

# Argyll and Bute Waste Strategy

## Contents

<b>Glossary of Terms .....</b>	<b>2</b>
<b>Executive Summary.....</b>	<b>5</b>
<b>Waste Policy – Reduce, Reuse, Recycle.....</b>	<b>8</b>
<b>Waste in Argyll and Bute .....</b>	<b>10</b>

## Glossary of Terms

**Anaerobic digestion:** A biological process where biodegradable waste, such as food waste, is encouraged to break down, in the absence of oxygen, in an enclosed vessel. This produces carbon dioxide, methane (which can be used as a fuel to generate renewable energy) and solids/liquors known as digestate which can be used as fertiliser.

**Waste Transfer Site:** A facility used primarily for the storage of recyclate. If required, some material is baled ready for onward transportation to reprocessing plants. The sites have a weighbridge for measuring the tonnage of material that comes in and out of the site.

**Bring Site:** Recycling point where the public can bring material for recycling, for example bottle and can banks. They are generally located at supermarket car parks, Council car parks and similar locations.

**Biodegradable Municipal Waste (BMW):** Biodegradable municipal waste is defined by Regulation 11(3) of the Landfill (Scotland) Regulations 2003 (as amended) as “municipal waste that is also biodegradable”.

Biodegradable waste is “any waste capable of undergoing anaerobic or aerobic decomposition such as food, garden waste, and paper and cardboard”.

Municipal waste is “waste from households as well as other waste which because of its nature or composition is similar to waste from households”.

**Composting:** An aerobic, biological process in which organic wastes, such as garden and kitchen waste, are converted into a stable granular material which can be applied to land to improve soil structure and enrich the nutrient content of the soil.

**Energy from Waste (EfW):** Technologies include anaerobic digestion, direct combustion (incineration with energy recovery), and use of secondary recovered fuel (an output from mechanical and biological treatment processes), pyrolysis and gasification. Any given technology is more beneficial if heat and electricity can be recovered. The Waste Framework Directive considers that where waste is used principally as a fuel or other means to generate electricity it is a recovery activity provided it complies with certain criteria, which includes exceeding an energy efficiency threshold.

**Food waste:** This term refers to the discarded food from households and trade premises e.g. vegetable peelings, tea bags and banana skins.

**Green Waste:** Biodegradable waste that can be composted such as garden or park waste, grass or flower cuttings and hedge trimmings. This is generally disposed of at Civic Amenity Sites or composted at home.

**Civic Amenity Sites:** Site provided by the Local Authority for the recycling of household waste including bulky items such as beds, cookers and garden waste as

well as other recyclables, free of charge. Traders can dispose of recycling at CA sites if they have purchased a permit.

**Landfill sites:** Any areas of land in which waste is deposited. Landfill sites are often located in disused mines or quarries. In areas where they are limited or no ready-made voids, the practice of land raising is sometimes carried out, where waste is deposited above ground and the landscape is contoured around it.

**Low-participating and non-participating households:** Any household that does not, or seldom recycles.

**Municipal Waste:** Includes household waste and any other wastes collected by a Waste Collection Authority (WCA), in this case the Council

**WCA:** A Local Authority charged with the collection of waste from each household in its area on a regular basis. They can also collect, if requested, commercial and industrial wastes from the private sector for a fee.

**Participation Monitoring:** Collecting information to measure the public use of a new kerbside recycling scheme and the effect of communication activities so that the Council can identify and engage with low or non-participating households.

**Pollution:** The introduction of contaminants into the natural environment that have adverse effects on the environment

**Recycling:** Involves the reprocessing of wastes, either into the same product or a different one. Many non-hazardous industrial wastes such as paper, glass, cardboard, plastics and scrap metals can be recycled. Special wastes such as solvents can also be recycled by specialist companies, or by specialist in-house equipment.

**Reduction:** Minimising the amount of material that enters the waste stream through actions such as reuse, cutting down packaging and composting.

**Reprocessor:** A business that carries out one or more activities of recovery or recycling.

**Residual waste:** Term used for waste that remains after recycling or composting material has been removed from the waste stream. Also known as refuse.

**Reuse:** Using a product again for the same or different use

**Commercial Waste:** Waste produced by any premises which are used wholly or mainly for trade, business, sport recreation or entertainment, excluding household and industrial waste.

**Industrial waste:** Waste from any factory and from any premises occupied by an industry (excluding mines and quarries).

**Treatment:** Physical, thermal, chemical or biological processes, including sorting, that change the characteristics of the waste in order to reduce its volume or hazardous nature, facilitate its handling or enhance recovery.

**Waste Electrical and Electronic Equipment (WEEE):** Describes discarded electrical or electronic devices. The definition includes used electronics which are destined for reuse, resale, salvage, recycling, or disposal.

**Waste hierarchy:** Sets out the order in which options for waste management should be considered based on environmental impact. It is a useful framework that has become a cornerstone of sustainable waste management.

**Zero waste:** Zero Waste is a goal that is ethical, economical, and efficient and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use. Zero Waste means designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them. Implementing Zero Waste will eliminate all discharges to land, water or air that are a threat to planetary, human, animal or plant health.'

## Executive Summary

Argyll and Bute Council is responsible for collecting and then disposing of household waste on behalf of its customers across the Council area. In order to provide this vital service across a large and diverse geographic area, a variety of models are in place, which balance local circumstances and needs against the Council's wider obligation to provide best value for the public purse.

The Council empties all household waste bins for Argyll and Bute's 47,000 households, as well as most of the recycling bins. In some areas, we have partnerships in place with local social enterprises who provide recycling collection services on our behalf.

Once the waste is collected, there are different models for its disposal:

- Islands (Tiree; Islay; Jura; Mull; Iona; Coll; and adjacent small isles) – The Council owns and operates its own waste disposal sites on our main islands;
- Mainland and other islands (excluding Helensburgh and Lomond) – On the mainland we have a contract in place with Renewi (formerly known as Shanks) who provide waste disposal services on our behalf. This contract runs until 2026;
- Helensburgh and Lomond – The waste from this area is disposed of at private sites out with Argyll and Bute

There are three major changes on the horizon which will fundamentally change how the council delivers waste services in Argyll and Bute. To manage this change a new Waste Strategy is needed.

**Ban on biodegradable municipal waste (BMW)** – the Scottish Government is introducing a ban on BMW waste going to landfill. This means that all biodegradable waste (such as food waste, garden waste, paper and cardboard) cannot be disposed of in landfill. Currently landfill is the primary means of disposal in the council area for biodegradable items. This change will have significant cost implications for the Council as we will have to transition to alternative ways of dealing with this waste. It remains to be seen whether we will receive any additional funding from the Scottish Government to help us do this.

This strategy also features a section with a detailed description of the current Scottish Government and SEPA positions in regard to the BMW landfill ban. Included in this section is a breakdown by preference balanced against necessity where government support could be sought in order to deliver a cost effective solution for Argyll and Bute. The geography of Argyll and Bute coupled with poor access to offtakers based in the central belt results in disproportionately high transport costs.

**End of waste disposal contract with Renewi** – in 2026, the council's contract for waste disposal with Renewi will come to an end. In advance of the contract ending, we will need to look at the best model for waste disposal in the future. The council will consider a range of options, from in-house waste disposal to a private contract, with various models in between. The council will have to balance the need to provide compliant service against what is cost effective and sustainable for the council in an ever changing financial and policy landscape.

