



# Hamilton Waste

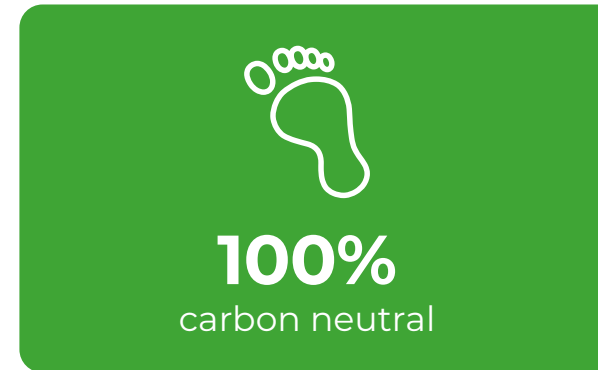
## **Our Commitment**

Our impact in realising the environmental and commercial benefits of the waste we manage





## 2021 Headline Numbers







## Introduction

The media spotlight on environmental issues such as climate change and resource scarcity has resulted in a lot of posturing and bold statements designed more to grab headlines.

At Hamilton, we decided to focus on practical actions we could take to reduce our impact. These cover two main areas:

- **The impact of our own operations – through the collection and processing of customers' waste**
- **Our role as an enabler – the downstream benefits of diverting the waste we process from landfill and using these resources to offset virgin materials**

Whilst we did not want our reporting to get in the way of taking positive action, we do realise the importance of benchmarking our current performance in order to identify potential improvements as well as measuring our progress over time.

We have now published these findings together with detail on what we are already doing to reduce our own impact and realise the environmental and commercial benefits of the waste we manage.

