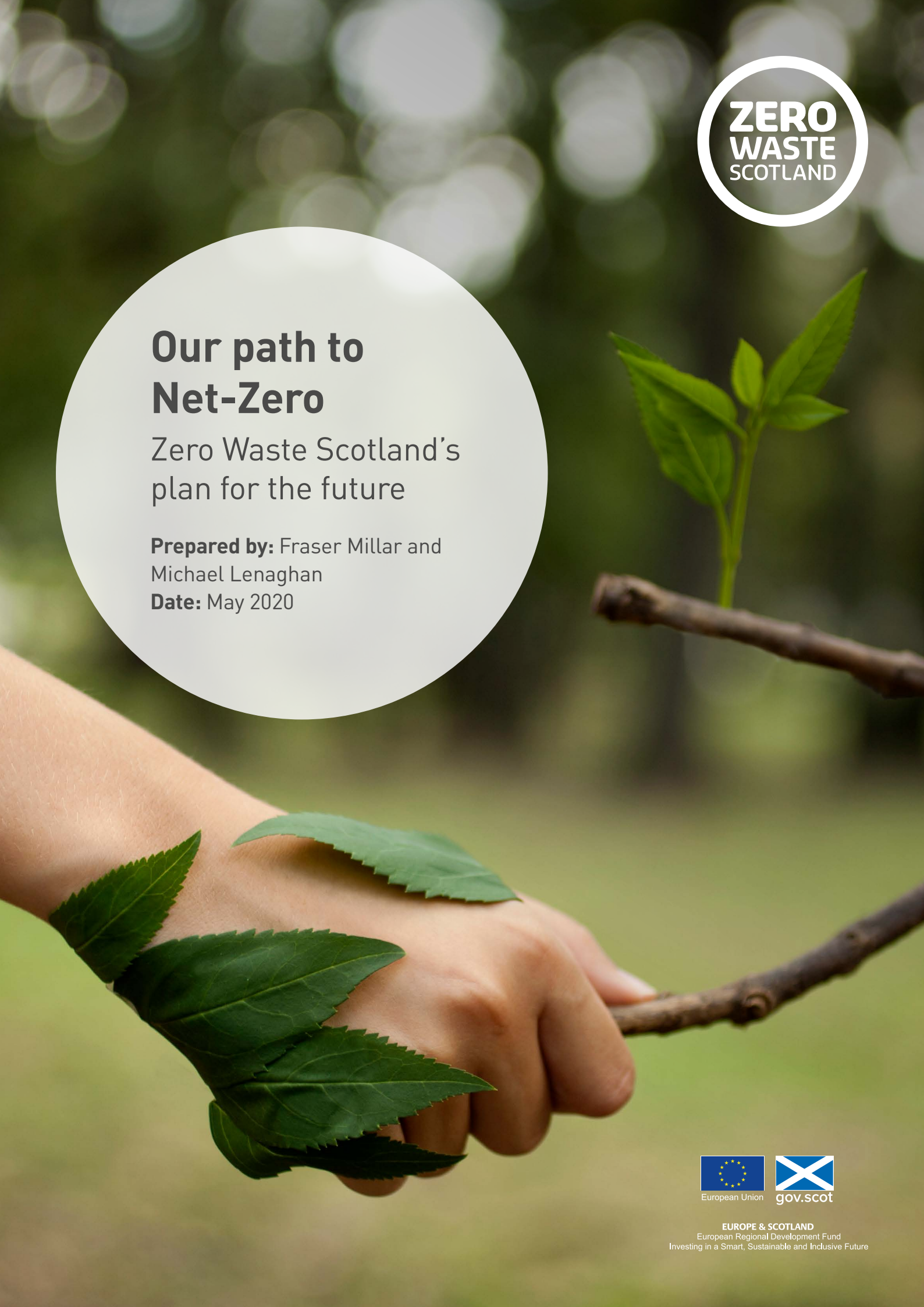

ZERO WASTE SCOTLAND

Our path to Net-Zero

Zero Waste Scotland's plan for the future

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Investing in a Smart, Sustainable and Inclusive Future

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1 Foreword

The world faces a climate emergency and to solve it, public and private sector organisations all need to understand and reduce their climate impacts.

'Net zero carbon' targets have emerged at all levels to galvanise and guide this global effort. However, not all net-zero plans are created equal, or have equal value for protecting the planet.

Through our partnerships and discussions with other expert groups and stakeholders throughout Scotland, it is clear many public and private sector organisations want to play their part to fight climate change but need some guidance on how best to do that.

With the publication of 'Our Path to Net-Zero', we not only plot out our own journey towards a zero emissions future, but provide a blueprint which other organisations can follow as they seek to do the same.

Our strategy is founded upon five key principles which together, aim to shape a coherent, climate-conscious approach to net-zero:

1. Net-zero strategies must be evidence-led
2. They must achieve absolute emissions reductions
3. They must prioritise emissions reductions over offsets
4. Beyond net-zero, organisations must take responsibility for their whole carbon footprint
5. To accelerate change, we must share our successes and failures

Using Zero Waste Scotland's 2018/19 emissions data as a baseline, this plan commits us to a series of measures which combined, are expected to almost halve our operational emissions from electricity, heat, waste, water and corporate travel by the financial year 2022/23.

It also makes clear the need for all organisations to go beyond the limited scope of conventional net-zero plans, to take responsibility for measuring and reducing their entire carbon footprint.

Like most organisations, our understanding of our entire carbon footprint remains incomplete. Where our carbon impacts are already known, this document presents our plans to reduce them. Where they aren't, it details our plans to measure them, so we are able to undertake evidence-based reduction measures in future.

Our Path to Net-Zero will lead our journey towards zero emissions, providing a path that others may follow, while supporting the Scottish Government's bold and vital aim of ending Scotland's contribution to the climate crisis by 2045.

Iain Gulland, Chief Executive,
Zero Waste Scotland

2 Five key principles to make net zero work for the planet

The world faces a climate emergency and to solve it, countries, businesses and the public sector must all do their part to reduce their climate impacts. Net-zero carbon targets have emerged to galvanise and guide this global effort at all levels, from countries and cities to businesses and the public sector.

However, we need to ensure the net-zero strategies we create have real and lasting climate benefits. For this reason, Zero Waste Scotland has built its plan upon five key principles which we believe should form the foundation of any net-zero plan. These are:

2.1 Be led by evidence

To work out how to reduce our emissions we first need to measure them and identify their cause. Establishing systems to measure and monitor the different sources of emissions within any organisation provides accurate data to help identify hotspots and target efforts where they will have the greatest impact.

It also allows organisations to evaluate their progress and communicate that to others, including staff and government. To identify their emissions, organisations should take the following four steps:

1. Baseline measure and record carbon emissions to identify key sources

2. Intervene develop and implement plans to reduce emissions from key sources

3. Monitor keep measuring to assess the impact of actions taken

4. Repeat continue this process to ensure constant improvement

2.2 Achieve absolute emissions reductions

Solving the climate emergency requires all organisations to reduce their total emissions, regardless of rising staff numbers or other operational expansion.

2.3 Prioritise reducing emissions over offsetting

We cannot offset our way out of the climate crisis. While some offsets will be required to achieve net-zero, they are a means of easing the transition towards low carbon operations - not to avoiding this transition altogether. Net-zero plans must prioritise reducing emissions over offsets, despite the higher financial cost which that brings, and reduce reliance on offsets, in absolute terms (tCO_2e), year on year. Additional funding for the public sector will be required to finance emissions reduction measures to ensure these do not eat into service budgets.

2.4 Go beyond net-zero to tackle whole carbon footprint

An organisation's carbon footprint is the total amount of emissions it produces through its own operations, as well as those produced across its supply chain, regardless of where in the world these emissions occur. While the latter lie outwith the scope of net-zero strategies, organisations still have the power - and the responsibility - to account for, and reduce, their entire carbon footprint.