**Deposit return scheme for drinks containers** – The Scottish Government announced in 2017 that it would be looking to introduce a Deposit Return Scheme for Scotland. This proposal has gone out to public consultation, and at present we are awaiting clarity on the timescale for implementation. It is too early to say what the implications of this might be for the council, however it is likely that the scheme could result in a diversion of some recyclate away from kerbside recyclate into the scheme.

With these changes in mind, we need a waste strategy that provides a framework which will allow the council to continue to provide high quality and cost effective waste services on behalf of the people of Argyll and Bute. It is the agreed policy of the council that a goal of the strategy is to focus on complying with the new requirements being introduced by the Scottish Government. As well as looking at solutions to the coming challenges, the strategy identifies at how the council can support the people of Argyll and Bute to Reduce, Reuse and Recycle their waste.

To provide additional context, the Scottish Government's Zero Waste Plan includes the following targets, which increase national recycling targets in stages:

- 50% recycling/composting from households in 2013;
- 60% recycling/composting from households in 2020;
- 70% recycling/composting from households in 2025, and no more than 5% of all waste going to landfill.

Argyll and Bute's overall recycling figure for 2018 was 48.1%. This is up on previous years, and can mainly be attributed to the change to three-weekly bin collections as well as changing national attitudes to recycling.

The main objectives of the Waste (Scotland) Regulations 2012, provide the main legislative context for the delivery of the Council's current waste services:

- The provision of local authority recycling services to domestic properties (free of charge) and businesses (chargeable);
- The separate collection of recyclables;
- Food waste collection to domestic properties (although there is a rural exemption for this);
- Landfill bans by 2021.

National targets are important, but so are the unique issues faced by Argyll and Bute Council, this document looks to provide options that allow the council to comply with regulations and mitigate and increase in costs.

The Scottish Government has preferred collection and treatment technologies detailed in the form of the Household Recycling Charter. For residents this includes weekly food waste collections, weekly recycling collections through a kerbside sort collection (putting recycling in variety of containers and sorting it at the kerbside as opposed to putting it all in one container and sorting it at a recycling facility, which is known as co-mingled collections), and a residual waste collection to suit local needs.

Argyll and Bute has not signed up to the Scottish Household Recycling Charter it is not financially possible to provide this level of service within the council's current financial

constraints, bearing in mind the diversity and size of the council area.

The Waste Strategy details how waste will be disposed of in Argyll and Bute. In particular, this document:

- is a policy which sets key objectives and overall approaches for the reduction of waste across the area;
- Takes into account other upcoming changes such as the introduction of a Deposit Return Scheme for Scotland.

The primary policy objectives of the document include:

- to work with both residents and visitors to the area to raise awareness of the importance of recycling, reducing waste and preventing it in the first place;
- to increase public confidence in the Council's waste services by making high quality information on the recycling process available;
- annual publication and promotions of details on the councils waste performance;
- to enable the Council to meet its current and future statutory requirements;
- to provide a high quality and cost effective recycling service for the Council's customers, both residents and businesses.

There are several potential technical solutions to ensure that the councils waste disposal service complies with these new requirements. The options for each of the current waste disposal model areas are summarised below full details of the solutions including high level cost assessments can be found in the Waste Strategy Action Plan:

#### **Islands (Tiree; Islay; Jura; Mull; Iona; Coll; and Adjacent Small Isles) Model**

Develop waste transfer operations at our island landfill sites. This would be a step-change from the current model where household waste is landfilled and recyclable material is transferred off the islands for recovery via Energy from Waste (EfW). The creation of waste transfer stations would allow the Council to store and bulk transfer recyclable material efficiently.

#### **Helensburgh and Lomond**

Procure access to a waste transfer site linked to a long-term residual waste recovery contract;

#### **Mainland and Other Islands (Excluding Helensburgh and Lomond)**

- a) Evaluate the possibility of converting the existing treatment and landfill facilities to new facilities which will be able to process the residual waste in such a way as to make up to 40% of it inert, with the remainder of the waste processed at Energy from Waste facilities;
- b) Evaluate the possibility of a total transfer model where all residual waste is transferred to EfW plants for disposal.

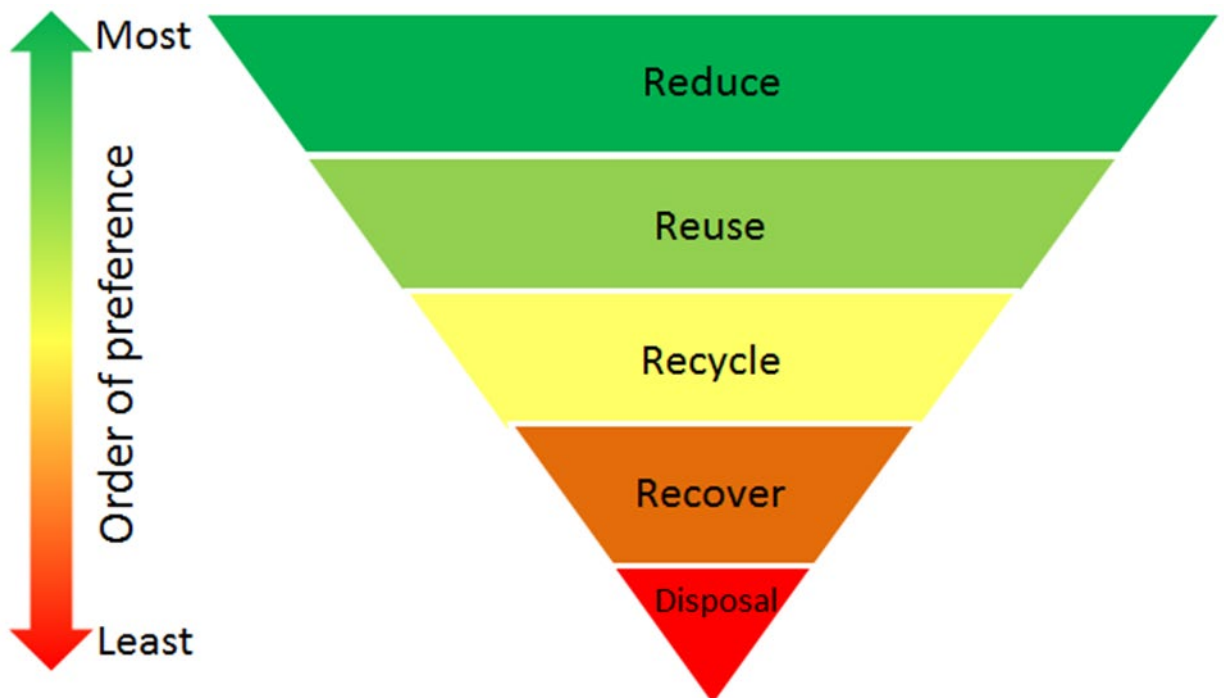
## Waste Policy – Reduce, Reuse, Recycle

At the heart of the Waste Strategy are the principles enshrined in the Waste Hierarchy which is shown in the following graphic. The hierarchy ranks waste management options from best environmental outcome to worst. In doing this, the model takes into account the particular lifecycle of a particular material. This is an environmental assessment against all stages of a product's 'life' – raw material extraction, material processing, manufacture, distribution, use, repair and maintenance and, finally, disposal or recycling.

The easiest way to interpret the waste hierarchy is to say its top priority is in preventing waste. If and when waste is created, next priority goes to preparing it for a reusable purpose, followed by recycling or other recovery method, with disposal (landfill) being the final, and least desired, option.