### The Value of Recycling

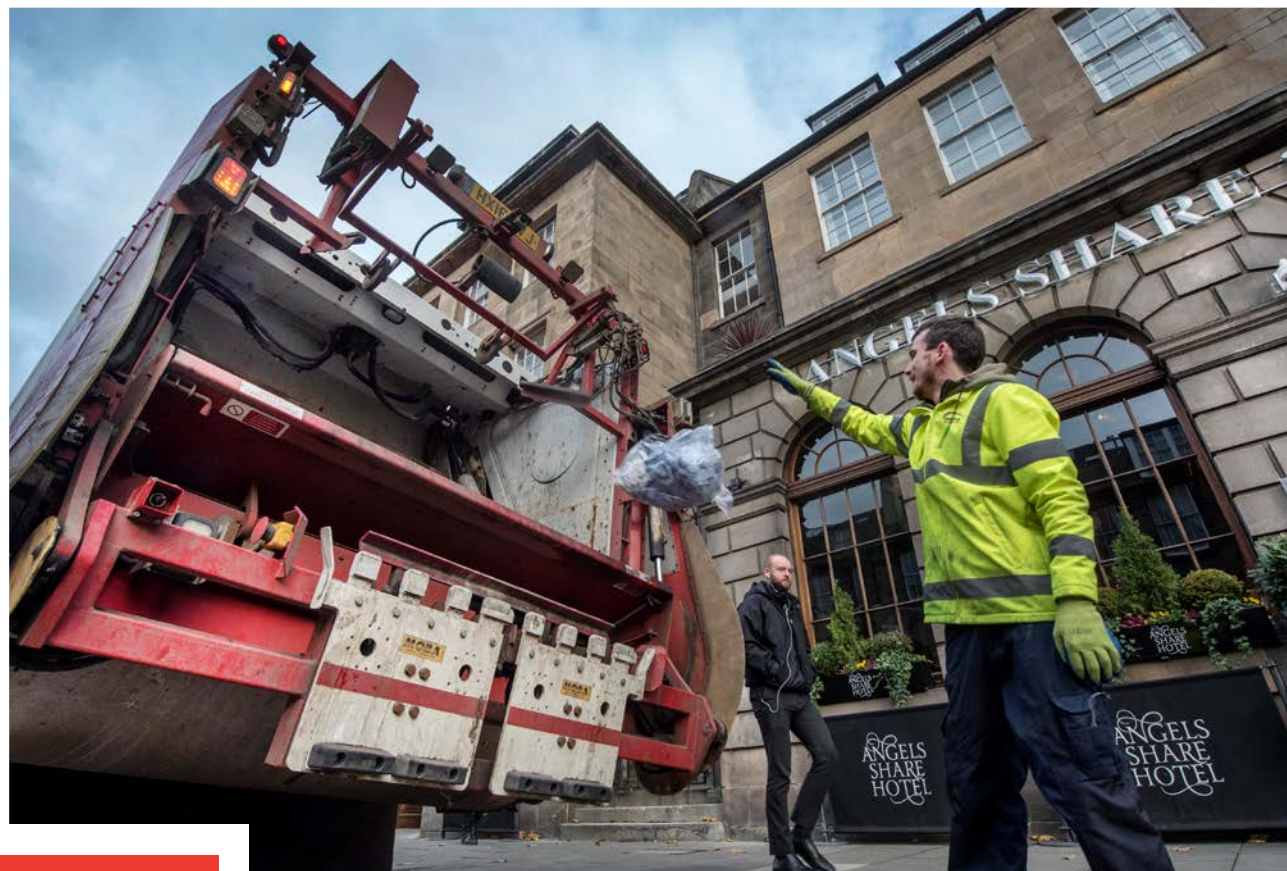
#### Reducing Climate Change

The UK government has set in law the world's most ambitious climate change target - cutting emissions by 78% by 2035 compared to 1990 levels. Our ability to offset traditional fossil fuels and improve our materials management will be key to this being achieved.

Recycling has an important role to play in the battle against climate change through reducing emissions from landfill which includes methane, a greenhouse gas some 25 times more potent than CO<sub>2</sub>. Removing the need for mining, refining or processing raw materials also means recycled products are generally far less energy and carbon intensive.

#### Developing the Circular Economy

The Earth's natural resources are unable to support our current levels of consumption. Recovered and recycled materials such as plastics, paper and cardboard, metals and aggregates can be used to develop more vastly more sustainable supply chains.



## Managing Our Impact

This section details the emissions from and resources consumed by our recycling operations and includes details of our energy, fuel and water usage. Whilst this could be considered relatively insignificant given the benefits of the materials we process, they remain important as we have direct responsibility for managing and reducing them.

### Waste Collection

0.22 litres of diesel per tonne of waste collected

0.01 tonnes of CE per tonne of waste collected

Carbon emissions from the collection of our customers' waste totals 921 tonnes of CE. This takes into account all the emissions from our fleet of waste collection vehicles. We continue to trail the use of fully electric vehicles and will seek to introduce them once they become a realistically cost-effective alternative. Until then, we are reliant on operating modern, fuel-efficient, diesel vehicles.

### Collection Impact Reduction Initiatives

#### Modern Fleet

The efficiency of any vehicle is generally directly linked to its age. As a result, we seek to replace our waste collection vehicles every 5 years. We have also introduced 3 electric vehicles which undertake city centre operations in Edinburgh where emissions are controlled.

#### Route Planning and Optimisation

We use specialist software to map all our collection routes to minimise the distance travelled by our vehicles. This, in turn, minimises fuel consumption and the resulting emissions. Our route optimisation takes into account a range of local factors such as type of road, traffic levels and access constraints

### Waste Processing

6.29KW per tonne CE

0.0037 tonnes of CO<sub>2</sub> emissions per tonne of waste processed

Solar capture over 45% of our total usage

#### Energy Consumption

Waste processing, by its very nature, is quite energy intensive. The high degree of equipment and automation required to efficiently process the amounts of waste we all produce means that electricity consumption is by far the largest contributor to our carbon emissions. We produced over 45% of the electricity used on site via solar energy capture with the remainder drawn from the National Grid as green energy.

Over the last 12 months, 323 tonnes of CE has been produced as a result of processing our customers' waste.

### Processing Impact Reduction Initiatives

#### Source Segregation of Waste

We provide a range of containers to sort as much waste as possible into individual waste streams at the point of production. This reduces the amount of mechanical sorting that is needed at our recycling facility. These containers can be colour coded and labelled to make it easier for people to recycle their waste.

#### Waste Minimisation

The easiest way to cut carbon emissions from waste is to reduce amount of waste that is produced. Our team of account managers continually work with customers to identify where waste can be reduced or eliminated from their businesses.

#### Proactive Maintenance

Our rigorous, preventative maintenance programme helps to ensure all waste processing equipment runs as efficiently as possible. By addressing any potential issues before they result in downtime, we also ensure that the best possible processing option is available.

#### Water Consumption

Water is also used quite extensively in the recycling processes for separating stone and wood. 98% of the water we use is captured and reused on site meaning we only use a very small amount of mains water in washrooms and for drinking.

