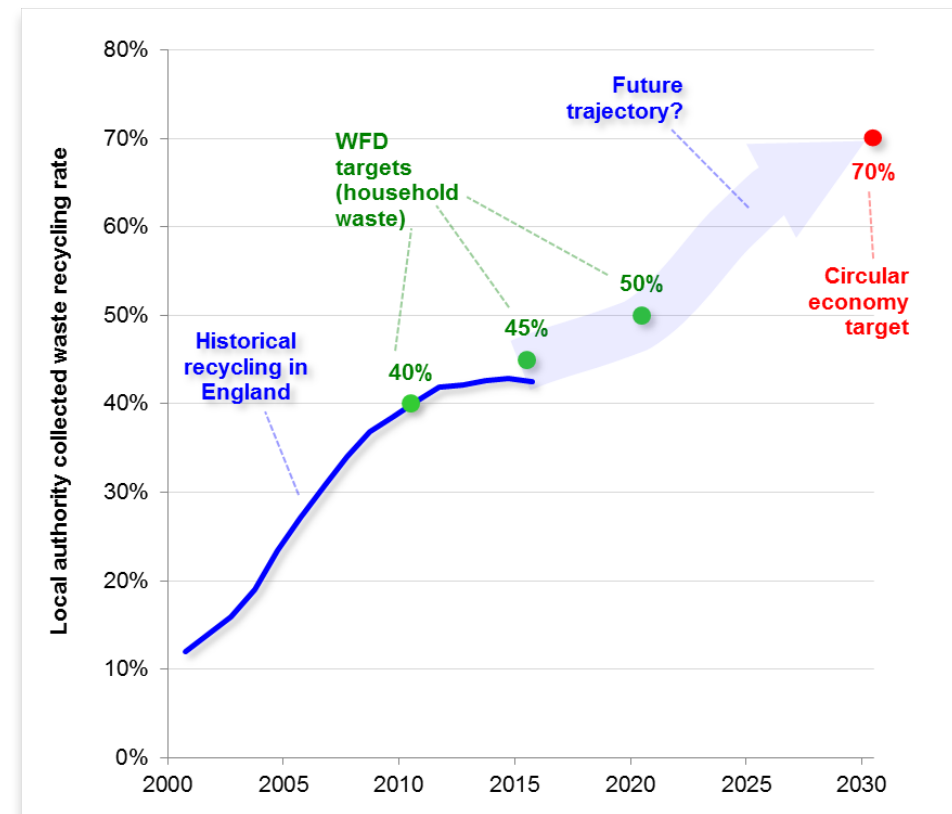
2. WHAT LESSONS CAN BE LEARNT FROM EXPERIENCES IN SCOTLAND, WALES AND ENGLAND? – 2.5 Policy in England

- Key overarching drivers for the historical improvement in England’s waste management performance (prior to the current plateau) were
 - Implementation of EU legislation
 - the EU landfill directive, and
 - Waste Framework Directive).
 - Introduction and continuing escalation of landfill tax.



2. WHAT LESSONS CAN BE LEARNT FROM EXPERIENCES IN SCOTLAND, WALES AND ENGLAND? – 2.5 Policy in England

- Good historical success in England
 - Current policy vacuum?
 - Plateau in England compared with substantial gains in Wales, Scotland & NI.
- The impact of Brexit is a currently major focus of debate.
 - Defra expects the EU Circular Economy package will be adopted in the UK.
 - However the UK Govt has consistently questioned the achievability of the CE targets for 70% recycling of municipal waste.