2.5 Share successes and failures to accelerate change

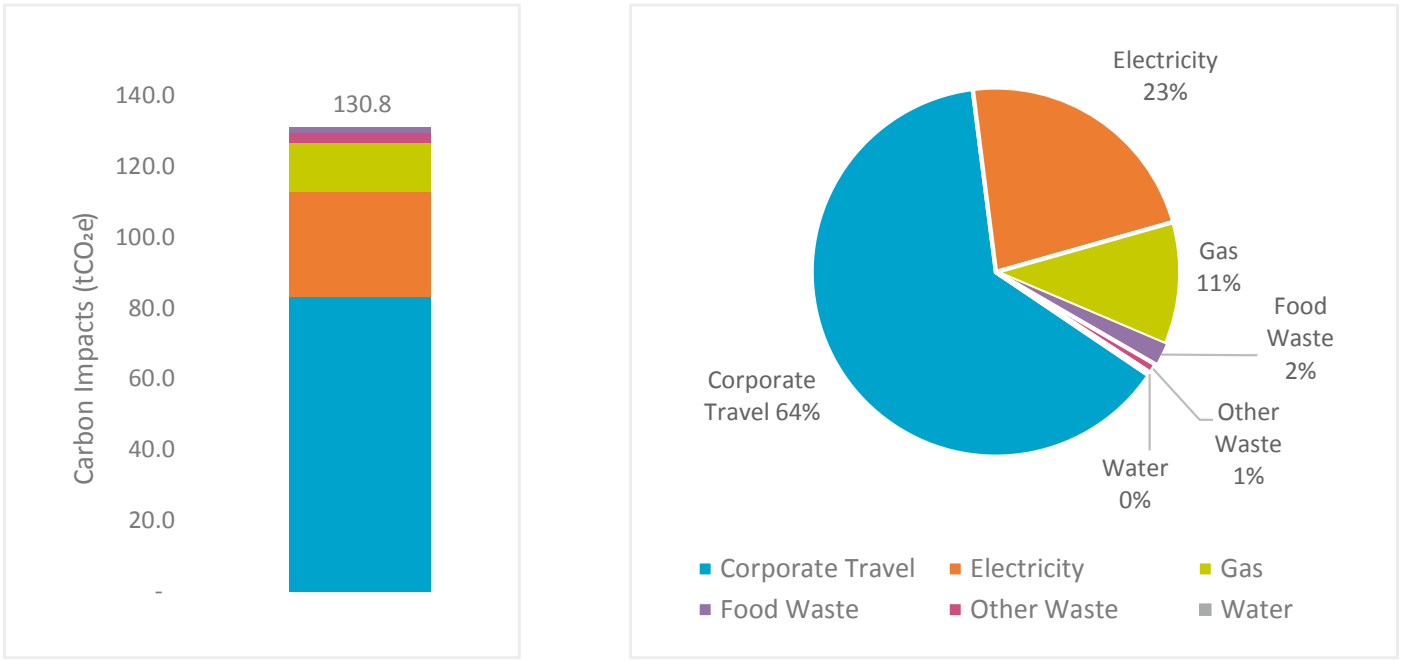
The path to 'net-zero' requires new and bold ideas, some of which may not be successful. By sharing failures as well as success stories we can increase the rate of change, allowing others to avoid repeating the things that do not work, and to easily replicate those which do.

3 Our 2018/19 Emissions Baseline: 130.8 tCO_2e

Every organisation needs a system for measuring its operational carbon emissions (electricity, gas, waste, water and corporate travel). The greater an organisation's understanding of how, why and where its emissions occur, the greater its ability will be to develop and evaluate targeted reduction measures.

Zero Waste Scotland's 2018/19 baseline operational emissions (from electricity, gas, water, waste and corporate travel) were 131 tCO_2e. The majority were caused by corporate travel, electricity and gas which combined accounted for 97% of our total emissions[1].

Figure 1. 2018/19 Baseline operational emissions



3.1 Corporate travel: 83.1 tCO_2e (64%)

3.1.1 How we measure our corporate travel emissions:

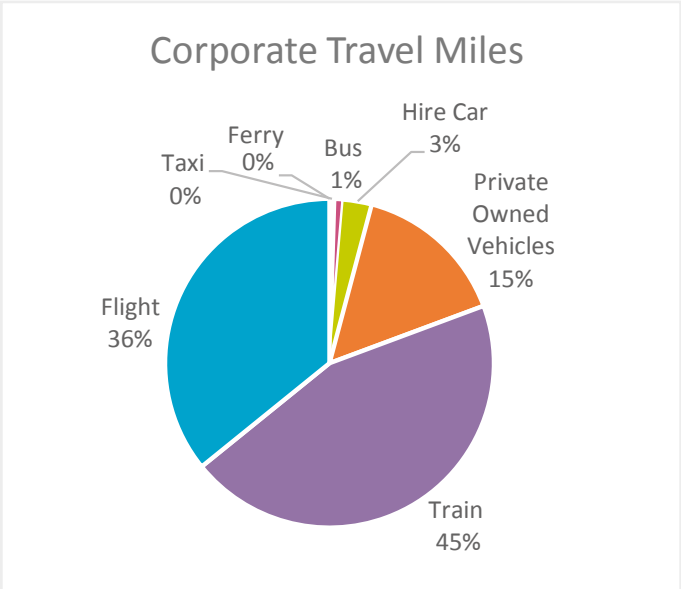
All our staff corporate travel claims record the mode of transport used and trip distance. Emissions are calculated using conversion factors provided by the UK Department for Business, Energy and Industrial Strategy (BEIS) for the corresponding year.

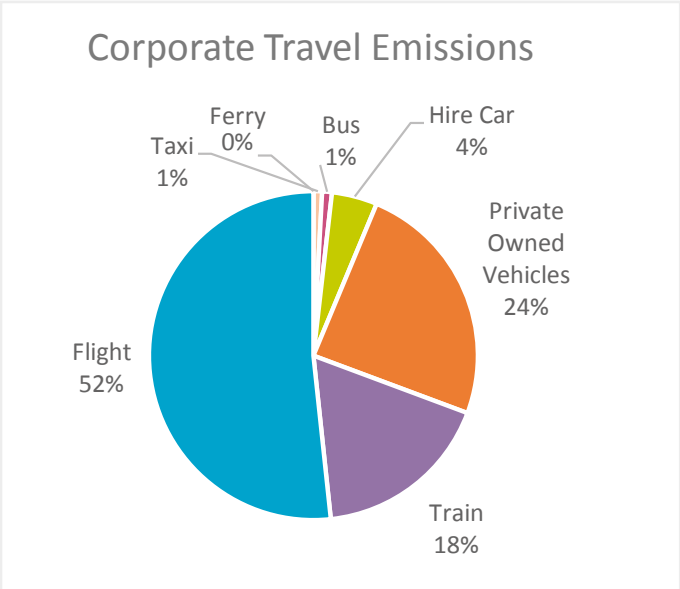
3.1.2 Impact breakdown:

In the baseline year, flights accounted for 36% of all corporate mileage and 52% of associated emissions. Trains made up 45% of all travel, but just 18% of our corporate travel emissions. Private vehicles accounted for 15% of mileage and 24% of emissions. Flights and private vehicles combined accounted for 76% of all corporate travel emissions.

[1]Note that percentage impacts do not total 100% due to rounding.

Figure 2. 2018/19 Baseline corporate travel



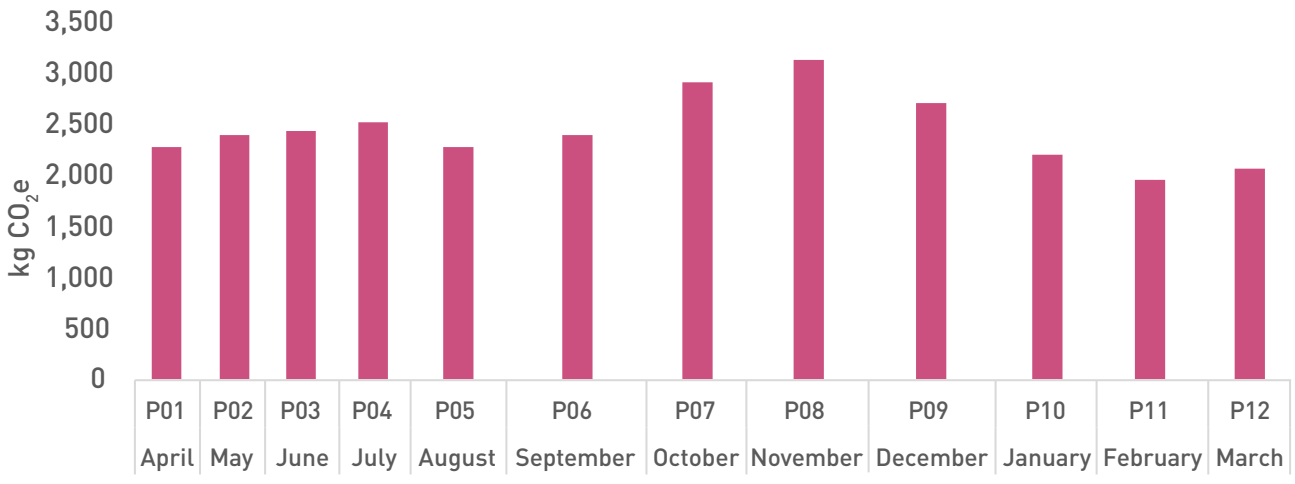


3.2 Electricity: 29.6 tCO_2e (23%)

3.2.1 How we measure our electricity emissions:
Our headquarters occupy portions of two neighbouring office buildings. In one, a real-time electricity monitor records daily consumption. In the other, monthly meter readings for the whole building are apportioned to Zero Waste Scotland based on relative occupancy rates. This is converted to emissions using the BEIS conversion factors for the corresponding year.