As a practical example, one tonne of food waste sent to landfill produces 450 kilogrammes of CO<sub>2</sub>e (equivalents) which then go into the atmosphere; whereas preventing one tonne of food waste saves 3590 kilogrammes of CO<sub>2</sub>e. Beyond the significant matter of Green House Gas emissions, selecting waste options higher up the hierarchy also creates opportunities to reduce water consumption, protects important (and finite) raw materials, creates jobs and provides a range of ancillary economic opportunities in recycling and reuse.

### WASTE HIERARCHY



The council, continues to fulfil its statutory obligations to collect and dispose of household waste free of charge. As was normal practice in waste management, much



of this waste was disposed of in landfill. After landfilling, the council continued to manage the material in order to control its environmental impact as far as reasonably practical. In the future disposal via landfill is not a realistic option given the impending ban being promoted by the Scottish Government.

Given the current taxes which are placed on local authorities per tonne of waste sent to landfill, one of the main benefits of placing the waste hierarchy at the heart of the new waste strategy is financial.

The current rate of landfill tax is high and set to increase annually, this tax collected by the Scottish Government from Local Authorities (and companies providing services on their behalf). In 2018 Argyll and Bute sent 32,217.55 tonnes of waste to landfill, giving us a tax bill of £2,865,751.

Proportionally, landfill tax accounts for around 75% of the total cost of disposal via landfill. Increasing the amount of waste diverted from disposal has both cost and environmental benefits.

Beyond the financial implications, sending valuable, reusable materials to landfill is, in the purest definition, a waste of resources. Much of this waste material has the potential to be reused or recycled. Where practicable, disposal and recovery should be the absolute last resort in order to maximised the value of the materials.

The council will work to meet the Scottish Governments Zero Waste and Circular Economy targets by basing our waste disposal services around the Waste Hierarchy. Achieving this objective will have positive effect on the councils Green House Gas output. Through framing the policy initiative on the Waste Hierarchy we will also able to achieve savings as a smaller decreasing amount of Waste goes to Disposal or Recovery (EfW).

Using promotional tools such as Social Media and the Councils Websites as well as direct engagement at events etc. We will educate residents, business, visitors and Council employees on the need to Reduce, Reuse and Recycle following the waste hierarchy to reduce Waste going for either Disposal or Recovery.

The public of Argyll and Bute have a crucial role to play in not only maintaining current recycling and diversion rates levels, but also making positive changes supporting the Councils ability to increase diversion and recycling rates. Strong education and communications will be implemented and sustained with regular refreshes of content to reinforce the waste reduction message. From feedback from the waste strategy consultation it is clear that the public value their waste disposal services and they strongly support all efforts made to promote waste reduction, reuse and recycling. To increase engagement and to support the public's desire to reduce, reuse and recycle we intend to make several improvements to our content:

- Clear unambiguous guidance on what can and cannot be recycled by the council;
- Cradle to grave information on all of our different waste streams, detailing the end destinations of our waste;
- Advice on how to reduce food waste;

- Active promotion of local reuse charities and groups;
- Guidance on beach cleans and marine litter;
- Publication of the council's annual waste performance information.

The council will work with Zero Waste Scotland to improve our waste guidance material. Using Zero Waste Scotland's resources and promotional materials the council will tap into national campaigns promoting Reduction, Reuse and Recycling. Where possible the council will make use of open source/free to use tools to develop and publish promotional content.

Communications will be linked to locality profiles and targeted messages specific to these localities will be used in conjunction with national and authority wide messages. For example Social Media will promote a Zero Waste initiative across the Council area - in turn a local group working in support of that objective in an area would be promoted---- specific neighbourhood may targeted if it the issue/benefit can be localised to a specific area. Education will also continue within the Council, with a particular focus on engaging with staff on both the cost/benefit refuse and recycling and its environmental impact. This staff engagement will increase awareness but should also serve to strengthen and encouraging best practise across the Council.

## **Waste in Argyll and Bute**

Argyll and Bute covers a land area of 2712 square miles (approximately 4.5 times the size of London). The population, from the 2017 mid-year estimates (National Records of Scotland), is 86,810, making it the second largest Scottish local authority by area, but one of the least populated. Over 40% of the population are classified as living in remote rural areas, and with 23 inhabited islands, just over 17% of the total population are islanders. This is a unique mix, which brings its own particular opportunities and challenges.

Waste disposal is carried out via three different models:

- Islands (Tiree; Islay; Jura; Mull; Iona; Coll; and adjacent small isles) – The Council owns and operates its own waste disposal sites on our main islands;
- Mainland and other islands (excluding Helensburgh and Lomond) – On the mainland we have a contract in place with Renewi (formerly known as Shanks) who provide waste disposal services on our behalf. This contract runs until 2026;
- Helensburgh and Lomond – The waste from this area is disposed of at private sites out with Argyll and Bute.

The waste budget for 2019/20 is just over £13.8million, broken down as follows:

<b>Service</b>	<b>Annual Waste Budget 2019-20</b>
Recycling	769,639
Waste Collection	2,269,295
Waste Disposal Islands, Helensburgh & Lomond	2,743,667
Waste Disposal PPP	7,924,431
Waste Management	121,413
<b>Grand Total</b>	<b>13,828,445</b>

Other than the sites operated by Renewi there are no major waste disposal facilities in Argyll and Bute. The majority of alternative disposal sites are located in the Central Belt. These are relatively easily accessible from Helensburgh and Lomond, but are challenging to access from other areas of Argyll and Bute. These alternative sites are a mix of landfill and EfW sites.

In terms of waste collections, the Islands (Tiree; Islay; Jura; Mull; Iona; Coll; and adjacent small isles) and Mainland and other islands model areas have the following collection:

**Residual waste** – three weekly collection cycle

**Co-mingled waste** (plastics, paper, card, cans) – fortnightly collections

Helensburgh and Lomond, because of the requirements placed upon the Council by this area's population numbers, has four collection streams:

**Residual waste** – three weekly collections

**Co-mingled waste (plastics, paper, card, cans)** – fortnightly collections

**Food waste** – weekly collections

**Glass** – four weekly collections

At present there is a food waste exemption within the Waste (Scotland) Regulations 2012 which has a population cap of 10,000. All other major settlements in Argyll and Bute sit well below this level. Based on current census information it is considered unlikely that any other areas will breach the cap before 2031, although this is nevertheless a financial risk to the Council which requires to be actively monitored.

There are just under 100 bring sites across the Council area. These give residents the opportunity to do their own recycling of glass bottles and are a cost effective addition to the kerbside recycling service across the Council area.