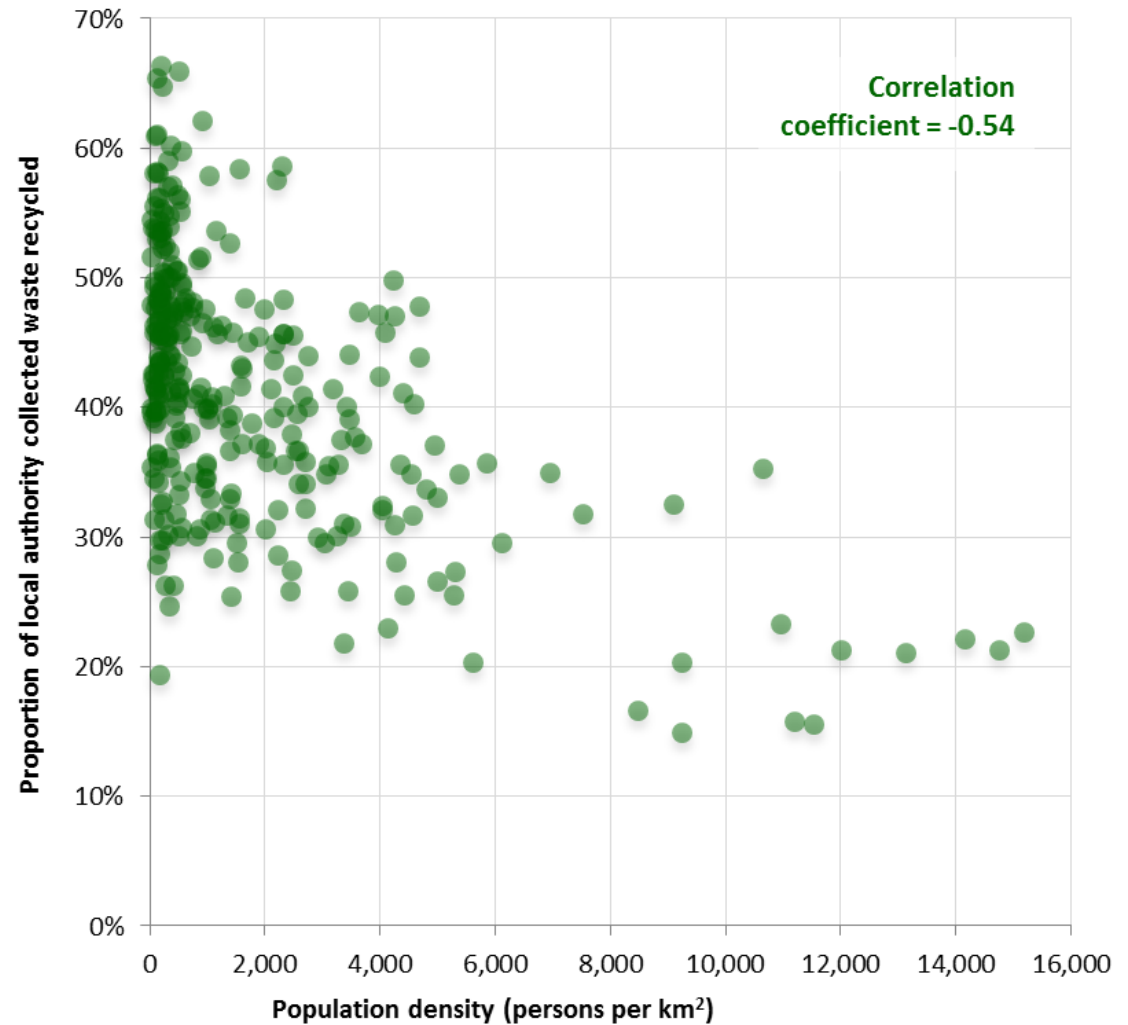


3. DRIVING BETTER DIVERSION PERFORMANCE

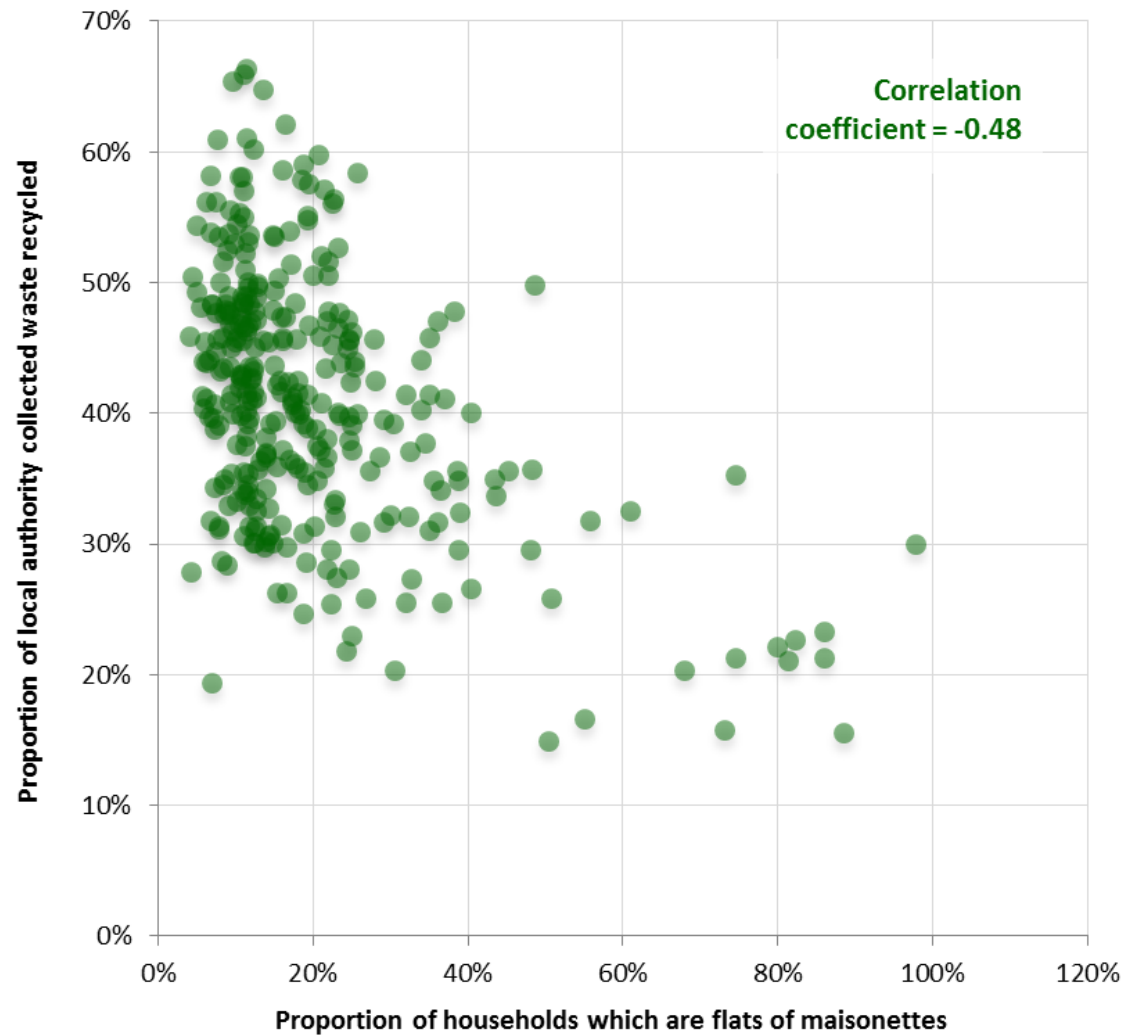
- As illustrated above, Wales, Scotland and England have achieved significant performance improvements to date.
- At present, performance is has plateaued in England, though improvement continues in Wales, Scotland and Northern Ireland.
- To maintain momentum in improving performance, concerted action is required from policy makers.
- Below we consider
 - key performance barriers;
 - indicative improvement in performance that may be achieved via policy intervention;
 - lessons from European best practice review; and
 - best practice review for global cities

3. DRIVING BETTER DIVERSION PERFORMANCE – 3.1 Key Performance Barriers

- factors outside control of policy makers may significantly constrain, or enable waste management performers.
- Eg, indicates that to date high population density is a predictor of poor recycling performance.



3. DRIVING BETTER DIVERSION PERFORMANCE – 3.1 Key Performance Barriers



- a high proportion households being flats / maisonettes are likely to struggle to recycle a high proportion of collected waste.
- Other significant correlates of performance include
 - age structure
 - levels of deprivation

