

National Library of Scotland   
Sustainability Report 2021-22

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## Background

This Sustainability Report reflects on the progress achieved in the first year of the Library’s four-year Climate Action Plan, which runs from 2021-25. The Climate Action Plan was created to embed sustainability into the Library’s working practices, prepare for the impact of climate change, and enable us to progress towards achieving net-zero by 2045.

As a national institution, with extensive collections and staff knowledge, the Library also has an important role to play in climate literacy. We can help communities and individuals be empowered to respond to the climate crisis.

The previous Sustainability Report, 2020-21, covered a period of severe disruption to Library services due to the Covid-19 pandemic. The impact of Covid-19 continued to be felt during 2021-22, however, over this year the Library was able to gradually expand services and operate closer to the pre-pandemic model.

## Executive Summary

Below you can see some of the key Library results for the 2021/22 year against the Climate Action Plan.

Generally, there was good progress against the Plan. Most significantly, the Library reached its target of a 75% reduction in Green House Gas emissions three years early, achieved a 53% reduction in energy use, and now sends none of its waste to landfill. Given these results it is appropriate that the Library re-sets future targets and this is something that will be happening during 2022/23 as it reviews the Climate Action Plan.

**75% Less GHG emissions compared to 2008/09**

Target: Scottish Government target of 75% reduction against 2008/9 levels by 2030. Result: 75% reduction achieved for 2021/22 year.

**53% Less Energy used compared to 2008/09**

Target: Scottish Government target of 40% reduction against 2008/9 levels by 2020. Result: 52.5% reduction achieved for 2021/22 year.

**66% Less Water used compared to 2008/09**

Target: Scottish Government target of 25% reduction against 2008/9 levels by 2020. Result: 66.3% reduction achieved for 2021/22 year.

**40% Less Business Car travel compared to 2008/09**

Target: Scottish Government target of 20% reduction against 2008/9 levels by 2030. Result: 40.2% reduction achieved for 2021/22 year.

**16.9% More Waste arisings compared to 2010/11**

Target: Scottish Government target of 25% reduction against 2010/11 levels by 2020. Result: 16.9% increase against 2010/11 levels

**86% Waste recycled or composted**

Target: Scottish Government target of 70% of all waste recycled by 2025. Result: 86% achieved for 2021/22 year.

**0% General Waste sent to landfill.**

Target: Scottish Government target of 0% of general waste to go to landfill by 2030. Result: 0% of waste went to landfill for 2021/22 year.

## 

## Climate Action Plan 2021-25

In 2010, the Library published its first Carbon Management Plan. In it, the Library set out targets to help contribute to Scotland’s ambition to become a low-carbon nation. Over the subsequent decade the Library surpassed the original Scottish Government targets and by 2019/20 had achieved a 69.09 per cent GHG emissions reduction and a 50.76 per cent reduction in energy consumption, compared with its 2008/09 baseline.

The Library has made tremendous strides in improving our own sustainability and contributing towards Scotland’s climate targets, however, in the context of the escalating climate crisis and the ramping up of Scotland’s ambitions to tackle it, the Library needed to do more than re-badge its Carbon Management Plan. It needed a complete re-think of what the future it wants to be a part of looks like and how it is going to get there.

The Library developed its Climate Action Plan over It sets out a sustainability vision in response to the growing threats the climate crisis poses to every aspect of our lives and work. Whilst the actions detailed in the plan only take us to 2025, we have set out the vision that we want to achieve by 2045 at the latest. This includes the target of being net-zero.

### We will become net-zero by 2045 at the latest.

The Library aimed to achieve a 75 percent reduction in greenhouse gas emissions by 2025 from our 2008/09 baseline, and this target was achieved in 2021-22. Furthermore, we are aiming to recycle 70 percent of our waste, reduce the amount we send to landfill to 5 per cent and fully decarbonise our fleet by 2025. Given the progress achieved against existing targets in 2021-22, the Library will revise sustainability targets in 2022-23. We’ll be working with partners and third parties to help bring down our indirect emissions and play a positive social role through our procurement decisions, all in the service of helping the Library reach net-zero.

### We will mainstream sustainability into every aspect of our operations.

Our climate ambitions, however, go beyond our estate. Recognising our influential role in society, we are committed to promoting our resources to help improve climate literacy, empowering individuals and communities to respond to the climate crisis in their day-to-day lives. Through our public programming, events, and online engagement, the Library is in a strong position to help society take action against this existential threat. However, as well as promoting climate resources, we are also interested in collecting climate resources, and so we will continue our efforts to record and collect responses to the climate crisis. Our collections work in this area will include documenting the response to the climate crisis whilst also playing a major role in building knowledge, awareness, and resilience, thereby helping individuals and communities actively respond to our changing climate.

