

Property and Asset Management

NHS Fife Annual Climate Emergency and Sustainability Report

2022-2023

© NHS Fife 2023

Published March 2023

This document is licensed under the Creative Commons Attribution-Noncommercial-NoDerivatives 4.0 International License. This allows for the copy and redistribution of this document as long as NHS Fife is fully acknowledged and given credit. The material must not be remixed, transformed or built upon in any way. To view a copy of this license, visit <https://creativecommons.org/licenses/by-nc-nd/4.0/>
www.nhsfife.org

Contents

Contents

1. Introduction	3
2. Leadership and governance	3
3. Greenhouse gas emissions	5
4. Climate change adaptation	6
5. Building energy	7
6. Sustainable care	9
6.1 Anaesthesia and surgery	9
6.2 Respiratory medicine	11
7. Travel and transport	12
8. Greenspace and biodiversity	15
9. Sustainable procurement, circular economy and waste	18
10. Environmental stewardship	22
11. Sustainable construction	24
12. Sustainable communities	24
13. Conclusion	25

1. Introduction

This is NHS Fife's annual Climate Emergency and Sustainability Report covering the financial year 2022/2023.

NHS Fife provides health care services to the 375,000 people who live in Fife and employs approximately 9,805 members of staff of which, 7,955 are WTE staff.

As part of NHS Fife's commitment to becoming a net zero health board by 2040, and to meet the requirements set out in the NHS Scotland Climate Emergency & Sustainability Strategy 2022-2026, we have prioritised sustainability across many areas of our organisation. This has involved putting great effort into reducing greenhouse gas emissions as well as transitioning to more sustainable practices, where possible. This report aims to capture the board's progress and highlight the key areas we have been working on as part of our commitment to sustainability.

At NHS Fife, our key focus will always be the health and wellbeing of our staff and patients. However, as a key public sector organisation and anchor institution in Fife, we have the opportunity to demonstrate environmental stewardship by limiting our impact on the environment; creating a more sustainable health service for the people of Fife both now and for future generations to come.

2. Leadership and governance

NHS Fife has made significant progress towards meeting the requirements of the Climate Emergency and Sustainability Strategy by identifying and aligning staff roles and responsibilities towards the sustainability agenda.

In February 2023, guidance for the Annual Delivery Plan (ADP) was released and now includes a section on 'Climate Emergency and Environment'. This outlines our plans to deliver changes across seven key areas that will reduce greenhouse gas emissions and contribute to wider societal decarbonisation, adapt to the risks caused by climate change, and decrease NHS Fife's impact on the environment.

This year we have continued to build a dedicated and specified workforce to help us meet the commitments set out in the NHS Climate Emergency and Sustainability Strategy. This has involved creating two new Sustainability Officer roles and appointing a Head of Sustainability (July 2023). This has enabled NHS Fife to greatly increase our sustainability efforts and progress. To grow our team further, we plan to recruit an Energy Manager. The Energy Manager will support the board's energy transition strategy.

Towards the end of 22/23, we started developing a working group to help us complete the National Sustainability Assessment Tool (NSAT). The NSAT mandates that all health boards in Scotland monitor their sustainability progress across 16 key areas. The NSAT working group will bring together all the leads from across the organisation and offers a great opportunity to discuss areas where we are doing well and identify areas for improvement whilst monitoring our progress across the board and meeting reporting requirements. Commitment to this group will follow in 23/24.

The following table represents the current roles in the organisation:

Executive Director	Executive Input to Objective	Role
Non-Exec Director	Contributor and non-exec Board Champion for sustainability	The role is a non exec Board Champion and will ensure that the Board is aware of the key priorities and responsibilities within the strategy. The BC will also lead on the development of sustainable communities and adapt to the impact of climate change
Director of Property and Asset Management	Lead Executive	The role is Lead Executive (LE) and will create management time and capacity to co-ordinate the Strategy on a day-to-day basis. In addition, the LE will take responsibility for sustainable buildings and land, sustainable travel, and the reporting of progress.
Director of Public Health	Board lead for anchor Institute and Contributor	The role will ensure that the Board is aware of the key priorities and responsibilities within the strategy. and also lead the development of sustainable communities and adapt to the impact of climate change.
Medical Director	Contributor	Lead and develop the thinking and models around Sustainable Care into the future including: <ul style="list-style-type: none"> • Sustainable Care Pathways • Reducing harm and waste • Medicines • Green theatres • Supporting Primary Care
Director of Nursing	Contributor	
Director of Acute Services	Contributor	
Director of Health and Social Care Services	Contributor	
Director of Pharmacy and Medicines	Clinical Lead for Sustainability and Contributor	
Director of Finance and Strategy	Contributor	LE for Sustainable Goods and Services (circular economy) and consideration for PMO support for the programme and reporting regime.
Director of Workforce	Contributor	LE for engaging with NHS Fife staff to ensure that Climate Emergency and Sustainability is at the heart of all that we do including staff training, awareness, and communication.
Head of Sustainability	Contributor	Lead and promote improvements on NHS Fife's performance on climate change and sustainability.
Sustainability Officers	Contributor	Delivering projects and supporting NHS Fife to meet objectives.
Energy Manager (Proposed)	Contributor	Delivering energy projects and supporting NHS Fife to meet objectives.