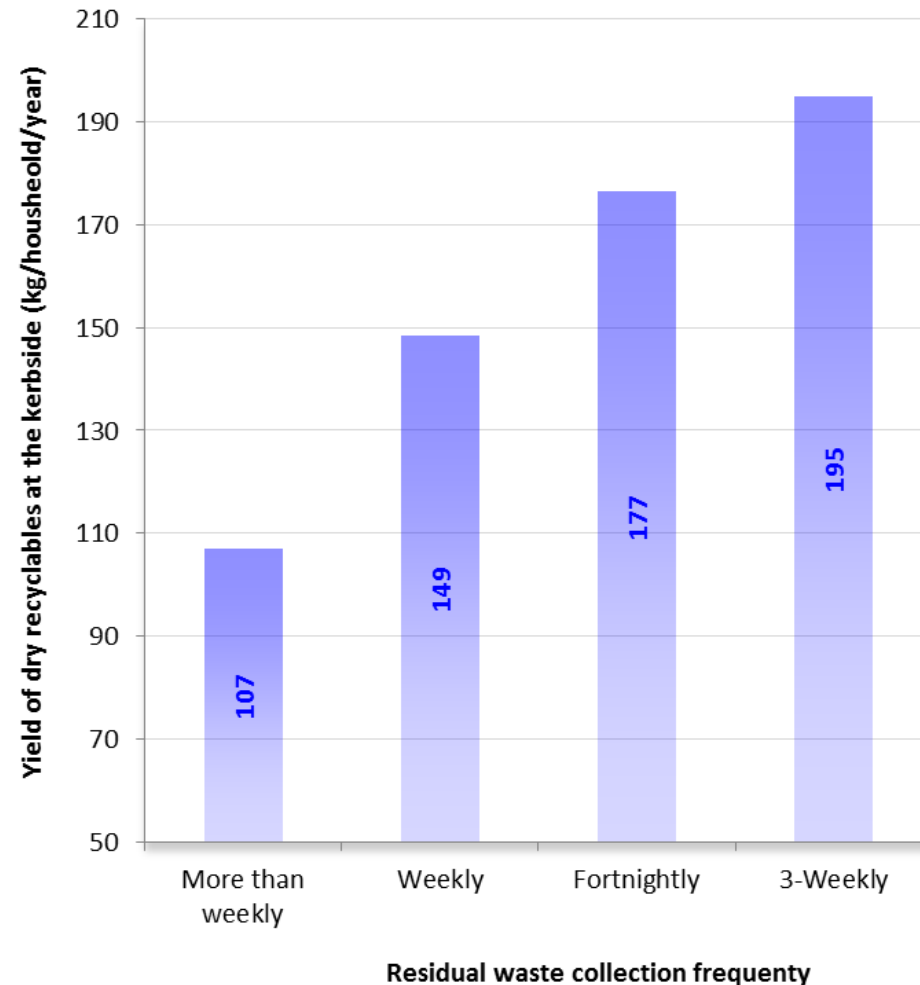
3. DRIVING BETTER DIVERSION PERFORMANCE – 3.2 Policy Intervention Impacts

- Focussing on England - potential impacts of key policy interventions:

Action	Indicative recycling uplift for authorities	Proportion of authorities impacted	Net impact on England's recycling rate
1 Mandatory separate collection of food (and reduce frequency for residual)	6%	50%	3%
2 Local level reuse / recycling targets	-	-	-
3 Pay as you throw	12%	25%	3%
4 Strong household communication programmes	3%	75%	2%
5 Defra / EA to establish protocol for bottom ash uses qualifying as recycling			4%

3. DRIVING BETTER DIVERSION PERFORMANCE – 3.2 Policy Intervention Impacts

- SLR data suggests a reduction in residual waste collection frequency (while controversial) tends to improve recycling performance.
- Findings consistent with WRAP, demonstrating that residual waste collection volume is a strong predictor of performance.



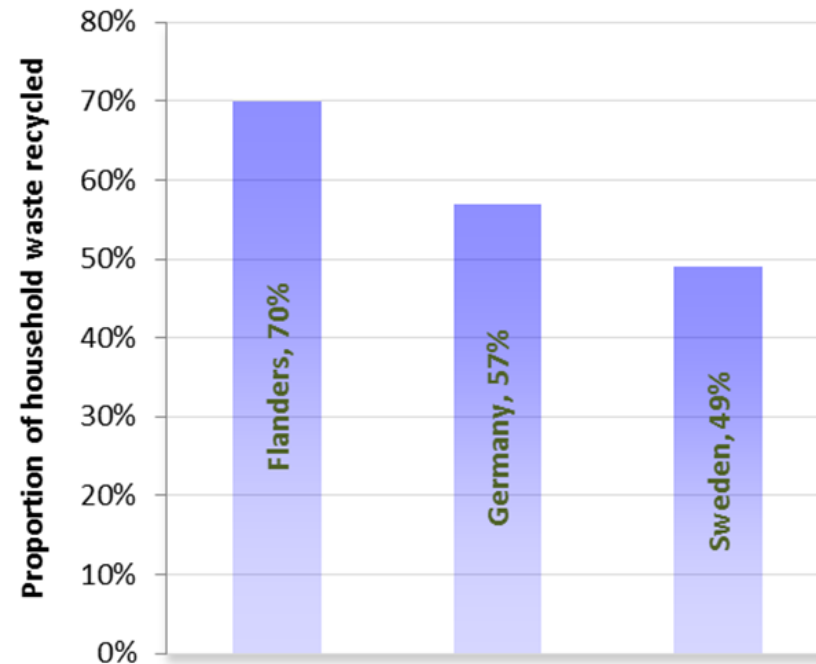
3. DRIVING BETTER DIVERSION PERFORMANCE – 3.3 European Best Practice

