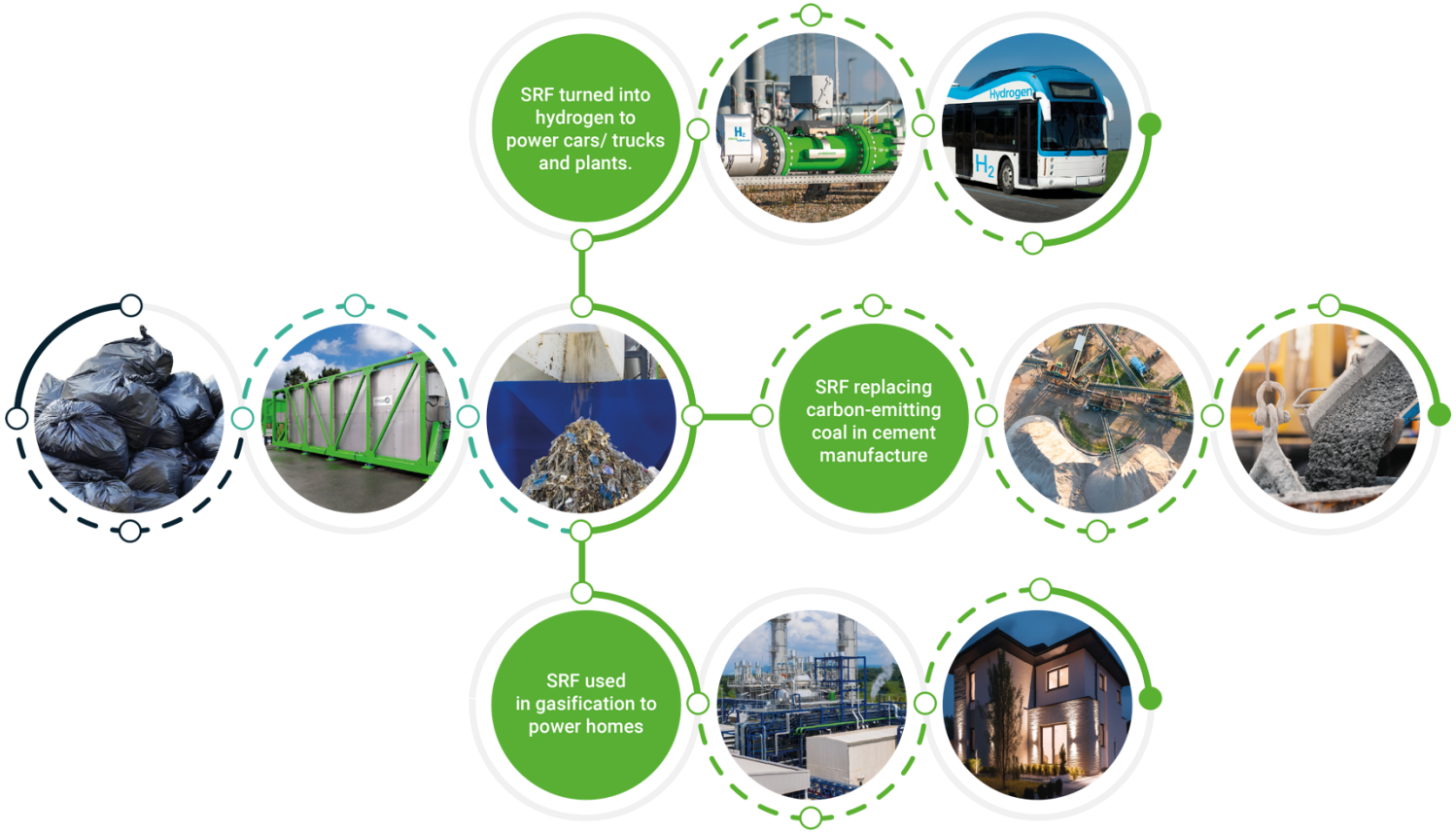
Agenda

- Why Now?
- Moving Waste Up the Thermal Hierarchy
- From 1G to 2G
- How do you prepare the waste for SAF?
- Waste Streams
- How does the Advetec XO technology work
- The Results – Mixed Residual Waste
- The Benefits of Advetec XO Biotechnology
- Unlocking Value from Unrecyclable Waste
- Further Advetec Information



Why Now?