## Report structure

This Sustainability Report reflects the structure of the Library’s Climate Action Plan, which in turn is derived from the Climate Change (Scotland) Act 2009. The Act sets out three statutory duties that are required of Scottish public bodies:

To act in a way:

1. best calculated to contribute to the emissions reduction targets,
2. best calculated to contribute to the climate adaptation programme,
3. that it considers most sustainably.

Furthermore, public bodies are encouraged to go above and beyond, considering other ways they can positively contribute towards Scotland’s climate change targets.

We have translated this into four areas of focus, which we call:

1. Mitigation
2. Adaption
3. Sustainable Development
4. Wider Influence

## Mitigation

Mitigation refers to the actions we take to minimise the severity of climate change. This typically means reducing or eliminating the greenhouse gas (GHG) emissions that result from our operations. The Library set the scope of what it includes in its calculation of its GHG Emissions in 2008/09. It comprises:

### Scope 1. Direct Emissions

* Gas
* Library Fleet

### Scope 2. Indirect emissions from electricity

* Electricity

### Scope 3. All other indirect emissions

* Waste
* Water
* Business Travel

### Scope 4. Emissions from major Third Party Suppliers

Looking forward the Library aims to include indirect emissions from major third parties suppliers in its scope. The priority will be to account for emissions from third party IT cloud-based services that have replaced former on-site provision.

## Green House Gas Emissions.

In 2021/22, the Library’s total Green House Gas Emissions were 800 Kilo Tonnes CO2e. This is a 75% reduction on the baseline year of 2008/9.

Electricity consumption increased in 2021/22 compared to the previous year. This reflects increased onsite working by Library staff.

### ****Table 1. National Library of Scotland Green House Gas Emissions****

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Greenhouse Gas Emissions****(Kilo Tonnes CO2e)** | **2008/09 (Baseline Year)** | **2018/19** | **2019/20** | **2020/21** | **2021/22** |
| Gas (Scope 1) | 530 | 214 | 271 | 265 | 239 |
| Organisation owned fleet (Scope 1) | 12 | 6 | 4 | 1 | 7 |
| Electricity (Scope 2) | 2,511 | 718 | 669 | 509 | 549 |
| Business Travel (Scope 3) | 117 | 47 | 40 | 2 | 3 |
| Waste Disposal (Scope 3) | 24 | 6 | 11 | 0.2 | 2 |
| Water Supply & Disposal (Scope 3) | 10 | 7 | 6 | 2 | 1 |
| **Total Gross Emissions** | **3,197** | **995** | **994** | **779** | **800** |

The chart below summarises Table 1 and demonstrates how electricty (549 Kilotonnes) and Gas (239 Kilotonnes) are the two largest sources of Green House Gas Emissions.

**Chart 1. Greenhouse Gas Emissions by National Library of Scotland**

### During 2021/22 the Library:

* Continued to develop a system that brings its environmental and energy management tools together across the whole estate giving real time monitoring and control. We call it LEEP - the Library Environmental Energy Platform.
* Focused maintenance works to eliminate leaks from pipework and plant.
* Maximised the use of video conferencing tools as an alternative to travelling to in-person meetings, helping to reduce business travel by staff.

Looking ahead we undertook preparatory work with a view to:

* Purchasing new electric vans in order to decarbonise our fleet and use only electric vehicles.
* Upgrading a number of air handling units.
* Installing a next generation of LED gallery lighting based around presence detection controls.

## Adaptation

Our world is already seeing massive disruptions caused by our changing climate. Whilst putting in place strategies to mitigate climate change, we need to prepare for the inevitable and unavoidable effects of the climate crisis that are already present and will continue to cause impact to our lives, our mental health, and local economies in the future.

Implementing strong adaptation measures is particularly relevant for the Library. Our collections and archives are vulnerable to changes in temperature, humidity, and climate, as well as being at risk from increased rainfall which threatens to overwhelm discharge systems which would have been adequate in the past.

### During 2021/22 we:

* Updated the Business Continuity Framework and the Salvage & Response Plans to ensure they are adapted for climate change. These provide clear delineation of roles and responsibilities across staff.
* Continued to support a PhD collaboration with Heriot Watt University, Edinburgh and Quingdao University, China - ‘Applying ANN technology to determine acceptable microclimate parameters for the National Library of Scotland’s Collections to enable significant energy efficiency improvements’.
* Developed a focused pest trapping programme to assist us in identifying new pest risks.