3.2.2 Impact breakdown:
Electricity emissions were slightly higher in winter months corresponding to greater lighting requirements, with a notable drop in December when the offices were closed over the holiday period.

Figure 3. 2018/19 Baseline electricity emissions

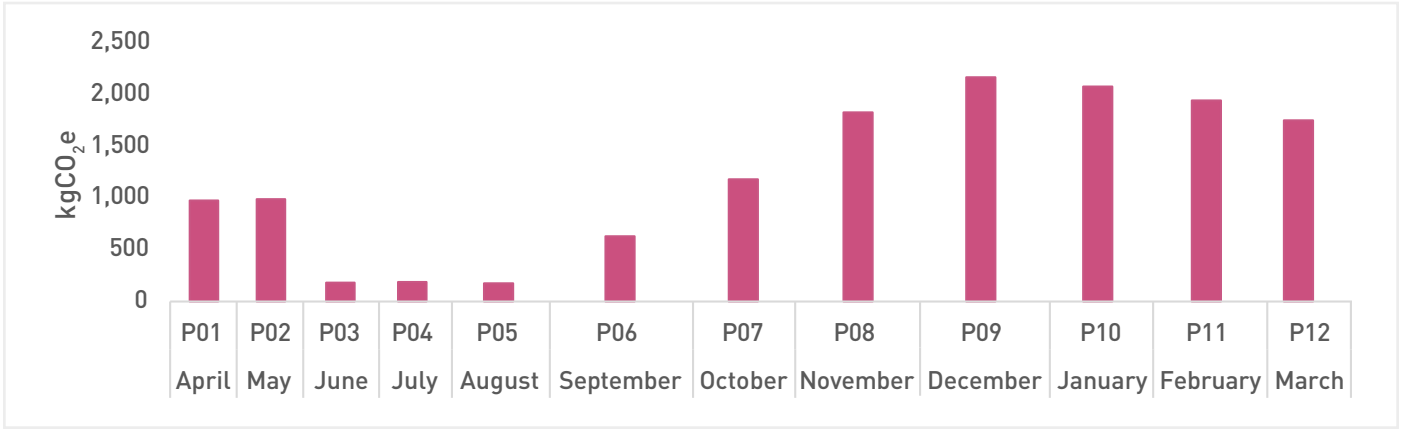


3.3 Gas: 14.1 tCO_2e (11%)

3.3.1 How we measure our gas emissions:
In one building, monthly gas use is recorded from a dedicated gas meter. In the other, monthly meter readings for the whole building are apportioned to Zero Waste Scotland based on relative occupancy rates. This is then converted to emissions using the BEIS conversion factor for the appropriate year.

3.3.2 Impact breakdown:
Our gas emissions are subject to high seasonal variation corresponding with outdoor temperatures. A base level of gas throughout the year is used to heat water.

Figure 4. 2018/19 Baseline gas emissions

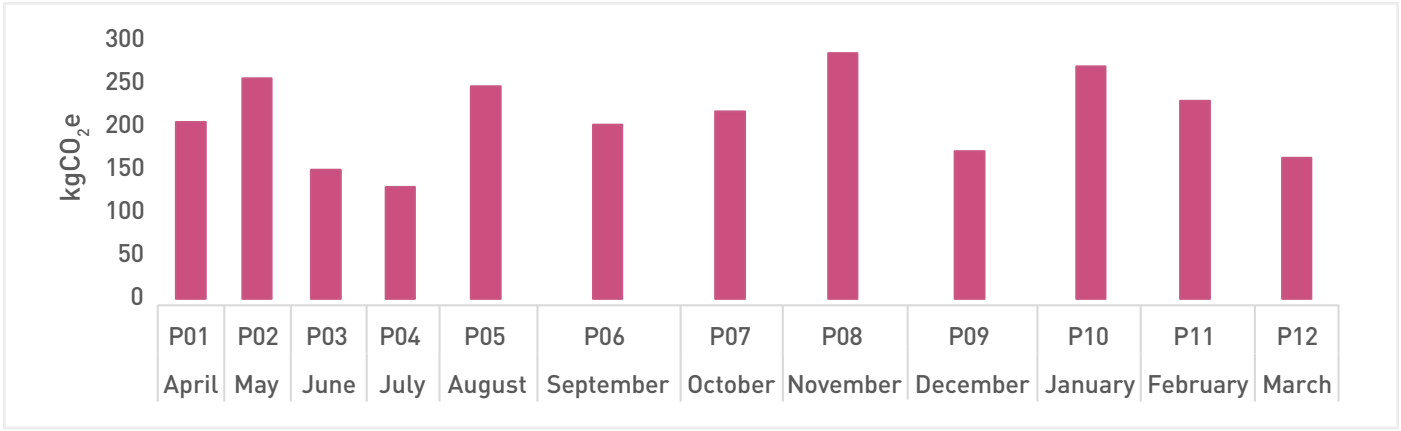


3.4 Food Waste: 2.5 tCO_2e (2%)

3.4.1 How we measure our food waste emissions:
Food waste caddies are located in the kitchen areas of both the offices where Zero Waste Scotland has its headquarters. When the caddies are full, staff are required to weigh and record the weight of the food waste on electronic scales before emptying it into an outdoor food waste bin. This is converted to emissions using food waste factors from our Scottish Carbon Metric which measures whole-life emissions from waste.

3.4.2 Impact breakdown:
Food waste includes both unavoidable waste (such as banana peel and tea bags) and avoidable waste (edible but uneaten food). Unavoidable food waste levels are correlated to office occupancy.

Figure 5. 2018/19 Baseline food waste emissions



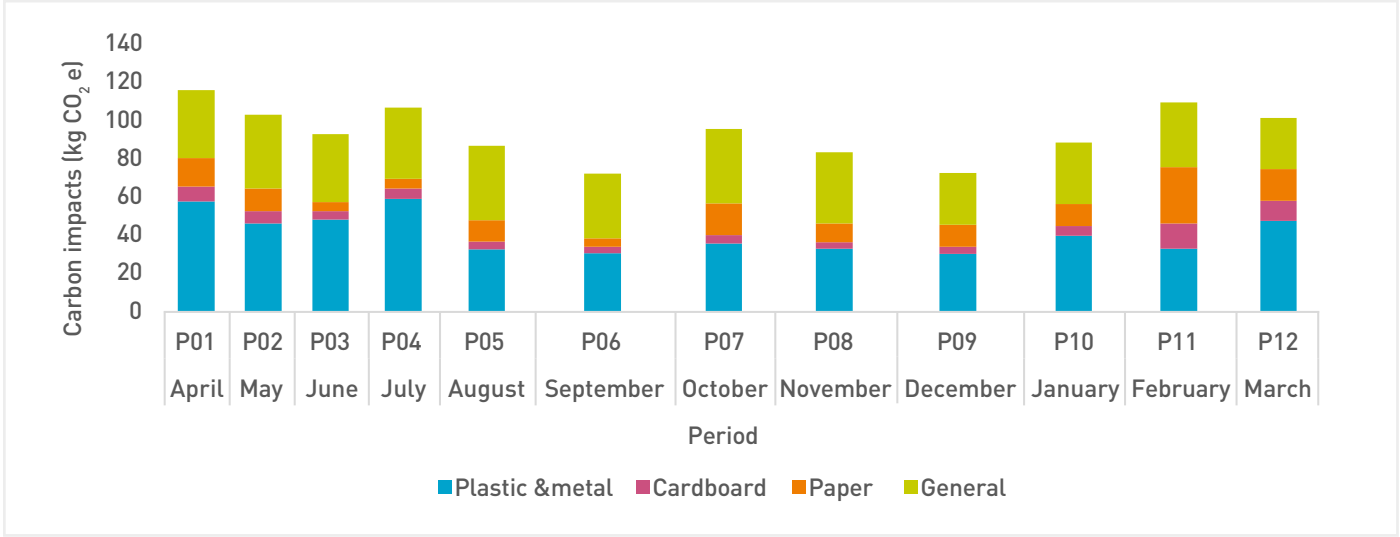
3.5 Other Waste: 1.1 tCO_2e (1%)

Other waste, such as paper, plastic and general waste generated 1.1 tCO_2e, or 1% of our total carbon footprint.

3.5.1 How we measure our other waste emissions:
There are bins in both Zero Waste Scotland's headquarter buildings for paper, cardboard, plastic, metal and general waste. Bin weights are recorded weekly prior to collection, with periodic waste audits to determine the composition of mixed waste. This is converted to emissions using corresponding material factors from our Scottish Carbon Metric.