3. Greenhouse gas emissions

NHS Fife aims to become a net-zero organisation by 2040 for the sources of greenhouse gas emissions set out in the table below. The table sets out the amount of greenhouse gas produced annually by NHS Fife.

Greenhouse gas emissions 2021/22 & 2022/23, tonnes CO2 equivalent

Source	Description	2021/22 – emissions	2022/23 – emissions	Percentage change – 2021/22 to 2022/23
Building energy	Greenhouse gases produced when providing electricity and energy heat for NHS buildings	20395	19864	-2.6%
Non-medical F-gas use	Greenhouse gases used for refrigeration and air conditioning	3033.9	312.32	-89.7%
Medical gases	Greenhouse gases used in anesthetics - nitrous oxide (N2O), Entonox (which contains nitrous oxide), desflurane, sevoflurane and isoflurane	1524	1338	-12.2%
Metered dose inhaler propellant	Greenhouse gases used as a propellant in inhalers used to treat asthma and chronic obstructive pulmonary disorder (COPD)	5786	6034	+4.29%
NHS fleet use	Greenhouse gases produced by NHS vehicles	502.08	468.44	-6.7%
Waste	The greenhouse gases produced by the disposal and treatment of waste produced by the NHS	1088.95	1150.44	+5.65%
Water	The greenhouse gas produced from the use of water and the treatment of wastewater (note this is only ten months usage due to an issue with billing)	103.6	70.5	-31.95%
Business travel	Greenhouse gases produced by staff travelling to work (not using NHS vehicles)	Not Available	Not Available	Not Available
Total greenhouse gases emitted		32433.53	29237.7	-9.85%
Carbon sequestration	The amount of carbon dioxide captured per by woodland, trees, grassland, and shrubs growing on NHS grounds	259.7	259.7	0
Greenhouse gas emissions minus carbon sequestration		32173	28978	-9.9%

4. Climate change adaptation

The climate is changing due to the greenhouse gases already emitted into the atmosphere. While efforts to reduce the rate and scale of climate change continue, we must also adapt to the new conditions we are facing.

The changing climate is increasing risks for health and health services. More information on these risks in the UK can be found in the UK Climate Change Committee's Health and Social Care Briefing available here: www.ukclimaterisk.org/independent-assessment-ccra3/briefings/

What are the main risks from climate change that the Health Board has identified through its Climate Change Risk Assessment?

1. Overheating - risk to electrical equipment, patient and staff health, delay in service provision.
2. Flooding and downpours - infrastructure damage, equipment damage, staff unable to commute to work, appointment and service cancellations, impacts on patient and staff health.
3. Structural damage from high winds - infrastructure damage, equipment damage, risk to patient and staff health.

What actions has the health board taken to reduce those risks?

The board has collaborated with local organisations such as Fife Council to assess similar risks and how to best approach these issues from a place-based approach. Based on the CCRA for NHS Fife's estates, we identified our key risks as listed above. From this analysis, we will create an action plan based on risk to prioritise those.

Climate change, Business continuity, and long-term organisational resilience.

When it comes to climate changes and business continuity as professionals, we are no longer planning for the incidents that may never happen; we are preparing for situations directly linked to global temperature changes that have a direct link to climate where there is increasing evidence of severe weather impacts.

Business Continuity Management (BCM) is an integral aspect of NHS Fife's management to ensure a continued services capability. NHS Fife undertakes business continuity impact analysis assessment across service areas to ensure planning has been considered for response preparedness.