Looking ahead we undertook preparatory work with a view to delivering a new triage area and associated protocols to help protect collections against the threat of infestation.

## Sustainable development

Sustainable development covers many areas. It is not a stand-alone concept but rather a process, something to be built into practices and operations.

To develop sustainably, the Library must embed sustainability into every aspect of the Library’s operations. We have a long way to go before this way of thinking is worked into the core of everything we do, however we have been making progress by improving sustainable practices in our procurements, business plans, and waste management processes.

The Procurement Reform (Scotland) Act 2014 places a Sustainable Procurement Duty on Scottish organisations. This requires that before a contracting authority buys anything, it must think about how it can improve the social, environmental and economic wellbeing of the area in which it operates, with a particular focus on reducing inequality.

### During 2021/22 we:

* Revised the Treasury Management & Investment Policy and significantly expanded and strengthened the section on ‘Responsible Investing’.
* Updated the Library’s Procurement Policy and Procurement Plan so that use of the Sustainability Tool is completed when developing the commodity strategy for all regulated Library advertised procurements and concession contracts

Looking ahead we undertook preparatory work with a view to:

* Complete and report progress against the Scottish Government’s Flexible Framework and to set targets for continual improvement.

## Wider influence

As a National Library, we play a formal role in society as a site of knowledge. In that role, we have the responsibility to empower individuals by enabling research, both formal and informal, into our relationship with the natural world. From climate science to climate justice, we hold materials that can provide insight, provoke discussion, and inspire change.

As well as providing resources on the climate crisis, we continue our work *collecting* resources on the climate crisis and making them available.

### During 2021/22 we:

* Published a [collections discovery tool for titles on the climate crisis](https://search.nls.uk/primo-explore/collectionDiscovery?vid=44NLS_VU1&collectionId=81663704810004341&lang=en_US).
* Toured our climate-themed Moving Image Archive film 'Living Proof' to critical acclaim.
* Prepared events and resources to coincide with COP-26.
* Joined the Climate Heritage Network.
* Continued in our role as a Zero Waste Scotland Resource Efficient Scotland Ambassador.

### Looking ahead we undertook work with a view to:

* Developing student research projects to improve understanding of how our collections can aid climate research. Projects include: an exploration of polar and arctic related collections and how our official publications can reveal how environmental policy has developed over time.

## Summary of performance figures

A **Green** status means 'Achieved / on target'.

An **Amber** status means 'Progress not sufficient to meet target/ negative progress in reporting period'.

A **Red** statusmeans 'Negative progress'.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Area | Target | Baseline year | 2020/21 | 2021/22 | % change against baseline | % change against previous year | Status |
| GHG emissions (KiloTonnes CO2e) | Reduce GHG emissions from operations by 75% by 2025 from 2008/09 levels | 3,197 | 779 | 800 | -75.6% | -0.13% | **Green** |
| Total energy consumed (kWh) 1 | Reduce its energy consumption by 40% by 2020 from 2008/9 levels | 7,926,595 | 3,485,345 | 3,765,484 | -52.49% | +8.03% | **Green** |
| Total waste arisings (Tonnes) 2 | Reduce waste arisings by 25% by 2020 from 2008/9 levels | 67.93 | 11.14 | 79.40 | +16.9% | +612.7% | **Red** |
| Food waste consumption (Tonnes CO2e) | Reduce food waste by 1/3 (33%) by 2025, against 2013 levels | 2.50 | 0.31 | 2.43 | -2.8% | +683.9% | **Amber** |
| % waste recycled or composted | Recycle or compost 25% of all waste arisings by 2020 from 2008/9 levels | 49.3% | 40.3% | 86.0% | +36.7% | +45.7% | **Green** |
| % waste to landfill | Only 5% of all waste arisings to go to landfill by 2025 and send no waste to landfill by 2030 | 50.7% | 0% | 0% | -50.7% | 0% | **Green** |
| Water consumption (m3) | Reduce water usage by 25% by 2020 from 2008/9 levels | 9,124 | 1,650 | 3,069 | -66.36% | +86% | **Green** |
| Owned transport & business travel (Km) | Not to exceed the baseline year numbers 2008/09 | 1,038,859 | 14,027 | 63,682 | -93.87% | +354% | **Green** |
| Business Car travel (km) | Reduce business car travel by 20% by 2030 | 6,198 | 3,096 | 3,704 | -40.2% | +19.6% | **Green** |