3.5.2 Impact breakdown:
In the baseline year, plastic and metal waste accounted for 44% of total other waste carbon emissions. General waste was responsible for 37% of the impact of other waste, with paper and cardboard accounting for 13% and 6% respectively.

Figure 6. 2018/19 Baseline other waste emissions



3.6 Water: 0.3 tCO_2e (0.2%)

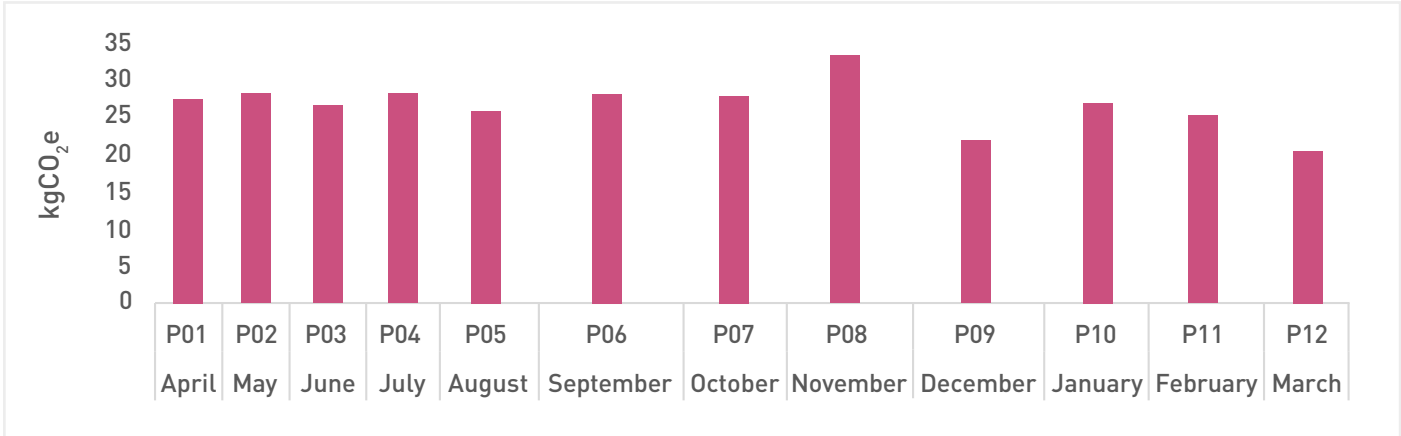
3.6.1 How we measure our water emissions:

In one building, monthly water use is recorded from a dedicated meter. In the other, monthly meter readings for the whole building are apportioned to Zero Waste Scotland based on relative occupancy rates. This is then converted to emissions using Scottish Water's latest conversion factor.

3.6.2 Impact breakdown:

Water consumption and carbon impacts result from kitchen and bathroom use and are correlated to office occupancy, remaining relatively stable throughout the year.

Figure 7. 2018/19 Baseline water emissions



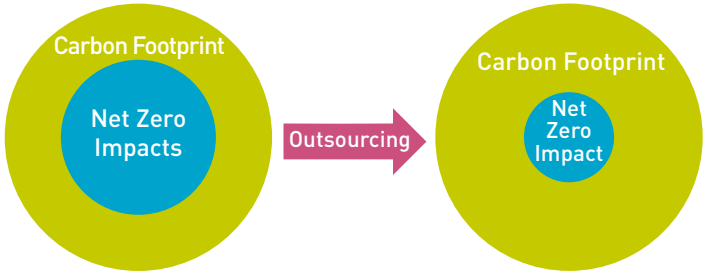
4 Our plan to cut emissions by 45% by 2023

Once an organisation has put in place an emissions monitoring system and established its baseline, it can develop an evidence-based, targeted net-zero strategy.

Zero Waste Scotland's baseline shows corporate travel, electricity and gas account for 97% of all our operation emissions. Accordingly, a range of measures have been devised to reduce emissions from these sources.

Combined, the measures outlined in this report are expected to cut Zero Waste Scotland's emissions by 45% (59 tCO_2e) below 2018/19 baseline levels[2] by the financial year 2022/23, (Table 1) inclusive of rebound[3] and outsourced emissions (Box 1).

Box 1 Carbon impacts: outsourcing vs actual reduction



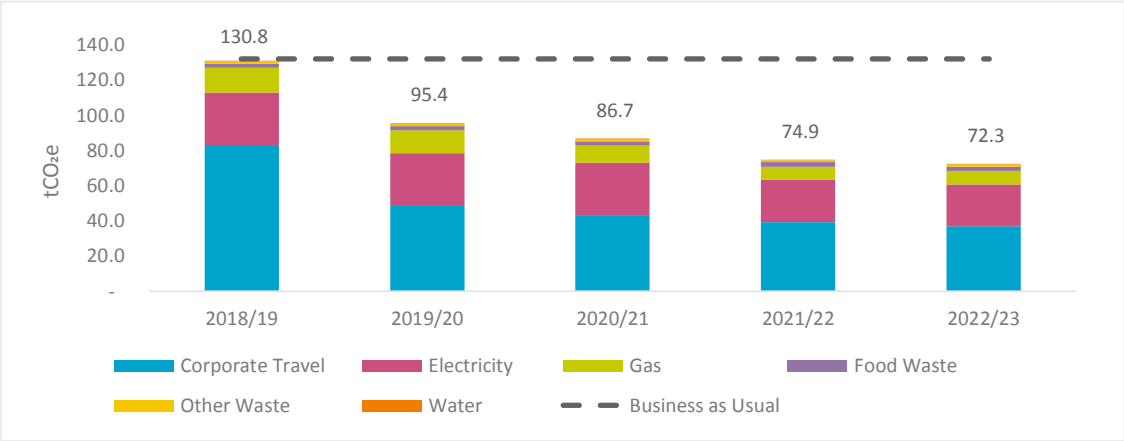
Outsourcing Emissions: Since net-zero strategies only cover operational emissions, organisations can progress to net-zero by simply outsourcing operations to their supply chain, leaving their carbon footprint unchanged. Net-zero strategies must account for outsourced impacts to avoid miscounting them as real emissions savings.

Table 1. Estimated operational emissions savings in 2022/23 relative to 2018/19 baseline[4]

	2018/19 Baseline		2022/23 Forecast		Reduction	
	$kgCO_2e$	Share of total	$kgCO_2e$	Share of total	kg CO_2e	Percentage
Corporate Travel	83,130	63.5%	36,747	50.8%	- 46,383	- 56%
Electricity	29,620	22.6%	24,034	33.2%	- 5,586	- 19%
Gas	14,100	10.8%	7,546	10.4%	- 6,554	- 46%
Food Waste	2,530	1.9%	2,530	3.5%		0%
Other Waste	1,130	0.9%	1,130	1.6%		0%
Water	320	0.2%	320	0.4%		0%
Total	**130,830**	**100%**	**72,308**	**100%**	**- 58,522**	**- 45%**

[2] Carbon savings from ongoing decarbonisation of the UK grid, transportation, etc, are excluded.
[3] Rebound occurs when actions to reduce emissions in one area result in additional emissions elsewhere. For example, opening a satellite office to reduce commuting impacts will increase gas and electricity use.
[4] Note: Percentages are rounded and therefore do not equal 100%.

Figure 8. Operational emissions savings forecast to 2022/23

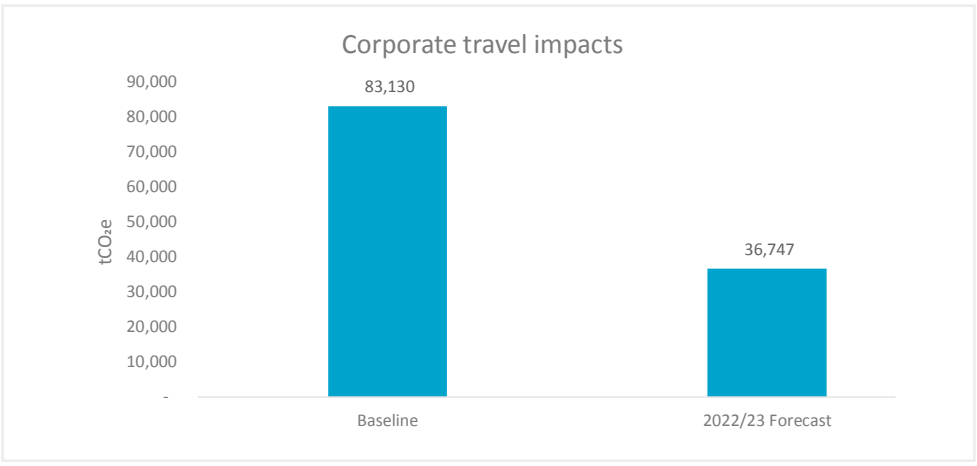


The carbon impacts of Covid-19 Lockdown

In response to the Covid-19 pandemic, Zero Waste Scotland closed its offices and adopted 100% homeworking in the latter half of March 2020. We estimate this reduced our carbon footprint during the final 2 weeks of Q4 by ~26%, largely by eliminating commuting, and to a lesser degree, corporate travel, despite increased home heating and the embedded carbon from one-off procurement of home office equipment. As a result, the 2019/20 emissions data presented in this report is slightly overestimated. We will update our figures once we are able to verify our estimates. In the meantime, Zero Waste Scotland is actively considering operational changes to retain these carbon savings once lockdown is lifted.