Last year Argyll and Bute sent 32,217.55 tonnes of waste to landfill, with the breakdown across the waste model areas as follows:

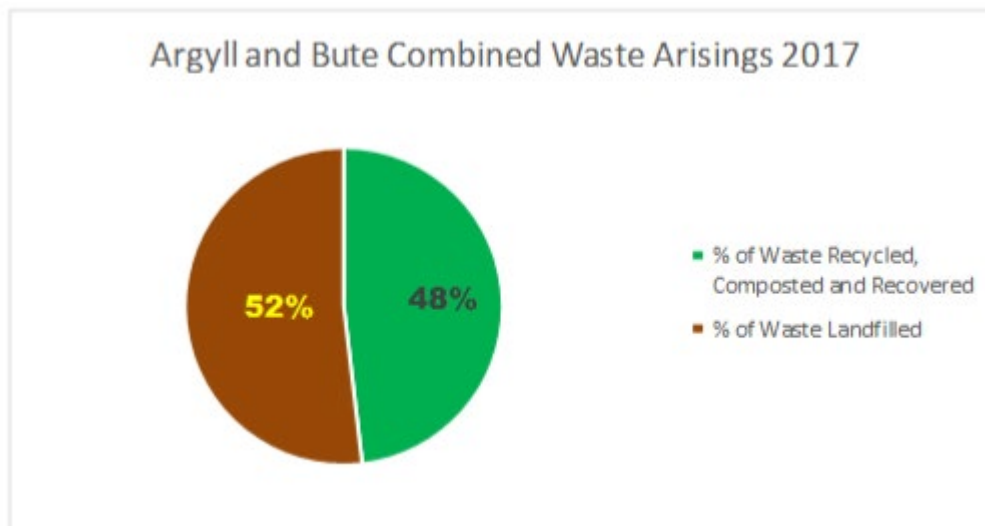
**Islands (Tiree; Islay; Jura; Mull; Iona; Coll; and adjacent small isles) – 3,420 tonnes**

**Mainland and other island areas– 17,500 tonnes**

**Helensburgh and Lomond – 11,300 tonnes**

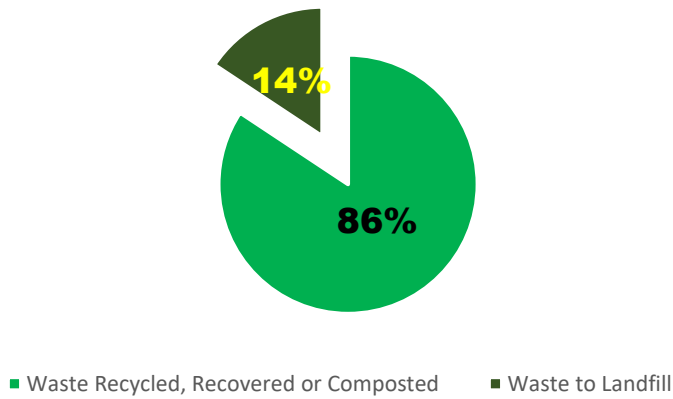
48.1% of total waste in Argyll and Bute was recycled or recovered last year, or 29,902.47 tonnes. There are variances in recycling/recovery performance between all three models as a result of treatment and disposal facilities available in each area. The percentage of waste Recycled, recovered or composted in each of the model areas are as follows:

- Island Model – 33.6%
- Mainland and other island areas - 53.8%
- Helensburgh and Lomond - 40.8%



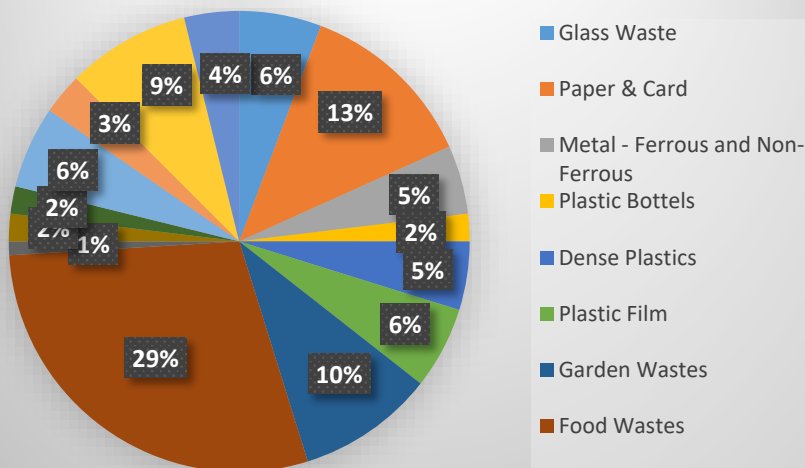
Using current waste figures as a baseline, it is possible to predict the level of remaining waste after the BMW landfill ban comes into effect. This modelling shows that, assuming mechanisms are put in place to meet the terms of the ban, Argyll and Bute will send 14% of its waste (non-BMW) to landfill.

### Waste Disposal Figures Post 2021 BMW Ban



In late 2014, the Council received funding from Zero Waste Scotland to carry out a composition analysis in two areas – Dunoon and Islay. This exercise showed that an average of 42% of the waste placed in the residual waste could, in fact, be recycled, and that on top of this, an average of 30% of the contents of the residual waste/black bin was food waste. This exercise was one of the main drivers for the successful change to three-weekly waste collections, which has encouraged more recycling across Argyll and Bute.

### Combined Waste Composition



As part of delivering this waste strategy, a new composition analysis, to the same format in the same areas, will be carried out, providing fresh data and a means of like-for-like comparisons over changes to service delivery models.

### BMW ban-Technical/Contractual changes

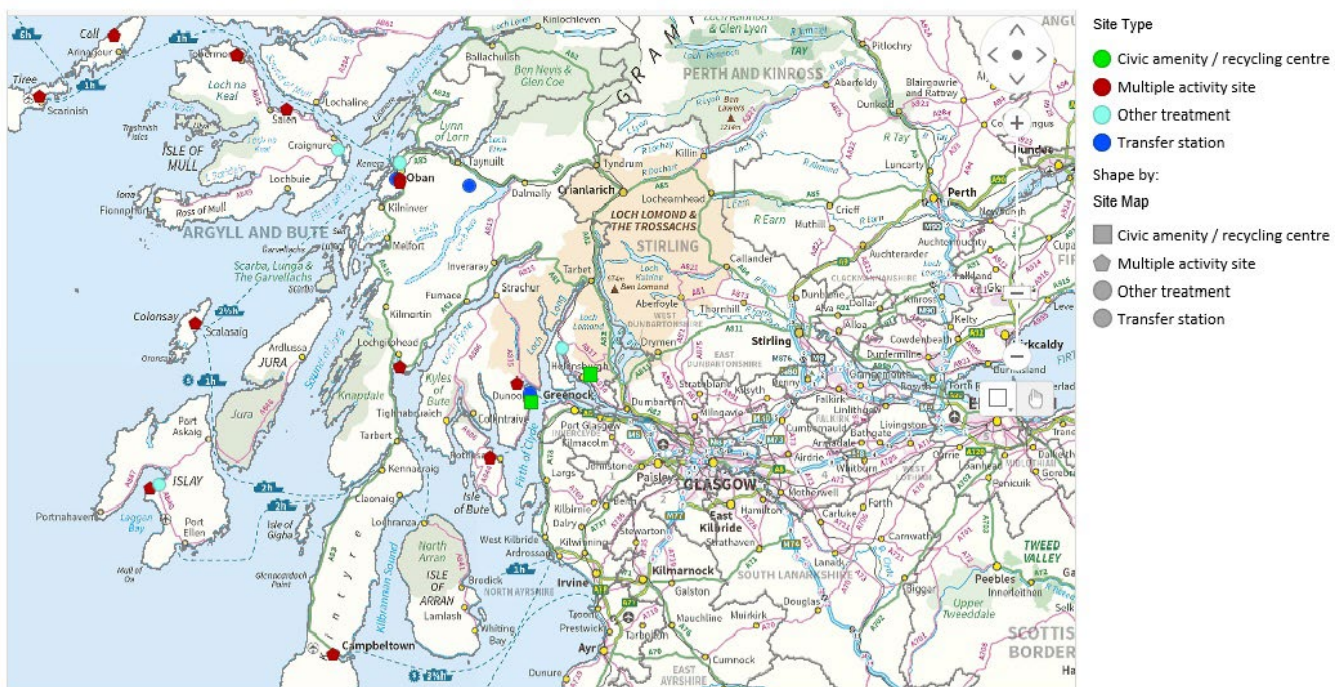
This section of the Waste Strategy covers the options for compliance with the BMW ban for each of Argyll and Bute’s Waste Models. The three Waste Models

and the areas each distinctive in their geography and how Waste in particular residual waste is disposed of. This section will put forward the Technical/Contractual options, highlighting the Cost/Benefit and Risks/Opportunities of each option and the timescale required to deliver it ahead of the ban and any aspects of a proposal that requires Scottish Government support.