Key Legislation mitigated by the SRF Route	2025	2026	2027	2028	2029	2030
ETS Scheme	Dry run MRV processes Agree contract changes and risk management Apply for GHG Permits	Implement MRV processes Appoint verifiers Dry run Cost Pass Through processes	Refine Strategy for MRV, Cost Pass Through and Carbon Risk Management processes	Full Implementation		
Bio Landfill Ban		**Scotland 1st Jan '26**		**England 2028**		
Landfill Tax	**£126.15**			**Aligned to ETS / EFW increases**		
Simpler Recycling		**March '26 - Food, DMR, Garden March 27 - Plastic Film**				
SAF Mandate	**2% SAF in 2025**					**10% SAF in 2030**

Landfill Tax increase of **£22.16 p/t** from 1st April 2025

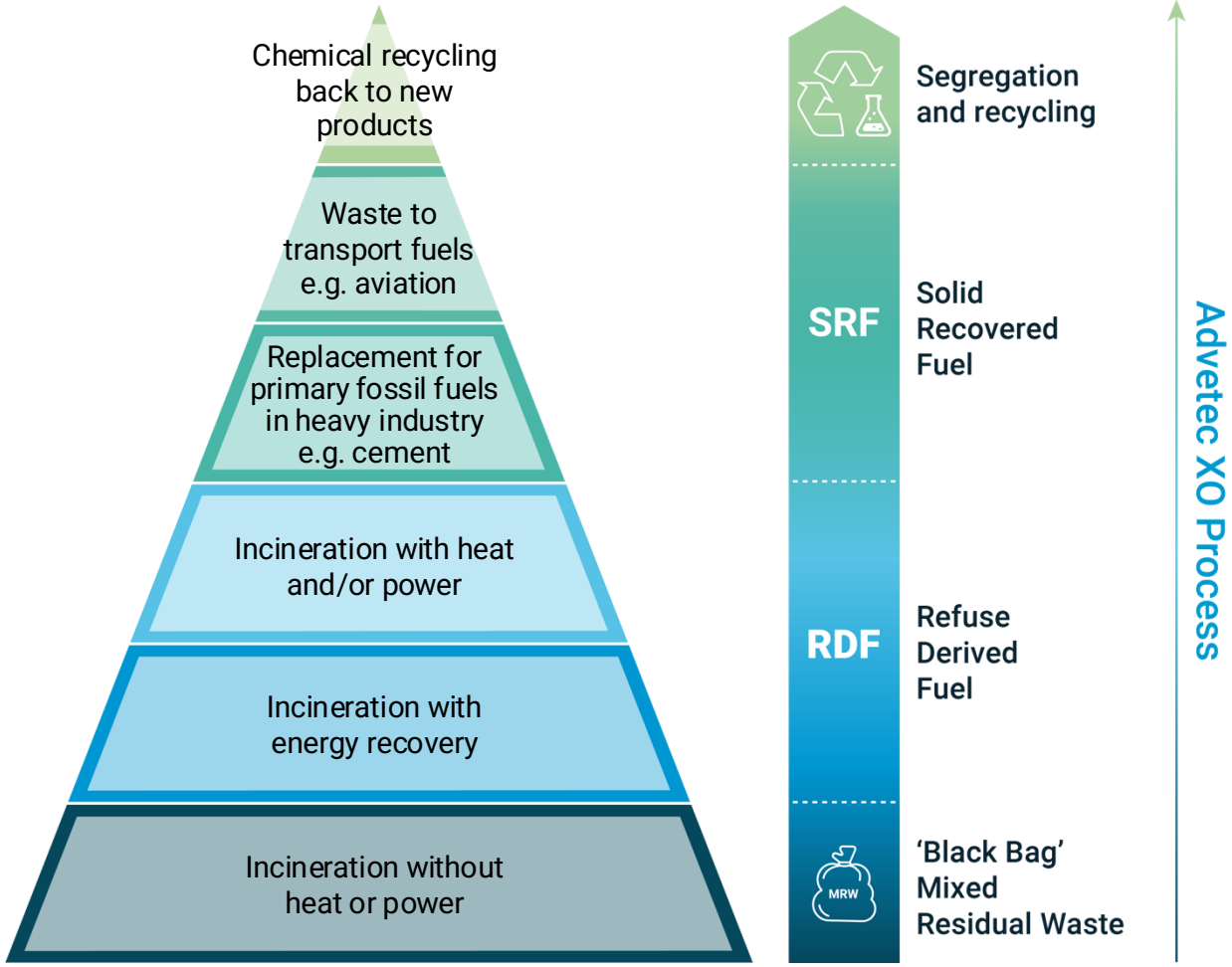
Water rebate currently 50% off landfill price - removal expected in 2028