Flanders (Belgium) – 70%

- Targets for source segregated collection recyclables
- Targets for residual waste arisings
- Pay as you throw schemes
- Landfill & incineration bans for unsorted waste
- Landfill & incineration levy

Germany

- Landfill ban for untreated municipal solid waste
- Strict implementation & enforcement of producer responsibility
- Focus on separate collection of materials
- Pay-as-you through for collection & disposal



Sweden

- Landfill tax
- Landfill bans for organic & combustible wastes

3. DRIVING BETTER DIVERSION PERFORMANCE – 3.4 Global Cities Best Practice

- No consistent system or approach across major cities
- The **best performing cities** have changed rapidly (over the last 10-15 years) through a combination of:
 - Firm political commitment and early decisive action
 - Integrated plan development (principally at regional level)



3. DRIVING BETTER DIVERSION PERFORMANCE – 3.4 Global Cities Best Practice

... Best performers ...

- Legislative measures consistent with waste hierarchy
- Fiscal re-structuring consistent with waste hierarchy
- Strong commitment, accountability and ownership of waste related issues
- Integration of waste streams for treatment and disposal (MSW and CIW)

- **Poor performing cities** have lacked an integrated approach:
 - Lack of certainty within the waste industry (creating difficulties in securing key waste management infrastructure)
 - Fiscally (contradicting promotion of the waste hierarchy)
 - Weak local accountability and ownership of waste related issues
 - Politically (inconsistent messages, little co-operation between tiers of government, repeated deferment of issues)
 - Poor strategic planning capability

3. DRIVING BETTER DIVERSION PERFORMANCE – 3.5 Defining Performance?

- Debate around recycling policy often makes an implicit assumption that higher recycling *rates*, measured in terms of mass, are always desirable.
- The choice of performance metric is critical in determining the materials which should be the focus of recycling efforts:

Prioritisation metric		Paper	Plastics	Glass	Card	Metals	Textiles	Food waste
Tonnage data	Proportion of English household waste arising	16%	10%	7%	5%	4%	3%	18%
	Rank based on composition	2	3	4	5	6	7	1
	Rank based on energy saving	4	1	6	5	3	2	7
	Rank based on CO ₂ e saving	4	3	6	7	1	2	5
	Rank based on monetary value	2	1	6	5	3	4	7

5. SUMMARY OF FINDINGS

- Historical data for Scotland, Wales, Northern Ireland and England shows rapid improvement over the last 15 years.
- In England (and NI), recycling performance has stalled at ~42 to 43% since 2011. In contrast Scotland and Wales have continued to improve, Wales in particular reporting a 64% rate in 2016/17.
- These differences can in part be explained by policy:
 - Wales policy provides clear long term goals objectives, well funded, and backed up by advisory support (and notably, Wales' targets are applied to individual authorities).
 - Scottish policy likewise sets clear long term targets, including a landfill ban in 2021.
 - In contrast, despite a history of effective legislation in England, the current Government is accused of leaving a waste policy vacuum, with continuing uncertainty over the position post-Brexit.
- Nevertheless, it is important to note that policy is not the whole story:
 - performance can often be constrained by factors outside the immediate control of local authorities – e.g. population density and housing type.
 - For this reason many English authorities (for example Birmingham and some London boroughs) have an inevitable uphill struggle in improving performance.

5. SUMMARY OF FINDINGS

- While the uncertainty around Brexit is a challenge, there also opportunity to re-evaluate waste management goals and develop more robust and effective policy. Example interventions overcome England's stagnating performance could include
 - **1 Mandatory separate food collection** (and **reduced collection frequency for residual**)
 - **2 Local level reuse / recycling targets**
 - **3 Pay as you throw**
 - **4 Strong household communication programmes**
 - **5 Defra / EA to establish protocol for incinerator bottom ash** uses qualifying as **recycling**
- Notably, Wales has implemented **1** (mandatory food), **2, 4** and **5** (inclusion of IBA in target calculation) with dramatic effect.
- In renewing waste policy, we should consider whether a mass-based recycling rate remains the most appropriate performance metric:
 - Other potential metrics include carbon, energy and monetary value.
 - Dependent on which metric is selected it may be most appropriate to focus on specific materials (in particular plastics and metals) with less emphasis on total tonnage.

CONTACT



Alban Forster
Infrastructure Director – SLR Consulting

- t** +44 (0) 7899 928514
- e** aforster@slrconsulting.com
- w** www.slrconsulting.com