4.1 Corporate travel: 56% reduction

Corporate travel is a key component of Zero Waste Scotland's work however, digital solutions and modal transport shifts can deliver significant emissions reductions. Reduction measures focus on reducing flights and private vehicle use, as these constitute 76% of baseline travel impacts.



2018/19 Baseline ($KgCO_2e$)	**83,130**
Cap & reduce total flight miles by 20% per annum to 2022/23 ($KgCO_2e$)	-36,881
Cap & reduce total non hybrid/EV miles by 50% per annum to 2022/23 ($KgCO_2e$)	-9,502
2022/23 Forecast ($KgCO_2e$)	**36,747**
Reduction (%)	-56%

Cap and reduce total flight miles by 20% per annum to 2022/23

Implementation date: 01/04/2019

Details: Flight miles have been capped since April 2019 and will be subject to a 20% annual reduction rate until 2022/23 based on the previous year's mileage. This 'flight allowance' is divided quarterly. All flight requests must include what portion of the quarterly allowance they would consume. Approved flight mileage is deducted from the quarterly allowance in real-time to maintain an up-to-date record, with unused mileage rolled over to the following quarter.

Assumptions:

- Rebound impacts: We assume one train mile is generated for every three flight miles avoided.
- Zero Waste Scotland first implemented the flight cap system at the outset of 2019/20. This has been tremendously successful. Flight impacts over the first three quarters of the financial year were down 70% compared with the same period the previous year while fourth quarter flights were further reduced as a result of the Covid-19 pandemic. As a result, total flight impacts for the year were 74% below the 2018/19 baseline. The 20% cap on 2020/21 flights is applied to this figure.

Supporting measures:

1. No-Fly Zone
   a. In 2018/19, Zero Waste Scotland ceased all corporate flights within mainland UK
   b. In 2019/20, the no-fly zone was expanded to Belgium, the Netherlands, Luxembourg and Paris
   c. The potential to expand the no-fly zone further will be reviewed annually

Cap and reduce staff-owned vehicle miles by 50% per annum to 2022/23

Proposed implementation date: 01/04/2020

Details: Building on the success of the flight cap system (detailed above), staff-owned vehicle use will also now require pre-approval (except where personal circumstances require an exemption), with total mileage capped and subject to a 50% annual reduction until 2022/23. Mileage allowance will be apportioned on a monthly basis, with unused mileage rolled over to the following month.

Assumptions:

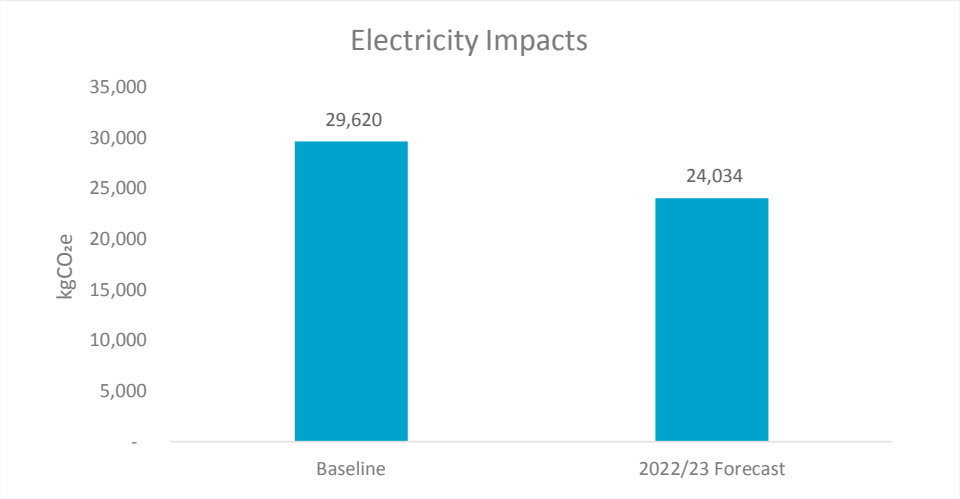
- Rebound impacts: We assume avoided staff-owned vehicle miles will rebound as follows:

Avoided travel	**10%**
Rented Hybrids/EVs	**60%**
Train	**25%**
Bus	**5%**

Supporting measures:

1. Register all staff with car club service to enable convenient access to low carbon vehicles
2. Require more detail on private vehicle expenses to improve transparency and analytics
3. Set Class A-C hybrid/EV as the default option for vehicle hire in line with Zero Waste Scotland's travel hierarchy; require sign-off for larger vehicles

4.2 Electricity: 19% reduction



2018/19 Baseline ($KgCO_2e$)	29,620
Move 60% of servers to cloud ($KgCO_2e$)	- 5,586
2022/23 Forecast ($KgCO_2e$)	**24,034**
Reduction (%)	-19%

Move 60% of servers to cloud

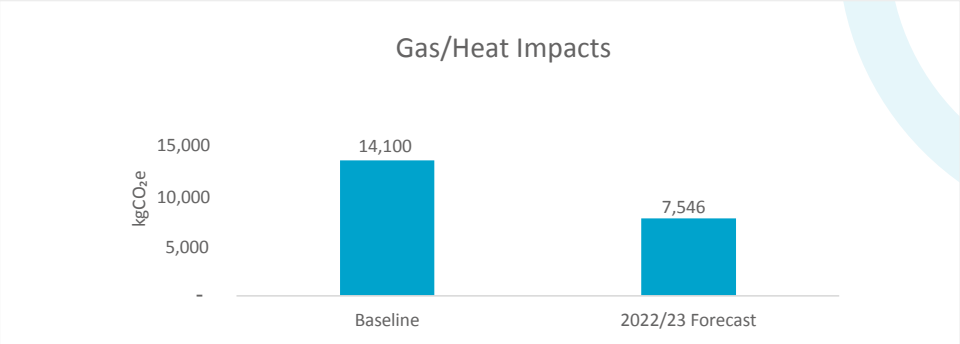
Proposed implementation date: 01/04/2021

Details: All company servers which are not required to run locally will be moved to a cloud-based service provider and powered by renewable energy.

Assumptions:

- 40% of our servers must be operated locally
- Cloud-based servers consume 80% of 'business as usual' electricity due to efficiencies of scale
- Cloud-based servers will operate on 100% renewable wind energy
- The carbon savings from further UK grid decarbonisation have been excluded from forecasts

4.3 Gas: 46% reduction



2018/19 Baseline ($KgCO_2e$)	**14,100**
District Heating System ($KgCO_2e$)	- 4,371
Install double-glazed windows in headquarters (Moray House) ($KgCO_2e$)	- 2,183
2022/23 Forecast ($KgCO_2e$)	**7,546**
Reduction (%)	-46%

District heating system

Implementation date: 01/11/2019

Details: In October 2019, Zero Waste Scotland offices were connected to Stirling's district heating system which extracts waste heat from the nearby sewage treatment plant.

Assumptions: The system is still undergoing calibration, so carbon impacts are based on nameplate performance figures and advice from Zero Waste Scotland's Low Carbon Heat Team.

1. The system will provide 80% of annual office heat demand.
2. There is no change in total heat demand as a result of switching to the scheme.

Install double-glazed windows in Zero Waste Scotland's headquarters (Moray House)

Proposed implementation date: 01/04/2022

Details: Zero Waste Scotland headquarters are located within a conservation area overseen by Stirling Council. Both office buildings have single-glazed windows however, neighbouring buildings from the same era have recently had double-glazed windows installed by the council. A 2015 building audit of council-owned Moray House concluded double-glazing could significantly reduce office heat demand and we will work with the council to implement this.