Business Continuity (BC) planning is promoted by the resilience team & senior managers across all service areas to ensure that any risks that may pose a threat to normal service delivery are identified and planned for. Improvements to support managers in preparedness planning have progressed with the introduction of new action card templates that incorporate considerations to weather impacts mitigations & services response. BC plan testing and exercising is undertaken to support the quality of plans and to ensure response memory capabilities and situational awareness within the workforce.

What are we doing to be prepared for the impacts of climate and increase the resilience of our healthcare assets and services?

We have begun work on our Environmental Management System (EMS) implementation journey, and the creation of EMS policy/aspects and impacts will help us to better coordinate a consistent approach to climate risk management. We are taking a multidisciplinary approach to our climate adaptations by working closely with Fife Council and our Public Health resilience team.

5. Building energy

We aim to use renewable heat sources for all the buildings owned by NHS Fife by 2038.

NHS Fife has 46 buildings such as Hospitals, Health Centres & Clinics.

In 2022/23, 19864 tonnes of CO2 equivalent were produced by NHS Fife for the use of energy for buildings. This was a decrease of 2.6 % since the year before.

In 2022/23, NHS Fife used 96,401.634 kWh of energy. This was a decrease of 3.42% since the year before.

In 2022/23, NHS Fife generated 27,560 kWh of energy from renewable technologies (Jan – March 2023 only *(does not include Glenwood HC or IPCU, this data was unavailable at this time)*)

Building energy emissions, 2015/16, 2021/22 and 2022/23 – tCO2e

	2015/16 energy use	2021/22 energy use	2022/23 energy use	Percentage change 2015/16 to 2022/23
Building fossil fuel use	16041	14898	15211	-5.17%
District heat networks and biomass	218.1	166.8	65.6	-69.9%
Grid electricity	11969	5329	4587	-61.68%
Totals	28228.1	20393.8	19863.6	-29.63%

Building energy use, 2015/16, 2021/22 and 2022/23 – MWh

	2015/16 energy use	2021/22 energy use	2022/23, energy use	Percentage change 2015/16 to 2022/23
Building fossil fuel use	76626	69401	71114	-7.19%
District heat networks and biomass	7314	7236	3554	-51.4%
Grid electricity	24099	23059	21733	-9.82%
Renewable electricity	Not available	Not available	27.56	Not Available
Totals	108039	99695	96428	-10.7%

What did we do last year to reduce emissions from building energy use?

In 2020, a project funded through the Low Carbon Infrastructure Transition Programme with an award of £1.8 million was established. The project was completed in March 2023 and included:

- Installation of solar photovoltaic cells at Glenrothes Hospital, Queen Margaret Hospital and Victoria Hospital
- Installation of an up-to-date BMS (Building Management System) Front End Software Programme to centrally monitor and control heating and ventilation across all NHS Fife sites
- Insulation of heating pipes to reduce heat loss at Kirkcaldy Health Centre, Lynebank Hospital, Queen Margaret Hospital, Victoria Hospital and Whyteman’s Brae Hospital
- Installation of LED lighting at Kirkcaldy Health Centre, Linburn Health Centre, Leven Health Centre, Lynebank Hospital, Queen Margaret Hospital and the Victoria Hospital
- Coolnomix air conditioning system to improve control and efficiency was installed at Adamson Hospital, Kirkcaldy Health Centre, Linburn Health Centre, and Lynebank Hospital

What are we doing this year to reduce emissions from building energy use?

- Proposed grant from the SG to improve the building fabric at the Fife College of Nursing building, along with other measures such as insulation and VSD on fans.
- Installation of a waste hot water recovery system at the Victoria Hospital Laundry.
- Realignment of capital funds to target LED lights across the Estate.
- Replacement windows (Stratheden Hospital).

What projects are we planning for the longer term to reduce emissions from building energy use?

- A development scheme is underway looking at the Cameron Hospital site, to remove aged steam boiler plant and replace with an alternative.
- We have net zero route-maps for all properties and plan to use this information to prioritise and install 'no regret' measures such as LED lighting and building fabric upgrades.

6. Sustainable care

The way we provide care influences our environmental impact and greenhouse gas emissions. NHS Scotland has three national priority areas for making care more sustainable – anaesthesia, surgery and respiratory medicine.

6.1 Anaesthesia and surgery

Greenhouse gases are used as anaesthetics and for pain relief. These gases are nitrous oxide (laughing gas), Entonox (a mixture of oxygen and nitrous oxide), and the 'volatile gases' - desflurane, sevoflurane and isoflurane.

Through improvements to anaesthetic technique and the management of medical gas delivery systems, the NHS can reduce emissions from these sources.