The three distinct waste models and the current Waste disposal methodologies are detailed below and feature a map of all Active Waste facilities in the Council area (Table 5):

- Island (Mull, Islay, Tiree) Landfill/Civic Amenity sites which are operated directly by the Council;
- Helensburgh and Lomond where waste is collected and disposed of at third party sites out-with Argyll and Bute.
- A 25 year PPP contract covering the mainland Argyll and the Island of Bute, excluding Helensburgh and Lomond. This contract runs until 2026;

### Argyll and Bute Waste Facility Map



## **Current Scottish Government BMW ban position and Local Government response**

As a result of measures in the Waste (Scotland) Regulations 2012 every local authority in Scotland is obliged to implement a ban on Biodegradable Municipal Waste (BMW) going to landfill from January 2021.

SEPA and the Scottish Government have made it clear that the ban of BMW waste going to landfill will be implemented across all of Scotland with no derogation planned for rural areas including the islands

SEPA and the Scottish Government publically remain committed to the terms of the ban, including its start date. However, Local Authorities across Scotland and the Private Sector continue to lobby the SG in relation to which materials should be included in the BMW ban and on the start date of January 2021.

Biodegradable municipal waste is defined by Regulation 11(3) of the Landfill (Scotland) Regulations 2003 (as amended) as “municipal waste that is also biodegradable”.

Biodegradable waste is “any waste capable of undergoing anaerobic or aerobic decomposition such as food, garden waste, and paper and cardboard”.

Municipal waste is “waste from households as well as other waste which because of its nature or composition is similar to waste from households”. For example food waste from a restaurant would be classified as being BMW.

Biodegradable municipal waste is the largest constituent fraction of our residual waste which is also known as black bag waste this is collected in a three weekly collection from householders green bins across Argyll and Bute

It was made clear by COSLA that the financing of a compliant solutions and lack of Scottish disposal capacity/options are a critical issue for most authorities and that there is still a risk that some authorities will not be in a position to comply with the ban. Argyll and Bute Councils had highlighted the specific rural challenge and impact of introducing ban compliant solutions.

In particular the costly logistical problem of transiting large quantities of residual waste over large distances to disposal sites in the central belt and potentially further afield.

Argyll and Bute Council’s preferred approach with the Scottish Government is to seek additional funding to meet the additional costs of complying with the BMW ban. If the additional compliance costs are not met by an enhanced level of central government funding then the Council will look to secure:

- Phased Landfill Derogations to allow for authorities to access to Waste to Energy treatment options;
- Exemption of some (bulky) waste from the BMW ban;
- Landfill Trading Scheme (Similar to the Renewable Obligation Certificate Scheme) extending beyond the ban start date allowing Local Authorities struggling to have compliant solutions ready for the ban, to continue landfilling for a limited period;
- Preferably total or phased Landfill derogation for rural areas;
- Preferably total or phased Landfill derogation for Island communities.

The Scottish Government response to these proposals asserted that the terms of the ban are fixed and not likely to change. However, that they would consider and work with Local Authorities/COSLA on practical options that would ensure compliance with the ban. It was agreed that a new joint COSLA/Scottish Government working group on the BMW ban would be setup to identify/develop potential solutions. The first meeting of this group is due to take place early in 2019.

The Scottish Government also stressed that working with the Scotland Excel they had provided a brokered solution that is open to any Local Authority. The brokered solution is for disposal only and does not include a haulage element and relies on the export of waste as Refuse Derived Fuel to Europe.

The Scottish Government and SEPA has however conceded that they would look again with COSLA Waste Managers at the Bulky Waste element to see if the current approach is appropriate. It has been proposed that a Bulky Waste code of practice be developed by Local Authorities that would ensure that non-biodegradable bulky waste is separated out at Civic Amenity sites. SEPA have also made it clear that biodegradable animal by-product waste from food production facilities such as Abattoirs are exempt from the ban and can continue to be landfill.

**Islands (Tiree; Islay; Jura; Mull; Iona; Coll; and adjacent small isles) BMW ban solution**



Argyll and Bute Council currently operate two combined Civic Amenity and Landfill sites in the Islands area:

- Gartbreck on Islay – With capacity beyond the 2021 date of the BMW ban;
- Glengorm on Mull – Landfill Capacity to be extended beyond the BMW ban;
- There are also decommissioned landfill operations on Tiree, Coll and Colonsay. These sites are operated as Civic Amenity Sites with the Waste arising transferred to the mainland for disposal.

Currently residual waste containing the BMW element produced on Islay and Mull is landfilled on the islands. Residual waste from Jura and Iona is landfilled on Islay and Mull respectively. The residual waste containing the BMW element is approximately 3420 tonnes (for both Islay and Mull). Residual waste from Tiree, Coll, Lismore, Luing, Seal and Bute are already transferred to the mainland for disposal.

Up to and including 2018 recyclate from bring sites, households and civic amenity sites was sorted, baled and regularly taken off the Islands for sale. Going forward from February 2019 the recyclate material will be changed to a comingled collection and bulked for transport and sorting at Mechanical Recycling facilities on the mainland. This brings this service in line with the other recycling services in the Council. Waste Electrical and Electronic Equipment (WEEE) waste, glass waste and scrap metal waste are also taken off the islands regularly.

An options appraisal study has been carried out to evaluate the options for a ban compliant solution for all our island sites. The options evaluated took into account:

- **Compliance**, Is it compliant and will it deal with all waste materials currently accepted and those included in the BMW ban;
- **Environmental impact**, on both the immediate area but also mainland Argyll and the overall CO2e impact of the solution;
- **Cost**, the Capital investment required to make the change and the ongoing Revenue cost impact once the change is live;
- **Deliverability**, how likely is it that the solution will be ready in time for ban.

The options considered as part of the options appraisal were:

- Conversion of existing Island Landfill sites into Waste Transfer/CA sites only allowing for Residual Waste transfer and recovery at EfW facilities;

- Maintain Island Landfill Sites to support ban exempt material disposal but develop Waste Transfer to allow for residual waste transfer and recovery at EfW facilities;
- Construction of local EfW facilities.

The current landfill cell at Glengorm will be full by the end of February 2019. This had the potential to have a significant impact on Waste disposal operations on Mull. To ensure that the Council waste operation as full flexibility both too:

- Continue to support local businesses that rely on Landfill as the primary disposal method for their non-BMW ban effected Waste streams.
- To accept and Landfill non-BMW ban effected Bulky waste at the CA sites.

There significant exceptions that are exempt from the terms of the BMW ban that can continue to landfilled at our Island sites:

- Animal By-product waste (ABPW), such as fleshing's/abattoir waste/ seafood processing waste;
- Construction and Demolition Waste (CD);
- Non-Biodegradable Bulky Waste from Civic Amenity Sites and bulky uplifts.