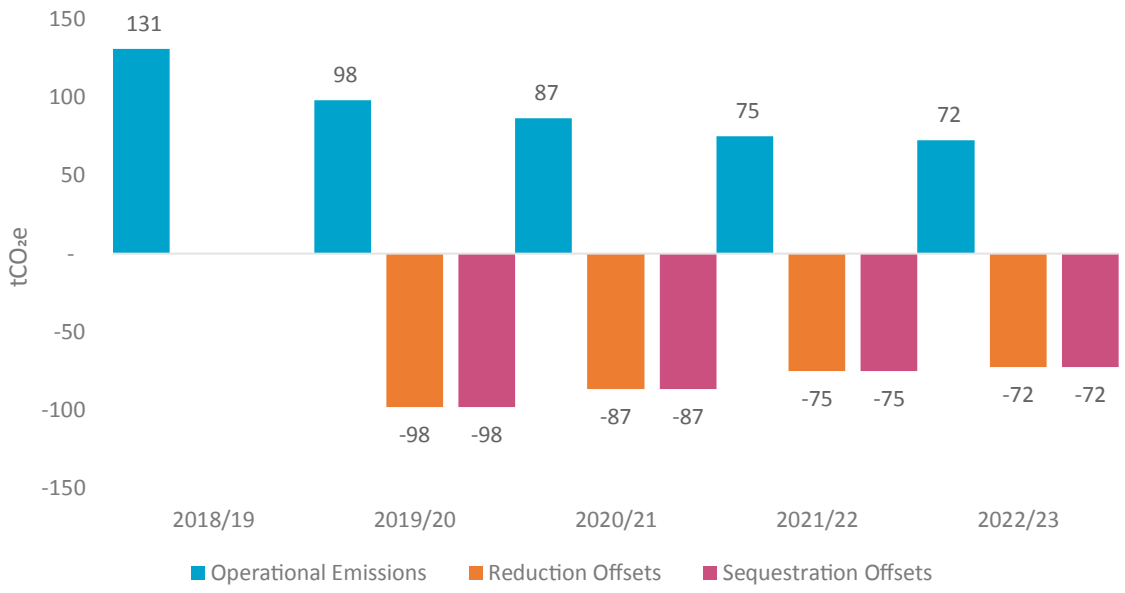
Assumptions:

- Working with Moray House landlord (Stirling Council), it should be possible to install double-glazed windows in the building by 2021/22.
- Zero Waste Scotland's other headquarters office (Jubilee House) is owned by a third party. We will also liaise with the owners about installing double glazing, however potential savings have been excluded here.

5 Our 'sub-zero' approach to offsetting

Zero Waste Scotland will achieve net negative carbon status[5] from 2019/20 onwards, while continuously reducing its absolute reliance on carbon offsets. Figure 9 shows offset projections to 2022/23 based on the emissions reduction plan outlined in Section 4.

Figure 9. Forecasted use of offsets to 2022/23



5.1 Limiting the use of offsets

In practice, an organisation can achieve net-zero without ever reducing, or even stabilising its emissions, by simply purchasing carbon offsets. Since offsetting is typically cheaper, and almost always easier than reducing operational emissions, there is a strong business incentive for organisations to 'offset their way to net-zero'.

Offsetting is not a long-term solution to the climate crisis however and while some offsets will be required to achieve net-zero, responsible organisations should use them sparingly, in ever-decreasing amounts, and only to ease their transition towards low carbon operations; not to avoid the transition altogether.

Ultimately, activities covered by offset schemes are best undertaken for their own sake, rather than to balance out emissions elsewhere. To support these activities, organisations can maintain a net negative carbon commitment and buy excess offsets.

5.2 Our choice of offsets

Given that the options and capacity to store carbon dioxide (CO2) are limited, it is important that these are deployed to reduce atmospheric CO2, rather than offset emissions generated elsewhere. To this end, Zero Waste Scotland will only offset its operational emissions using emissions reduction schemes. To play its part in reducing atmospheric carbon, the company will maintain 'sub-zero' status by purchasing an equal amount of carbon credit from sequestration schemes operating within the UK[6].

[5] By buying more offsets than are needed to neutralise its operational emissions, Zero Waste Scotland will remove a greater volume of carbon from the atmosphere than it emits through its business operations.

[6] Carbon sequestration schemes remove CO2 from the atmosphere, typically by growing biomass (e.g. trees) whereas reduction schemes reduce CO2e entering the atmosphere (e.g. investing in renewables).

Buying an additional offset for every one required to meet net-zero has the added benefit of raising the cost of offsetting and making reduction measures more cost competitive.

To ensure they are of the highest quality, Zero Waste Scotland will only purchase offsets from Labelled Verified Emissions Reductions Schemes which meet either the Gold Standard (for reduction offsets) or the Woodland Carbon code (for sequestration offsets) as outlined below.

Zero Waste Scotland's net zero team will maintain and review on an annual basis a shortlist of offset schemes which meet these criteria. Since reduction offsets under the Gold Standard are limited to developing countries, sequestration offsets under the Woodland Carbon code will prioritise Scottish/UK-based projects, supporting Scotland's afforestation objectives. An annual all-staff survey will then be used to select a basket of offsets from the list to be purchased that year. Engaging staff will give them a stake in the process and ensure offsets reflect our values as an organisation.

Box 2. Carbon Offset Standards

Gold Standard: Founded by 80+ prominent environmental NGOs, and supported by the World Bank and the UNFCCC, the Gold Standard is awarded to offset schemes in developing countries which meet the most stringent environmental and social criteria. Projects must include stakeholder consultation and gender-sensitive design. In addition to verifiable carbon savings, projects must deliver two or more co-benefits aligned to the UN Sustainable Development Goals.

The Woodland Carbon Code: The voluntary standard for UK woodland creation projects. Independent validation and verification to this standard provides assurance and clarity about the carbon savings of these sustainably managed woodlands.

Box 3. Key considerations when choosing carbon offsets

Choosing the right offsets: Due diligence is required to ensure offset schemes deliver the carbon impacts they claim. There are four primary issues to keep in mind:

1. **Additionality:** carbon savings are only legitimate if they would not have otherwise occurred.
2. **Double-counting:** occurs when the same carbon offset is sold multiple times. Credible offset schemes use a registry system with unique serial numbers to "retire" offsets once sold.
3. **Leakage/Rebound:** occurs when offset schemes simply displace emissions elsewhere (e.g. halting deforestation in one area for tree planting, resulting in deforestation somewhere else.). Credible offset schemes account for leakage in their project design and carbon accounting.
4. **Non-permanence:** occurs particularly in biological sequestration (e.g. forestry), where persistent ecosystem risks (fire, deforestation, disease etc.) can eliminate banked future carbon benefits.

6 Beyond net-zero: Additional measures to reduce our carbon footprint

In addition to reducing operational emissions falling within the scope of net-zero, organisations should continuously improve their understanding and measurement of their whole carbon footprint (Figure 10), and then take evidence-led steps to reduce it following the same process outlined in Section 2.1 (baseline, intervene, measure, repeat). This section outlines Zero Waste Scotland's progress to-date in this process.

6.1 Commuting: 166 tCO_2e

Employers can have significant influence over how and whether their employees commute to work; resulting in major carbon impacts and/or savings.

6.1.1 How it's measured

An all-staff survey is issued twice a year to collect data on commuting distance, duration and mode of transport. This is converted into carbon emissions using the appropriate BEIS conversion factors for that year.

6.1.2 Impacts breakdown

Zero Waste Scotland staff commuted over a million miles in 2018/19, averaging 35 miles a day[7] over 1.2 hours. Emissions from commuting exceeded all Zero Waste Scotland's net-zero impacts. Private car travel accounted for 53% of all commuting miles, and 75% of all commuting emissions. 28% of commuting miles were by train, which generated just 13% of emissions.

Figure 10. Organisations should continuously increase the portion of their impacts which they measure and target for reduction