SAF Mandate increase to **22%** expected in 2040

Moving Waste Up the Thermal Hierarchy

As more value is extracted from waste, it moves up the thermal hierarchy, and the closer it takes us to a fully circular model. For example:

- When non-recyclable washroom waste is sent for incineration with heat or power offtake, it becomes a Refuse Derived Fuel (RDF). Some value has been extracted.
- But when that waste is refined further with Advetec biotechnology, it moves up the thermal hierarchy. Its potential is unlocked, and it becomes SRF, capable of replacing primary fossil fuels in heavy industries such as cement.
- When waste is treated so it can be mined for valuable chemicals and recycled back into new products – its thermal value peaks, and its contribution to circularity greatens.



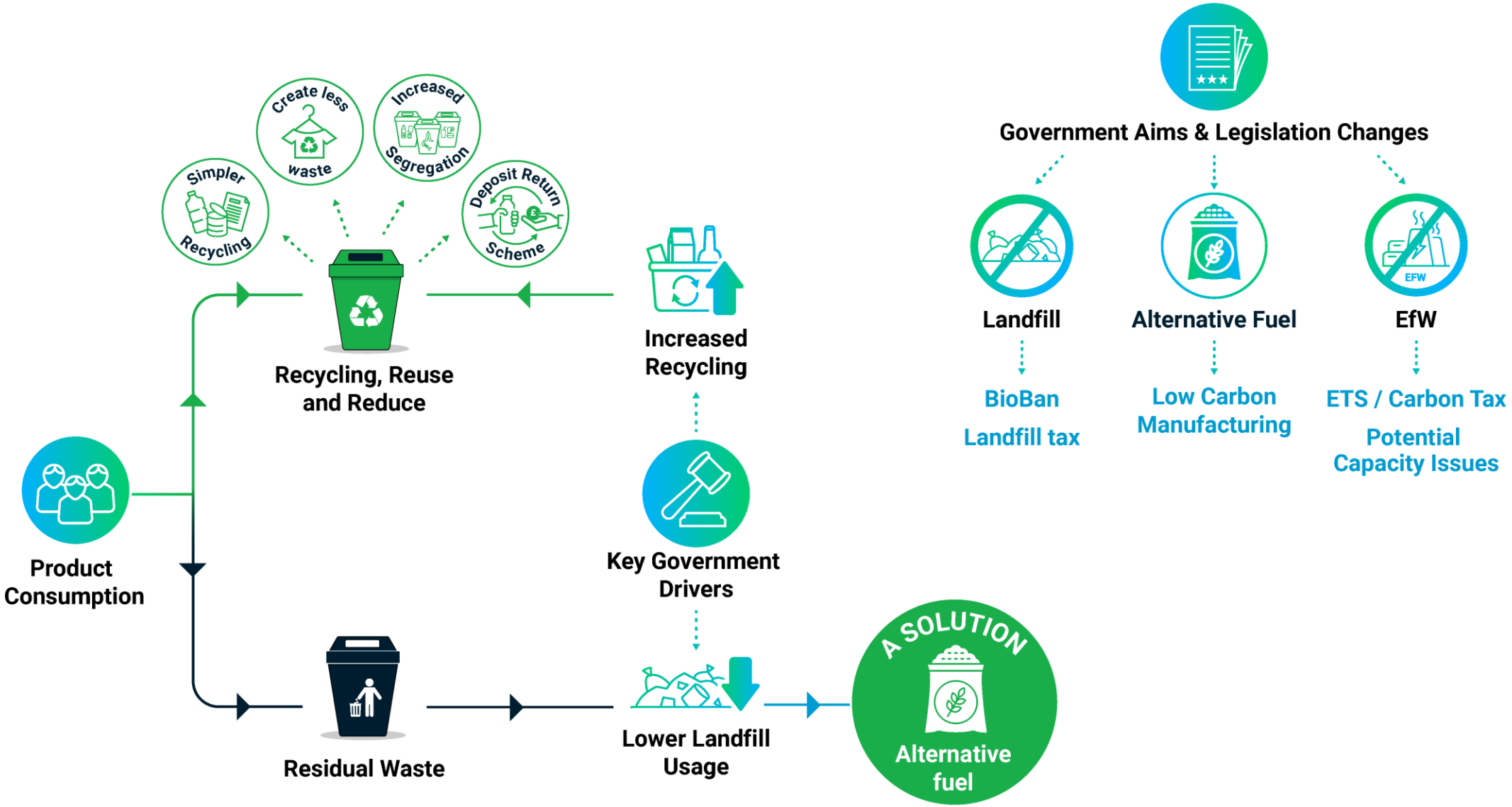
From 1G e.g vegetable oils, moving onto 2G; waste based SAF