It is the case that with both the ABPW and the CD the landfill tax costs of providing this service would be met out of the commercial charging for this service based on Weighbridge information plus administration fees etc. As landfill tax is likely to continue to rise this cost will be passed on to the service user. To mitigate the landfill tax impact of the Bulky waste going to landfill the measures to increase Reuse and to divert from landfill will be crucial.

Residual waste disposal operations through local EfW facilities on our Islands were considered. Ultimately this was rejected as a result of the low quantity of available waste feedstock on the Islands making a local EfW unable to sufficiently achieve an economy of scale. As a result of the high costs of construction and the inability to meet the ban deadline it became clear that local small EfW is a costly and impractical option.

The preferred option for the Island sites is to continue Landfill of the ban exempt materials locally and to construct and operate Waste Transfer facilities to be used in the onward transport and eventual to recover of the residual waste at an EFw facility. One construction options of the Transfer Operation being considered is existing site facilities could be enhanced in order to carry out this

new requirement without the need for the costly construction of new facilities. The cost for conversion of the sites is being developed and will be put forward as part of the works approval process in line with governance procedures. Capital funding has been secured for these works from existing funds set aside for capping and restoration works at our Island sites.

Switching to a transfer operation the Islands' residual waste would bring in an additional haulage and recovery gate fee cost for disposal via EfW. These additional costs would be offset against the saving made in Landfill tax currently sitting at £88.95/tonne. A full breakdown of the costs of the Transfer operation can be found in Appendix 1.

A long term (10 year+) EfW contract in order to secure best value by preventing steep price increases in gate fees. Alternatively the Island tonnage could be folded into a contractual agreement the eventual off taker of Helensburgh and Lomond's residual waste.

Transfer of residual waste from our Island sites will result in the requirement for up to 185 additional ferry journeys by Heavy Goods Vehicles to transport the waste for disposal. This will impact on the already stretched ferry capacity of Calmac, by switching to waste transfer operations the additional haulage requirement will displace other ferry traffic. Waste Disposal is a critical service and in order to avoid disruption and potential non-compliance at our sites the required ferry capacity will need to be secured.

## **Helensburgh and Lomond BMW ban solution**

Argyll and Bute Council's current residual waste disposal contract (including BMW materials but excluding food waste) for Helensburgh and Lomond ends in March 2019, with temporary contract arrangements in place for up to six months. This is an opportunity to comply with new legislative requirements timeously and also ensure that we have secured disposal arrangements for residual waste in a restricted market prior to the landfill ban coming into force.

As with the Island and PPP model areas and options appraisal study has been carried out to evaluate the options for a ban compliant solution. The study used the same criteria as listed in section 7.4 to evaluate the cost/benefit of each solution over its expected lifespan. The evaluation criteria for the ban was:

- **Compliance**, Is it compliant and will it deal with all waste materials currently accepted and those included in the BMW ban;
- **Environmental impact**, on both the immediate area and in overall CO2e impact;

- **Cost**, the Capital investment required to make the change and the ongoing Revenue cost impact once the change is live;
- **Deliverability**, how likely is it that the solution will be ready in time for ban.

The options evaluated in the options appraisal for a BMW ban compliant Residual Waste solution for Helensburgh and Lomond:

- Tender of a EfW disposal contract for Helensburgh and Lomond's residual Waste, supported by the construction of a Waste Transfer Site at either Blackhill CA site or Depot in Helensburgh;
- Direct appointment of the incumbent residual waste contractor;
- Carryout a joint procurement with neighbouring local authorities of residual waste disposal services including access to waste transfer facilities.

The option to construct and operate a Waste Transfer Site at either of the Blackhill sites would require a significant upfront capital investment. Argyll and Bute Taking on the operation of a waste transfer station in Helensburgh would require an uplift in revenue funding to meet the additional requirements of staffing the site and carrying out the operation. This increase in costs would not be offset by any potential saving in vehicle running costs. As a result of the financial burden of constructing and operating this option it is not considered cost effective to pursue this option further. In addition to cost there are also issues around securing planning and regulatory consent for a CA at the proposed locations due to their location and existing design.

The option that offers best total value for money over the longest possible term for Helensburgh and Lomond's residual waste is the proposed joint procurement of residual waste disposal service with neighbouring authorities. Under the proposal it's anticipated that Argyll and Bute would collaborate with West Dunbartonshire and Inverclyde Councils' in the procurement of a suitable contractor; separate contracts will be put in place with each authority.

The initiation of a collaborative tender process for residual waste disposal will ensure efficiency in the provision of this service. This approach supports the corporate procurement strategy and meets the Councils strategic priorities.

Consultation for this procurement requirement has been carried out at officer level with representatives from procurement, legal and waste across the three authorities. There is agreement between officers in all three authorities that a combined procurement is the most cost effective method of delivering this service.

The period of this contract will be for ten years with a five year option to extend. This period was agreed following market research and the need for companies to have contract security to offset major investment in waste infrastructure over a period of time. Shorter contracts are not cost effective as we would likely have to pay a premium on price to ensure that the contract would be sufficiently attractive for a provider to invest in the service.

The overall contract value for the ten years is expected to be affordable within the current budget. The annual anticipated expenditure is based on the tonnage of waste processed, with the forecast of below based on the 2017/18 tonnages.

#### Waste tonnages and estimated costs

Council	Est. Tonnage	Est. Cost
ABC	13000	£1.3m
WDC	40000	£4m
Inver	40000	£4.1m

West Dunbartonshire Council procurement team have led on this process and are advising on all aspects of procurement compliance. Argyll and Bute Council Procurement and Legal teams have also been involved for the start and have ensured that all decisions made represent the interests of Argyll and Bute Council and are in line with agreed policy.

The contract agreement also has the scope to include residual waste from the Island Model area. This would provide Argyll and Bute Council with a secure off taker and allow for the best possible price over the longest term for our smallest tonnage (currently around 3,000 p.a.).

The benefits of taking the joint procurement approach:

- Collaborating with the other two authorities should make the combined requirements more attractive to the market due to the geographical locations of the Council's and aggregated tonnage of waste which should present economies of scale and be more attractive to a wider range of waste processors to allow either inward investment or a haul and treat solution;
- Individual tonnages would itself not be as attractive for new investment or attract a processor willing to haul smaller tonnages;
- By including the requirement for outsourcing and sharing the costs of operating transfer station infrastructure between the three authorities it reduces cost of transport of waste to central belt;
- Collaboration with the other two authorities demonstrates our commitments to collaborative working, sharing best practice and pooling resources;

- The procurement does not impact on staffing numbers and would likely see a reduction in overtime. There would also be no impact on kerbside, civic amenity or bring site waste collection frequency;
- By putting in place a combined contract of significant scale we will be able to secure an attractive price/tonne over the total (potential 15 years) of the contract. If we were to approach the market as a single authority with a small tonnage we would not be able to achieve as low a price/tonne.

We have considered the procurement methodology to be adopted for this procurement and have agreed with the other two authorities that an open tender is most effective and timeous procurement route. We are in a position pending the approval of elected members and signoff of a “Minute of Agreement” that we could go live with the tender, and receive returns and carryout an evaluation with a view to appoint a contractor in Summer of 2019. Interim service arrangements to ensure that Residual Waste obligations are still met will put into place to tie in with the end of the current contract.