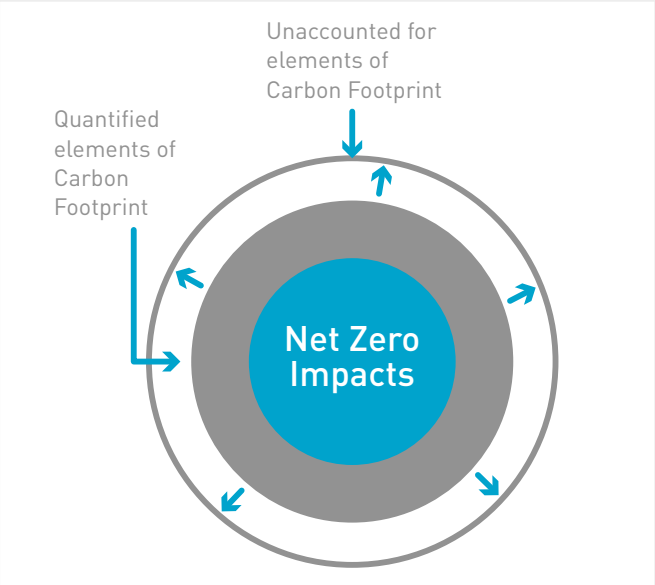
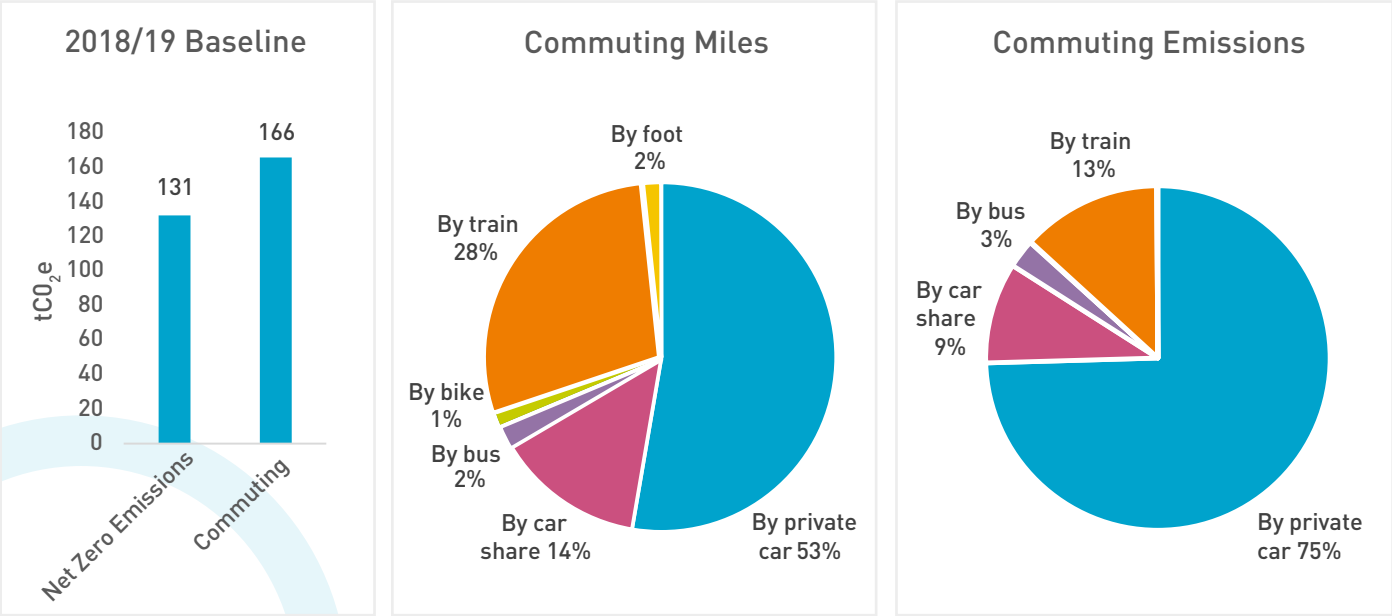


Figure 11. 2018/19 Baseline Commuting



[7]Scottish average is 8.8 miles/day (Transport and Travel in Scotland 2017, Transport for Scotland, 2018).

6.1.3 Reduction measures

Satellite offices and flexible working

Implementation date: 01/02/2019

Details: Zero Waste Scotland has established satellite offices in Glasgow and Edinburgh to reduce commuting requirements for the large number of employees living there. The organisation has also formally adopted flexible working arrangements, in part to reduce commuting requirements. Our year-end commuting survey indicates that, excluding the impacts of Covid-19, per capita commuting impacts fell 17%, though total impact rose 4% as a result of increased staff numbers. Since entering Covid-19 lockdown, we have undertaken analysis which has shown significant carbon benefits from increased homeworking and are considering options to retain as much of these benefits as possible after restrictions are eased.

Undertake further gap analysis of commuting in partnership with Sustrans

Proposed implementation date: 01/07/2020

Details: Sustrans offers advice and support to organisations and individuals seeking to reduce their travel impacts. Zero Waste Scotland will work with them in developing improved baseline data and a plan to reduce private vehicle commuting.

Explore options to encourage greater commuting by train

Proposed implementation date: 01/10/2020

Details: Many Zero Waste Scotland staff commute to the Stirling offices from other cities and, while train travel is the lowest carbon option, it is considerably more expensive than private vehicle use. Switching 25% of private vehicle miles to train would reduce total commuting impacts by 21 tCO_2e (13%). We will explore options to encourage greater use of the train rather than private car.

Encouraging use of cycling through improvement to cycling facilities

Proposed implementation date: 01/07/2020

Details: Clothes drying facilities will be installed within Moray House to enable more Zero Waste Scotland staff to cycle to work year-round.

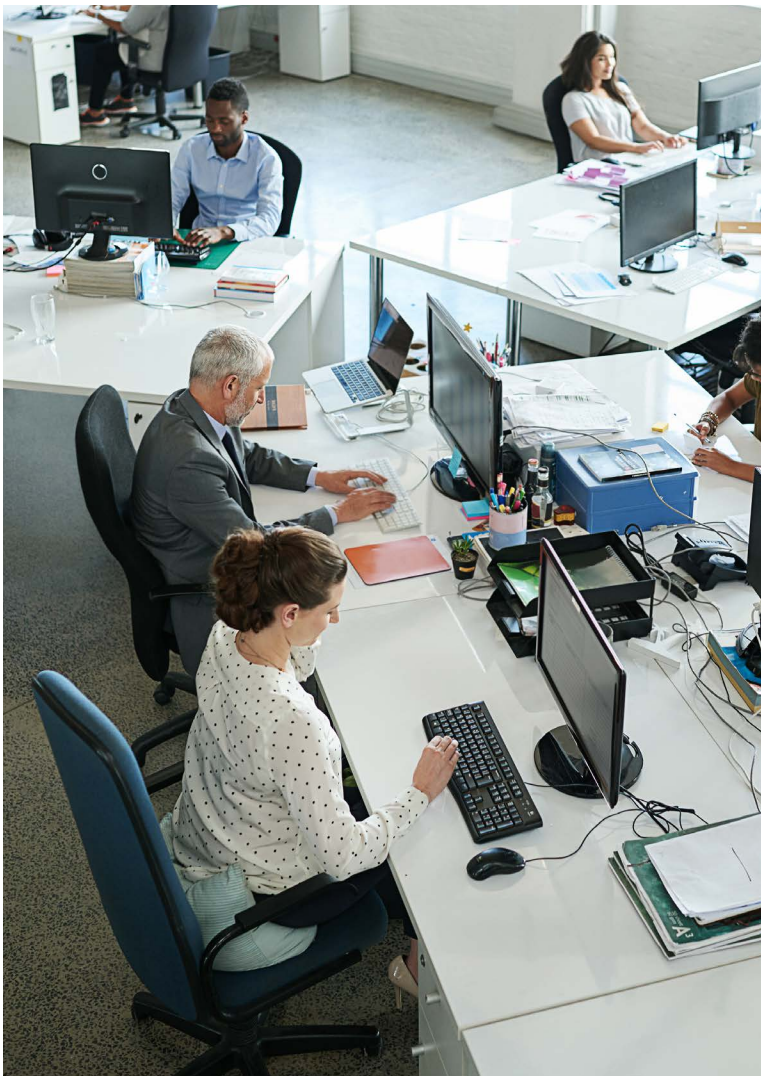
6.2 Milk: 4.3 tCO_2e

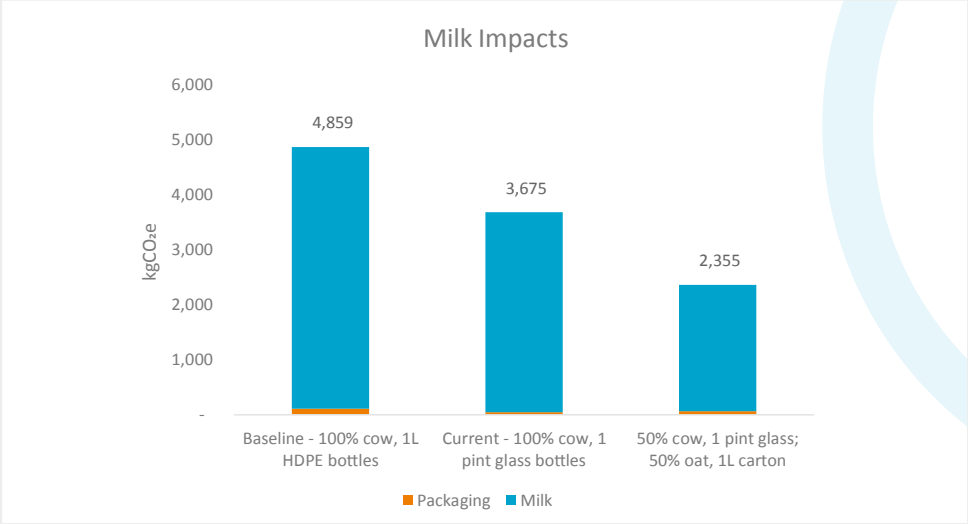
6.2.1 How it's measured

Weekly office milk delivery volumes and a lifecycle carbon factor for cow's milk are used to obtain total carbon impacts of milk consumption annually. Packaging impacts are estimated using reuse rate data obtained from the milk supplier, published data from WRAP, and carbon factors from our Scottish Carbon Metric.