The Challenges

- Use of gasification technology as the primary thermal component of the process – poor operating experience in the UK
- Residual waste is not homogenous – waste arisings, waste processing – RDF/SRF
- Challenge is to make un-homogenous - homogenous

The Positives

- Large quantity of waste available – in excess of 3.5 million tonnes
- Potential for long term contracts – improved stability


Create less waste
Increased Segregation
Simpler Recycling
Deposit Return Scheme
Recycling, Reuse and Reduce
Increased Recycling
Product Consumption
Key Government Drivers
Residual Waste
Lower Landfill Usage
A SOLUTION
Alternative fuel
Government Aims & Legislation Changes
Landfill
Alternative Fuel
EfW
BioBan
Landfill tax
Low Carbon Manufacturing
ETS / Carbon Tax
Potential Capacity Issues

How do you prepare the waste for SAF?

Make the waste stream suitable for additional processing...

- Reduce moisture content – remove stickiness
- Make more homogenous

Makes the waste more suitable for further processing to unlock value...

- Remove ferrous and non-ferrous
- Segregate fractions size / density
- Extract fractions such as plastic film

Key factors for delivery

- Small scale and flexible
- Direct operation at site

Waste Streams

Mixed Residual Waste

Non-hazardous by nature and is typically produced from the following areas:

- Trade waste
- Commercial waste
- Domestic waste
- Retail
- Facilities
- Entertainment

Washroom Waste

Non-clinical offensive waste is heavy, odorous and ammonia-rich. Sources include:

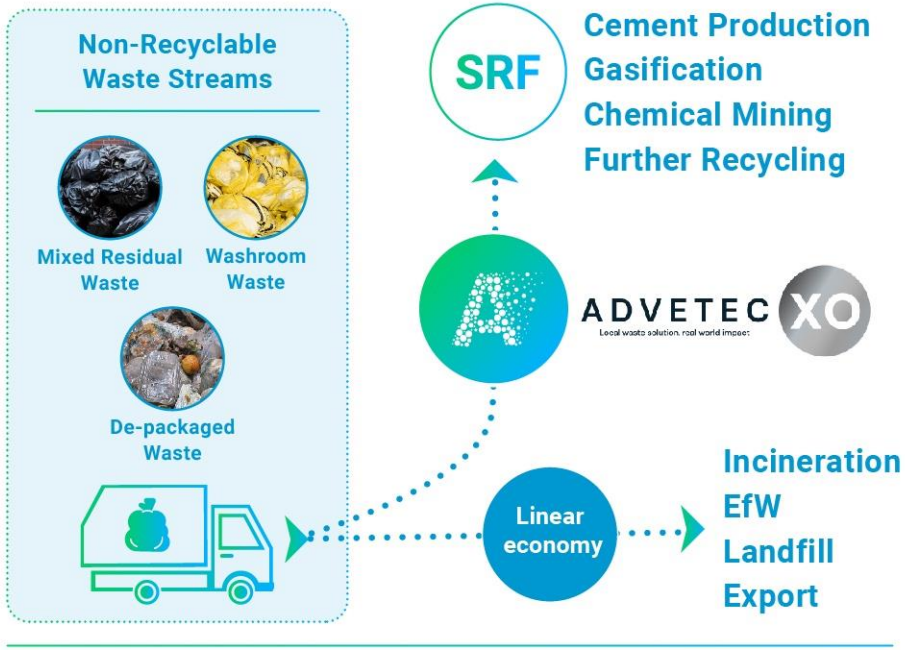
- Facilities
- Entertainment
- Education
- Care facilities
- Retail

De-packaged Waste

Consists of food packaging materials mixed with organic residue. These waste types have high moisture content and a significant organic fraction. This waste type is typically found in:

- Anaerobic Digestion (AD) plants

Giving value to the non-recyclable

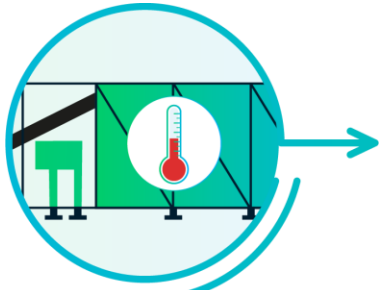


How does the Advetec XO technology work?

Step 1
Waste shredding

Waste goes through an industrial-grade shredder.

This begins the process and ensures that a consistent and optimum particle size enters the biomass.



Step 2
Heating & bacteria

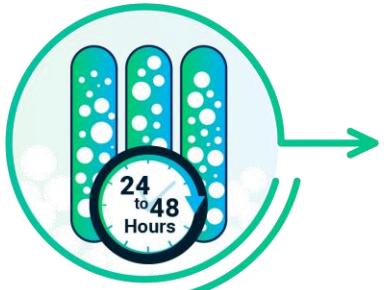
The system initially heats the waste to kick-start the bacterial activity.

Once the optimum temperatures have been achieved, the exothermic reaction self-generates the majority of the heat required. The heating system is then used to maintain the temperature above a minimum threshold for continual operation 24/7. This creates resiliency in the system for periods of inactivity.

Step 3
Biostimulant

Advetec's unique additives are added automatically.

This ensures a robust and strong biomass is maintained and allows for the system to cope with the inevitable existence of biocides within the waste stream.



Step 4
Rapid digestion

The XO has multiple chambers.

These chambers are aerated to allow the aerobic process to flourish. The waste is indexed through the system, allowing for the addition of fresh waste at regular intervals. The remaining material is then automatically exited from the XO when it has been processed fully, typically within 24-48 hours.

Step 5
Outcome

Output material is called post-process floc.

It typically has a moisture content less than 15% (with organic matter reduced significantly during digestion) and has an increased calorific value. Depending on the waste stream and your requirements, the floc can be used as a fuel or have further value extracted.

Watch the video

The Results – Mixed Residual Waste

Non-hazardous by nature and is typically produced from the following areas:

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- Commercial waste
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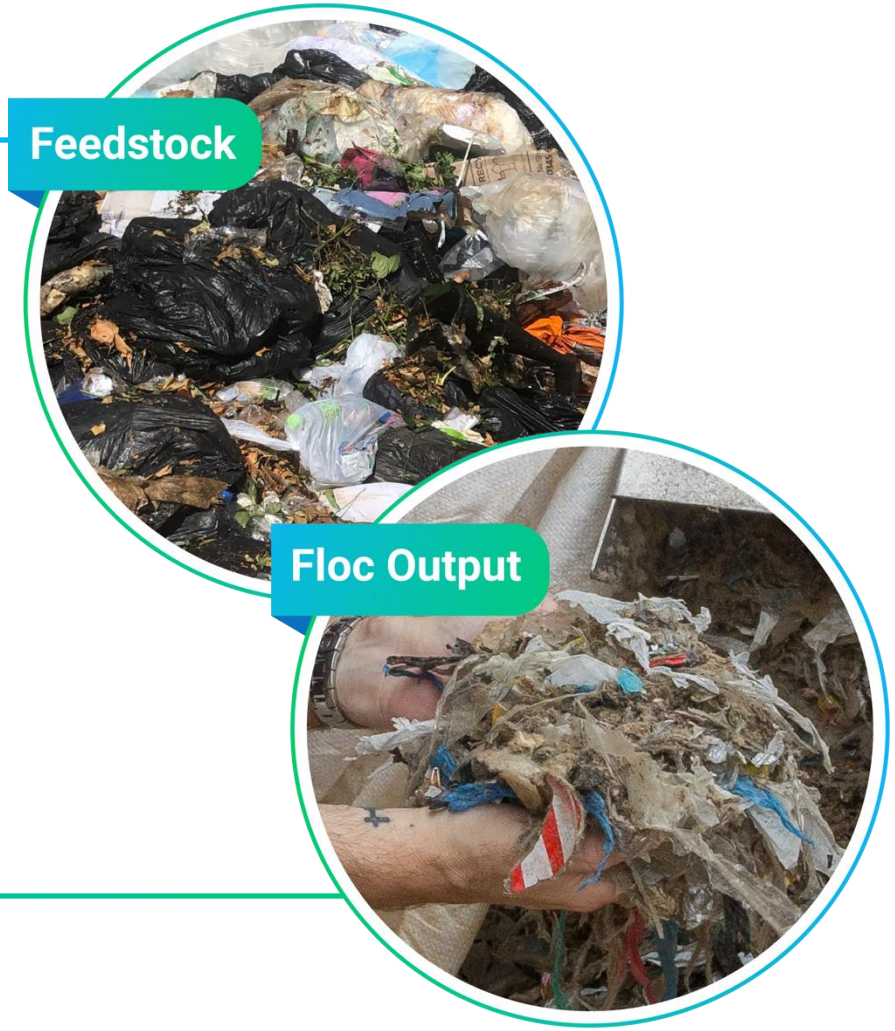
- Entertainment



Waste is treated in the machine for approx 3 days, this is the typical results for the floc

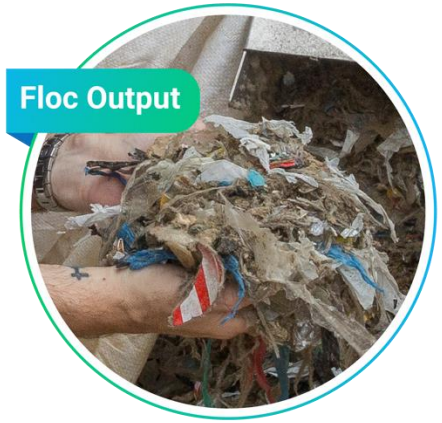
Key Parameters	
Moisture (%)	6%
Chlorine (%)	.61%
Ash	22%
Net Calorific Value (MJ/kg)	18
Biomass by CV	44.5%