## **Mainland and other islands BMW options**

Technologies and processes and systems that could ensure compliance with the ban can be broken down into two categories:

- Waste to Energy (WtE) – Using the waste as feedstock in the generation of heat/ electricity producing an inert by product. Including:
  - Refuse Derived Fuel (RDF) for supply to WtE plant
  - Anaerobic Digestion (AD)
- Composting - Compost is organic matter that has been decomposed in a process called composting. This process recycles various organic materials - otherwise regarded as waste products - and produces a soil conditioner (the compost). Including:
  - Community Composting (small scale In Vessel Composting)
  - In Vessel Composting (IVC)

In both technical options the logistics around the transfer of waste and/or RDF, is a key part of the cost of any solution. Waste Transfer Reception and temporary storage of waste material which is then bulked and transported to a disposal sites remains essential to the process.

As with the other waste model areas an options appraisal study has been carried out to evaluate the options for a ban compliant solution. Unlike the other two model areas the options appraisal process is as yet not complete. This is due to the complexity of the contractual implications and negotiations of changing the terms of a large 25 year PPP contract. The criteria used in the options appraisal are similar to those as listed for the other models (listed in section 7.4 and 8.3)

with the inclusion of evaluation against contract impact and risk. Taken in their entirety the evaluation are intended to evaluate the cost/benefit of each option.

An option that has been excluded from further consideration is building and operating our own large scale EfW plants in Argyll and Bute were considered as an option. However, both EfW methodologies of Anaerobic Digestion (AD) and a Refuse Derived Fuel (RDF) incineration plants would be impractical due to the comparatively low level of feedstock produced in Argyll and Bute and would have to rely on the importing of feedstock to make the EfW process economically and practically viable. In addition both processes produce by products that would require further disposal creating additional liability and cost.

### **Option One MBT to IVC Conversion**

Working with our existing waste PPP partner Renewi we have formed an officer joint working group to explore the potential for a technical solution to the BMW ban that would make use of current disposal facilities at Dalinlongart, Moleigh and Lingerton.

A proposal was put forward by Renewi's technical experts to convert the existing mechanical biological treatment (MBT) plants into IVC plants.

- The 40% would be treated through the IVC process and rendered inert enough (AT4 standard) to be landfilled under the terms of the BMW ban.
- The remaining 60% of the residual waste would either be baled or compressed in to briquettes of RDF. The RDF produced would then in turn be stored in a secure warehouse and then sold on the open market to either domestic or foreign WtE operators.

There are also several issues with the proposed conversion option that should be considered as part of the options appraisal process. These issues can split down into two areas - cost and contractual implications.

There are several cost impacts to be taken into account when evaluating the MBT to IVC conversion option. At this stage of the negotiation there is also a lack of clarity as to where all of the parties' liabilities sit and to what level:

- The conversion costs of switching the operation from MBT to IVC are understood to be substantial. There is also an additional cost for the construction of one or more storage facilities for the produced RDF. It should be assumed at this stage that Argyll and Bute Council would have to absorb the greater part of this cost.
- The operating costs of the IVC/ RDF facilities are as yet unknown. There is a working assumption on the part of Renewi that there would be no significant increase in operating costs versus the current model, however; this is as yet untested.

- There would be the additional cost of transiting residual waste to our sites for disposal at the proposed EfW facilities. Additionally costs for planning and licence changes at facilities would have to be included.
- 40% of the Waste would be extracted and rendered inert. This inert composted element would then be landfilled. This would require maintaining 40% of the existing/planned landfill capacity to meet this requirement.
- The landfill tax for landfilling inert material is currently £2.80/tonne but this is likely to rise however this is a reduction from the current rate for non-inert material of £98.95/tonne.
- 60% of the residual waste would be converted to RDF. This would then be transferred to either facilities in the central belt or in England or Europe for disposal. The gate fee, storage and haulage costs would have to be borne by ABC on top of the costs of the IVC system.

A change of operation of this scale would necessitate a variation of the agreement. Previous variations have been extremely difficult and costly to achieve as any change has to meet with the approval PPP contract funders. A diagram of the structure of the PPP contract can be found in Appendix two of this document.

There is continued risk of contractual liabilities particularly in relation to the end of contract landfill void space requirements. Depending on what option is pursued the amount of void space required will reduce. Currently under the contract Renewi are obliged to provide the Council with sufficient pre-prepared landfill void space for future needs beyond the contract end date. Under the agreement Renewi takes on all of the cost for these works. If the need for this requirement was no longer required then it would in effect reduce the cost liability for Renewi significantly. However, at the BMW ban working group it was agreed between Renewi and Council officers that an equitable solution to the void space issue favouring neither party should be sought as part of ongoing negotiations.

If the Council were to pursue this option it might become necessary to buy the senior debt in the contract with Renewi. This cost is significant and would also see a halt on further PPP support funding from the Scottish Government. Buying out the contract would prevent the involvement of the external PPP contract funders. Buying out the senior debt would also reduce the current Unitary Charge paid to Renewi under the contract, the structure of the PPP contract with details of the funders can be found in appendix 1.

The PPP contract will be coming to an end in 2026. Provision for this contract end date and the future of the operation needs to be built in to any agreement with Renewi on the adoption of this proposed solution. The waste strategy will provide a framework for process of costing and evaluating any future tenders to carry out the IVC/ MBT operation both external and internal with the Council absorbing the operation.



In addition to the issues surrounding both cost and contractual impacts, the technical efficacy of the proposed IVC system will need to be established prior to commitment of both parties to the MBT to IVC conversion.

The testing is focused on establishing if the biodegradable element of the residual waste extracted meets the AT4 respiration standard and is therefore inert enough to be landfilled under the terms of the landfill ban. The cost of the proposed testing is dependent on how much test material can be landfilled as inert material and ranges between £70k and £150k. Prior to any testing approval would be sought from committee. Testing could be potentially funded from funds earmarked for Helensburgh Transfer Station costs that are no longer required. The timescale for the delivery of the testing and analysis of the results assuming an approval will report back by the end of September 19. This is timed with the production of the final waste strategy.

Assuming that the feasibility study was part of the go/no decision, the new changes could be in place within 10-12 months of an instruction to proceed (assuming the permitting process would be twin tracked with construction). Typical duration for the work are as follows:

- Feasibility study and report-3 months
- Planning permission and permitting- 8 months
- Outline design & contractor procurement-3 months
- Detailed design and mobilisation- 3 months
- Site works- 4 months

## **Option Two: Total Transfer Solution**

The proposed IVC solution would extract a limited amount of waste (40%) with the remainder having to transfer for disposal as RDF. The costs for the IVC extraction and landfill would have to be borne along with the haulage cost for the transfer of the waste going as RDF (60%)

It may be more cost effective to improve the network of waste transfer stations by converting the two Landfill sites operated by Renewi. All of the waste would then be transferred to EfW plants/operators direct for disposal.

The cost implications of moving to a Total Transfer solution are significant:

- Conversion costs of the two remaining Landfill sites would be minimal as pre-existing buildings would be used to house the waste transfer operation. Decommissioning and removal/disposal of equipment would be needed to clear sufficient floor space. Reconfiguration of the layout of the buildings using prefabricated concrete walls could be utilised to keep costs at minimal level. The costs of carrying out the conversion to waste transfer sites would be similar or less than the proposed MBT to IVC conversion.