#### Reducing Waste to Landfill

Reducing waste to landfill significantly reduces the associated emissions and also prevents valuable resources from being lost forever.

Last year, we processed over 87,000 tonnes of waste of which only 1% was sent to landfill. As a result, we avoided 33,000 tonnes of CE.

#### Carbon Offsetting

Whilst our primary focus will always be on eliminating carbon production from our activities, we must accept this will not be possible in the short to mid-term. We also recognise our obligation to minimise the direct impact of our activities, even if the downstream benefits of recycling are hugely carbon positive.

As a result, we took the decision to sequester all of our carbon production through Trees for Life - an accredited offsetting project in the Caledonian forest. In doing so, we became the first Scottish waste management company to be fully carbon neutral. The purchasing of 1300 PIU's from Trees for Life enabled the planting of 5600 new native trees, realising a host of additional environmental, ecological and community benefits.



33,000 tonnes of CE saved by diverting waste from landfill



100% Carbon neutral





## A Key Enabler

We play an important role in supporting other sectors such as manufacturing, energy and construction to reduce their emissions and impact on climate change. These savings are formally reported by the companies using these valuable secondary resources but it is important to note that without the work Hamilton undertakes, this would not be possible.

### Sustainable Fuels

Our fuels displace  
17,000 tonnes  
of coal a year

38,000 tonnes CE savings  
against burning coal  
of the same  
equivalent energy

We produce and supply three different types of alternative fuels to help industry and energy producers offset their use of traditional fossil fuels. Use of these fuels has helped save 38,000 tonnes of CE and meant that over 17,000 tonnes of coal has been displaced.

Industry makes up nearly a quarter of the UK's total CO2 emissions. Over 80% of these emissions originate from generating the heat that is needed for industrial processes such as manufacturing steel, ceramics, cement and lime. By 2050, the Government expects industry to have delivered its fair share of emissions cuts, achieving reductions of up to 70% from 2009 levels.

#### Solid Recovered Fuel (SRF)

Solid Recovered Fuel (SRF) is manufactured from residual recycling fractions which cannot be recovered for use in new products or materials. The material we supply to UK cement manufacturers will play a key role in the sector's ability to meet its targets.

#### Refuse Derived Fuel

The power sector accounts for over 25% of UK total emissions by source. As with industry, alternative fuels are going to play a key role in cutting emission which need to be close to zero by 2050. RDF is produced from residual general waste that cannot be recycled. Using it as a fuel enables its energy value to be captured and diverts it from landfill and the associated emissions.

#### Biomass

High grade wood from our wood recycling process is supplied to the panel board industry to be used in products. Low grade wood is supplied as a fuel to biomass plants for heat and power. This valuable renewable source of energy helps unlock the environmental and commercial benefits of biomass.

### Secondary Resources

The reuse of recovered and recycled resources is vital in us being able to meet our future demand for products and materials. Scotland has been at the forefront of the circular economy and we recognise that the waste and recycling sector is a vital enabler in its development.

We collect, process and supply a range of recycled materials. These are primarily used in manufacturing and construction and include:



Ferrous metals

Glass



Paper & Card

Plasterboard



Aggregates

Plastic



## Always Working to Improve

### Our Commitment

In our first year, we committed to understanding the impact of operations, both positive and negative, in relation to climate change and resource management.

As a result of this work, we have been able to produce a set of clear and measurable objectives. Firstly, we will:

- Further reduce the direct emissions for which we are responsible by 5%
- Increase the environmental and economic value of recovered resources
- Increase production of sustainable fuels
- Better understand our own downstream CE impact from transporting material to processing facilities
- Install a wash plant to capture all sand, stone and gravel for use in the construction sector



## About Hamilton Waste

Family-owned Hamilton Waste & Recycling was founded in 2002 and operates a fleet of waste and recycling vehicles in and around Edinburgh. In recent years, the company has invested over £10 million in its award-winning recycling facility in Musselburgh.

Waste that cannot be recycled is used in the production of waste derived fuels which in turn, are used to offset traditional fossil fuels. Hamilton Waste remains committed to investment in its own recycling facilities and the continued development of partnerships with like-minded businesses to help develop a more resource-efficient Scotland.

## Get in touch

For any questions or enquiries regarding Hamilton Waste services or to book a collection, please contact:



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