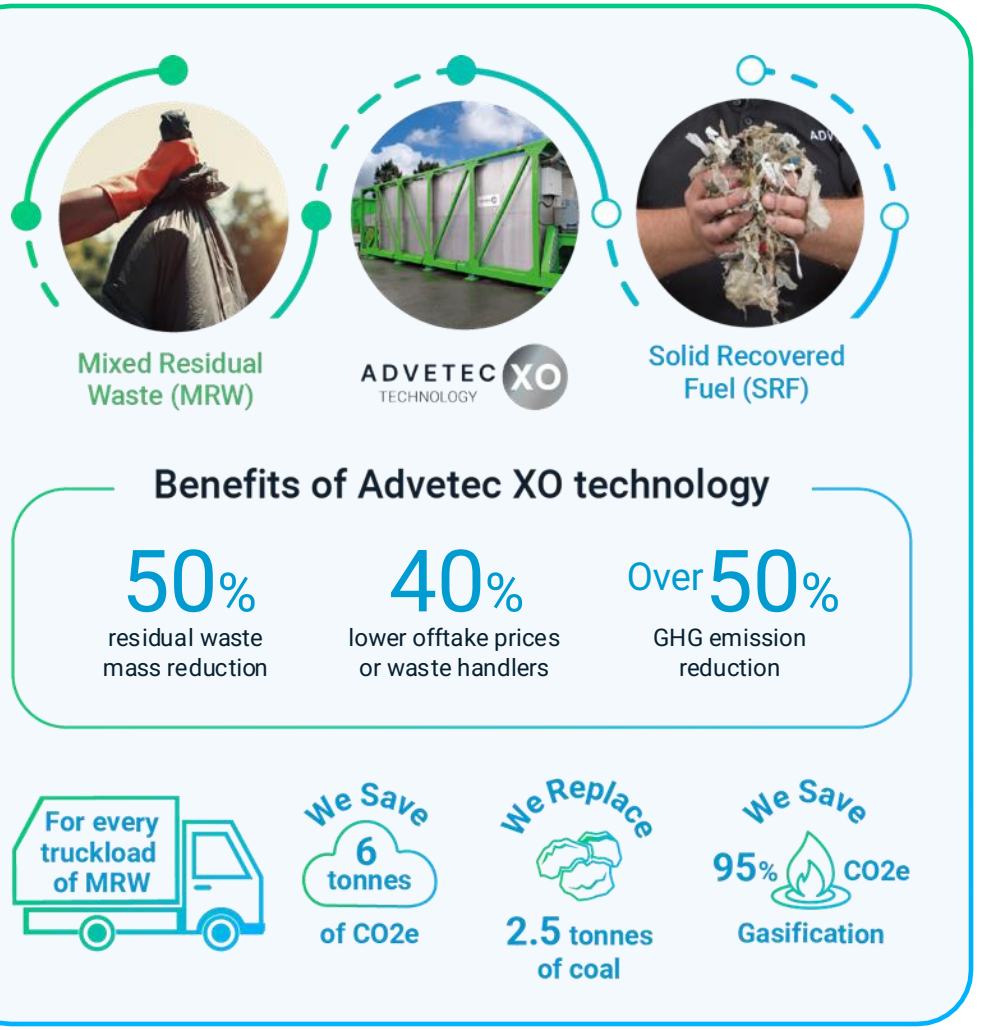
The Benefits of Advetec XO Biotechnology

Clever Biotechnology

Thanks to the **Advetec's blend** of bacteria and biostimulants, organic reduction of waste material can be achieved in just 72 hours, generating zero methane and producing a dry, odour neutral and biologically stable output called Floc.

The output, Floc, can be utilised as **Solid Recovered Fuel (SRF)** to replace coal in energy-heavy industries, gasification, or in chemical mining.





Unlocking Value from Unrecyclable Waste

In October, Advetec and Let's Recycle are bringing together leading voices in the waste industry for our first ever virtual Waste Summit.

If you are interested, please scan the QR code to sign up to receive more information.

Sectors We Work With

- Waste Handlers
- Water Companies
- Universities
- Washroom Waste
- Theme Parks
- Cruise Islands
- Shopping Malls

Creating an offtake network

We work in partnership with our customers to create offtake networks with sustainable aviation fuel manufacturers, cement kilns, co-fired power stations or users, e.g. Suez, Cemex, Geocycle, Fortnum.

We are working with

THE NWH GROUP

Six Flags

Royal Caribbean INTERNATIONAL

GO GREENER WASTE MANAGEMENT

maxrecycle .com Rely and Comply...

JWitt Waste Recycling

COMHAIRLE NAN EILEAN SIAR