- As with the IVC solution, there is a cost for the EfW disposal gate fee. Unlike the IVC solution 100% of the residual waste be transferred to either facilities in the central belt or in England or Europe for disposal. The haulage and recovery costs from all of the sites to EfW plants would be significant. However haulage costs would be offset against the former operating costs of Landfill including the tax element of around £3m/annum.
- Further savings as a result of the reduced requirement for future Landfill capacity and in turn future aftercare and monitoring costs.

The contractual implications of moving to a to a Total Transfer option are similar to that of the IVC/MBT conversion. Both options feature a significant change in waste disposal operation and require significant capital investment. Therefore a contract variation and potential buy out of the senior debt may still be required.

## Scottish Deposit Return Scheme

In September 2017, the Cabinet Secretary for Environment, Climate Change and Land Reform, Roseanna Cunningham MSP, announced the introduction of a Scottish Deposit Return Scheme (DRS). Zero Waste Scotland has been commissioned by the Scottish Government to develop one or more prototype systems which have been put forward for public consultation with returns due on 25th September. To date there has been no update from with Zero Waste Scotland of the Scottish Government to either COSLA or the public on the results of the consultation.

Zero Waste Scotland has carried out one-to-one interviews with a number of local authorities and with the Waste Managers Network to gather information on local authorities' waste and litter services and are running a number of so-called 'Sector Reference Group Meetings'. This engagement provided an opportunity to inform all stakeholder groups on the range of options, impacts and opportunities arising from the DRS and there is one meeting for each of the stakeholder groups. This has been followed by an open online forum hosted by ZWS, for further input ahead of the formal consultation.

The goals of the DRS in summary from the public consultation on the DRS from July of 2018:

*“Zero Waste Scotland and the Scottish Government have been working to consider the key questions which need to be addressed to ensure that a scheme delivers for Scotland. This work has been guided by four design principles - that a deposit return scheme should:*

- *increase the quantity of target materials captured for recycling;*
- *improve the quality of material captured, to allow for higher value recycling;*
- *encourage wider behaviour change in the use of materials;*
- *deliver maximum economic and societal benefit for Scotland.”*

Omitted from the description is a significant part of the brief that was given to Zero Waste Scotland from the Scottish Government that the DRS should not impact on existing local authority DMR operations. Though there is no direct impact on service such as a reduction of kerbside collections being mandated as part of the scheme there will be various other direct effects of it running in parallel to existing local authority DMR collections. It is expected that the quality of the materials left in the kerbside collection will be poor and therefore not able to attract a high price and not go towards offsetting the cost of collection.

The biggest issue with the DRS is the lack of certainty on the specific elements of the scheme and its operating model and how it will achieve the stated aims of the scheme. What is known is that the scheme will cover all of Scotland. It should be noted that a separate UK Deposit Return Schemes has been proposed. Currently there are no plans to create a single UK wide deposit scheme. However, it is understood that the Scottish Government will engage with other administrations to look at cross compatibility of schemes.

The consultation document on the DRS produced by ZWS has four operating models listed with different variables applied detailing the estimated impact of each model on the Scottish economy. The variables in the proposed consultation models include what materials would be accepted under the scheme but also how the materials would be collected. The question on how the materials would be collected is critical to the costs and benefits secured under the scheme. The options for the models are:

- Option 1: Take back to designated drop-off points, which would involve containers being taken back to a number of large, dedicated locations rather than smaller return points in shops and public places. Materials included: Cans, Glass, Plastic bottles excluding milk and dairy products.  
**Net benefit to the economy over 25 years: £494m, per annum; £617k**
- Option 2 Take back to dedicated drop-off points and some shops, similar to example 1 but with the inclusion of Reverse Vending Machines at some retailers. Materials included: Cans, Glass, Plastic bottles including milk and dairy products, Cartons and single use Cups.  
**Net benefit to the economy over 25 years: £352m, per annum; £440k**
- Option 3: Take back to any place of purchase. Reliant on Reverse Vending Machines being placed in all participant retailers. Materials included: Cans, Glass, Plastic bottles excluding milk and dairy products.  
**Net benefit to the economy over 25 years: £745m, per NPV annum; £992k**

- Option 4: Take back to any place of purchase. The crucial difference between examples 3 and 4 is that the latter includes more materials within its scope and can therefore maximise its NPV. However it remains reliant on Reverse Vending Machines being placed in all participant retailers. Materials included: Cans, Glass, Plastic bottles including milk and dairy products, Cartons and single use Cups.

**NPV over 25 years: £990m, per authority area/annum; £1.2m**

## **DRS impacts**

Unlike the BMW ban where the operations impacts and the compliance costs can be quantified, the DRS proposal is at too early a stage to model impacts with accuracy. Therefore, it is very difficult to predict with what the impacts of the scheme will be. Depending on what options are chosen and how the scheme is implemented will have differing cost impacts?

Of concern is that the scheme operator may see an opportunity as local authorities are the incumbent and largest waste services providers in rural as being best placed to deliver this service on their behalf. In practical terms this makes sense but without additional funding from the Scottish Government local authority involvement in the operating of the scheme is unlikely.

Sighting of Reverse Vending Machines or drop off areas would prove challenging in rural/ island areas due to the distances between return locations. In order to achieve the best materials capture rate for the scheme there would need to be sufficient quantity and dispersal of return locations. In rural areas there are likely to be fewer return points and the distance between them greater effectively disenfranchising some residents from the scheme.

Under the proposed scheme models the products currently offered by local authority catering departments will have to comply with the scheme. This may necessitate Reverse Vending Machines or specific material based collections to be implemented at the point of sale/service. The users of the catering services to participate will have to have their own way to collect the deposits that they have paid by purchasing their beverage. Clear guidance needs to be produced for local authorities on how this will be resourced particularly for rural and island locations. Further consultation with COSLA and Education departments and other stakeholders' needs to be carried out before implementation- to date there are limited details of any such consultation having taken place. This additional consultation should take into account of the potential issues of a cash based scheme operating our facilities, such as abuse bullying and social exclusion. Recognition must be given to the extensive roll out cashless catering that has already taken place in our schools and that opportunity for the DRS to feature as part of that.

The costs for participation in the DRS for business are currently unknown. It is unclear if small business and retailers that rural and island communities rely on for essential services will be mandated to comply with the DRS. These

businesses are already stretched by having large overhead costs in their supply chain and operations.

There is a real risk that the DRS will be another cost with limited benefit to these small businesses particularly if they may have to bear the burden either practically or administratively for the collection and return of scheme materials. Due consideration must be given by the Scottish Government et al. to what businesses may fall within the scope of the DRS model and to the true costs of participation.

Local authorities and bodies such as HIE and Business Gateway provide essential support and advice to small businesses and rural entrepreneurship. These bodies should be directly consulted on the proposed final model of the DRS to ensure that SMEs in rural area get the best advice allowing them to take steps to mitigate the impact of the DRS prior to launch and roll out.

## **DRS Conclusions**

The Scottish Government and its agencies must note the concerns and difficulties faced by rural and island local authorities in delivering compliant waste disposal services. Argyll and Bute Council fully supports the aims and objectives of the Scottish Government's drive to see a zero waste circular economy. Recognition of the unique resource and logistical challenges faced by rural and island authorities in delivering compliant services, though, is critical to delivering a successful national programme.

Similarly local authorities are willing partners that wish to operate compliant waste disposal services. Local authority compliance can be supported by the Scottish Government through a proposed combination of increased or new financial/ practical support and consideration of derogations (both phased and total) dependent on an options appraisal based on best total value.