6.2.2 Impacts breakdown

In the first quarter (Q1) of 2018/19, Zero Waste Scotland switched to ordering office milk in reusable glass bottles in order reduce consumption of single-use packaging. The change in packaging combined with a reduction in milk consumption through use of an improved stock management system resulted in 24% carbon savings of 1.2 tCO_2e. Milk consumption fluctuates throughout the year with school and summer holidays, with current average weekly impacts of 73.5 $kgCO_2e$.





Current scenario: 100% cow milk in reusable glass bottles ($KgCO_2e$)	**3,675**
Measure 1 – 50% cow milk in glass bottles; 50% oat milk in single-use containers ($KgCO_2e$)	- 1,320
Forecasted impacts ($KgCO_2e$)	**2,335**
Reduction (%)	-36%

Switch ~50% of office dairy milk to oat milk

Proposed implementation date: 01/07/2020

Details: Oat milk has a far lower carbon footprint than cows milk, and can be grown in northern climates, though no Scottish producer currently exists, and no suppliers yet offer oat milk in reusable containers. Nonetheless, based on current consumption and assuming a 50% switch to oat milk in single-use containers, this would reduce annual milk impacts by a further 36% (1.3 tCO_2e). Taste tests and an all-staff survey will be issued to determine the amount of dairy milk to be switched to oat.

6.3 Embedding a culture of sustainability

6.3.1 Making sustainability everyone's businesses

Sustainability cannot be the responsibility of just one person or group in an organisation. Organisations must embed a culture of sustainability, shared responsibility and continuous improvement at every level.

Continuous staff engagement

Staff consultation and input has played a pivotal role in shaping Our Path to Net-Zero, bringing in new ideas, ensuring all perspectives are considered, and establishing a unified understanding that change is needed, and it is coming. We recognise our staff are not a barrier to greater sustainability, but a critical asset and we will continue to consult our staff for new ideas and input going forward.

New employees

Our expectation that all staff embed sustainability into their roles and consciously seek ways to reduce our environmental impacts will be clearly communicated during our hiring process. Sustainability training will be incorporated into the induction process to ensure new members of staff feel responsible, capable and empowered to drive change, regardless of their role.

Performance review

We will encourage all staff to incorporate a personal or professional sustainability objective into their annual performance review process.

6.3.2 Structure of net-zero plan governance

This plan provides a path for Zero Waste Scotland's journey toward zero emissions; one which we will continuously improve upon in the years to come.

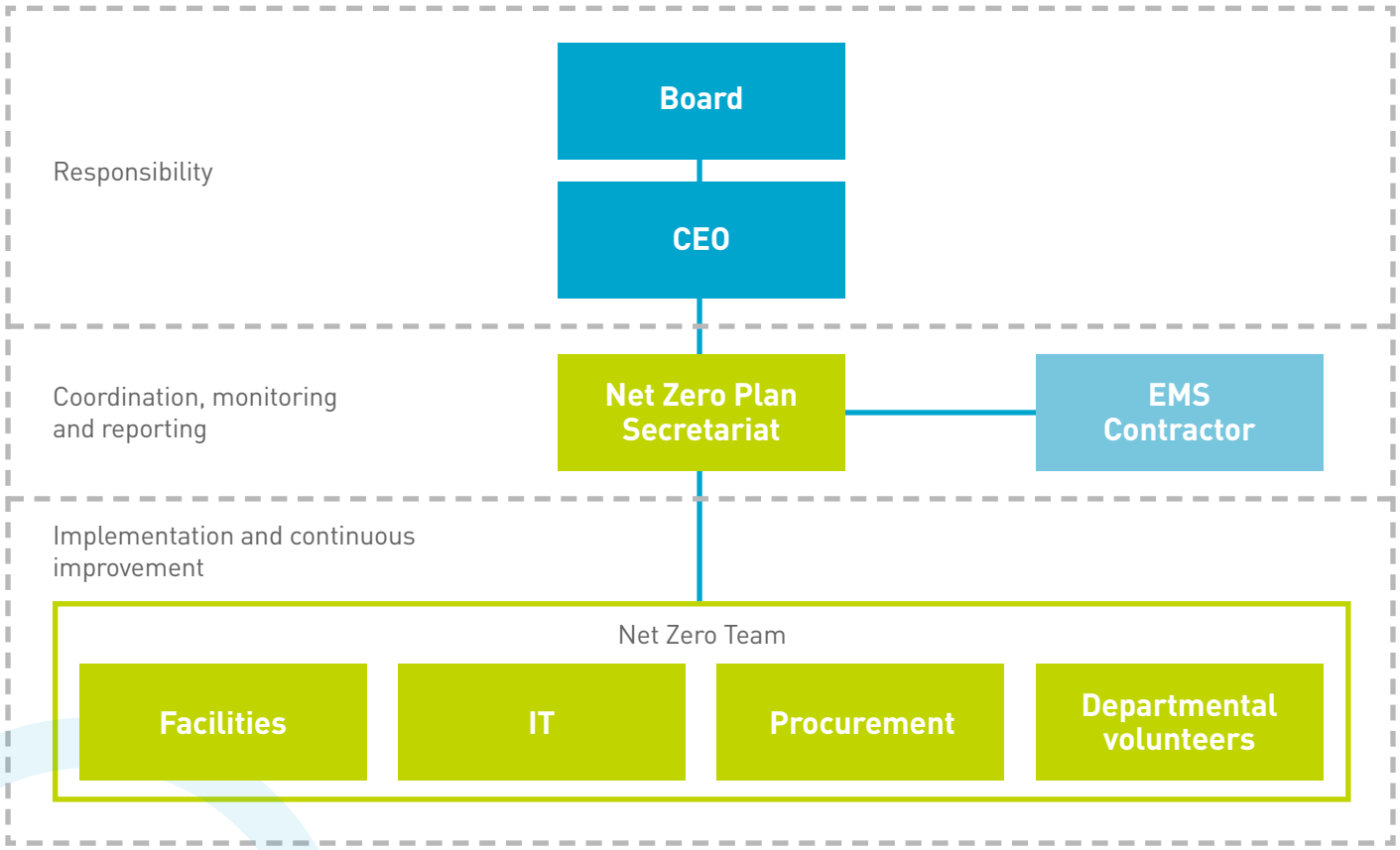
The governance structure (Figure 12) reflects the importance of the strategy, the wide-ranging implications it holds for all areas of Zero Waste Scotland operations, and the need to discharge objectives in a timely, effective and transparent manner.

Our governing board and directors have ultimate oversight of the plan, its continuous improvement and delivery.

A Net Zero Plan Secretariat role has been created to co-ordinate net zero activities across the organisation, monitor our ongoing operational impacts, and report to the chief executive and the board. They will also work with our environmental management system contractor to ensure that the ISO14001 status of the organisation is upheld.

A net-zero team comprised of key operational staff and volunteers from across the organisation will be responsible for implementing existing measures and formulating new ones as part of our continuous improvement.

Figure 12. Net-Zero plan governance structure



6.4 Future commitments

Establish a system for measuring catering impacts

Proposed implementation date: 01/07/2020

Details: Zero Waste Scotland frequently hosts outreach and stakeholder engagement events, many of which include catering. At present, Zero Waste Scotland does not know the carbon impact of this activity and will therefore develop and implement a system with which to measure it going forward.

Establish a system for measuring impacts of contracts

Proposed implementation date: 01/07/2020

Details: Zero Waste Scotland frequently commissions external research and support from a wide range of third-party specialists. The carbon impact of this supply chain activity is not currently measured or reported on.

To address this, Zero Waste Scotland will require a carbon footprint estimate as part of commissioned projects. Successful bids will need to provide evidence they have the carbon monitoring systems in place to fulfill this requirement. To ensure consistency and ease of compliance, Zero Waste Scotland will develop and maintain a simple online tool so contractors can input energy, water, waste and travel data related to their work. This free tool will be available for use by other organisations.

Establish a system for measuring impacts of satellite offices

Proposed implementation date: 01/07/2020

Details: Zero Waste Scotland currently operates satellite offices within Glasgow and Edinburgh. Whilst these sites have reduced commuting impacts, the emissions related to running these offices are currently unaccounted for. Zero Waste Scotland will therefore work with our workspace providers to obtain and integrate these satellite office impacts into our reporting.

Improve conference and video-calling facilities within Stirling offices

Proposed implementation date: 01/04/2021

Details: A professional conference calling studio will be installed to facilitate remote attendance to conferences and speaking events and cut down on business travel.

Explore options to own and operate renewable electricity infrastructure

Proposed implementation date: 01/10/2020

Details: Zero Waste Scotland takes all its electricity from the national grid. While the grid continues to decarbonise, the company could further reduce its electricity impacts by owning and operating its own renewable electricity infrastructure.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