NHS Fife's total emissions from these gases in 2022/23 were 40, a decrease of 10 from the year before.

More detail on these emissions is set out in the tables below:

Volatile medical gas emissions, 2018/19, 2021/22, 2022/23 – tCO₂e

	2018/19 (baseline year)	2021/22	2022/23	Percentage change 2018/19 to 2022/23
Desflurane	95	9	-4	-104.2%
Isoflurane	6	1	0	-100%
Sevoflurane	51	40	44	-13.7%
Total	152	50	40	-73.7%

Nitrous oxide and Entonox emissions, 2018/19, 2021/22, 2022/23 – tCO₂e

Source	2018/19 (baseline year)	2021/22	2022/23	Percentage change 2018/19 to 2022/23
Piped nitrous oxide	188	217	217	+15.43%
Portable nitrous oxide	128	84	109	-14.84%
Piped Entonox	1064	1056	858	-19.36%
Portable Entonox	113	117	114	+0.88%
Total	1493	1474	1298	-13.06%

What did we do last year to reduce emissions from anaesthetic gases?

New approaches when carrying out anaesthetics have been implemented to reduce the need for desflurane such as making sevoflurane first choice and encouraging the use of regional and local anaesthetics where possible.

What are we doing this year to reduce emissions from anaesthetic gases?

All nitrous oxide manifolds will be removed. The focus on Entonox, is being led by a working group looking at usage across all services to reduce impact.

What are we doing this year to make surgery more sustainable?

This year we are using the implementation bundles provided by the centre for sustainable delivery to continue making progress with the national green theatre programme. These actions are being taken forward by the Green Theatre project group.

A structured approach to ensure the most appropriate and sustainable use of Entonox is in place. This focuses on minimisation of waste and leakage within the piped system, and robust oversight and guidance on the use of portable Entonox.

6.2 Respiratory medicine

Greenhouse gases are used as a propellant in metered dose inhalers used to treat asthma and COPD. Most of the emissions from inhalers are from the use of reliever inhalers – Short Acting Beta Agonists (SABAs). By helping people to manage their condition more effectively, we can improve patient care and reduce emissions.

There are also more environmentally friendly inhalers such as dry powder inhalers which can be used where clinically appropriate.

We estimate that emissions from inhalers in NHS Fife were 6034.96 tonnes of CO₂ equivalent.

Inhaler propellant emissions, 2018/19, 2021/22, 2022/23 – tCO₂e

Source	2018/19 (baseline year)	2021/22	2022/23	Percentage change 2018/19 to 2022/23
Primary care	5358.95	5675.96	5913.86	+10.35%
Secondary care	112.09	110.4	121.1	+8.04%
Total	5471.04	5786.36	6034.96	+10.31%

What did we do last year to reduce emissions from inhalers?

The Board reviewed the respiratory chapter of the east region formulary and within adult chapters, the first choice of inhaler will be dry powder inhalers, which represents a potentially significant environmental benefit.

What else did we do last year to make care more sustainable?

We are working to ensure that sustainability is embedded as a core business across several areas. In emergency care acute clinical colleagues are delivering a plan for green ED in line with Royal College standards.

The approach within the planned care setting, focusing on green theatres, is described above.

What else are we doing this year to make care more sustainable?

The Board will undertake work following the publication of the SG strategy on the Scottish Respiratory Quality Prescribing Guide and is well placed to respond to requirements with the current respiratory managed clinical network and supporting resources. The Board is prepared to focus on reducing the use of SABA inhalers over the coming months and years in line with national direction.

7. Travel and transport

Domestic transport (not including international aviation and shipping) produced 26% of Scotland's greenhouse gas emissions in 2021. Car travel is the type of travel that contributes the most to those emissions.

NHS Scotland is supporting a shift to a healthier and more sustainable transport system where active travel and public transport are prioritised.

What did we do last year to reduce the need to travel?

Last year we continued implementing our Agile Working Policy, enabling staff who can work from home to have the ability to do so. This also includes encouraging staff who have external meetings to take them online where possible, to reduce business travel and long journeys for in person meetings.

What did we do last year to improve active travel?

Last year we launched our partnership with Mobility Ways. This involved a staff survey and has given staff the opportunity to receive a personalised travel plan which outlines all the sustainable commuter options available to them based on their postcode data and place of work.

We have also launched the NHS Fife Lift share scheme to encourage staff to lift share to work instead of driving in a single occupancy vehicle. This scheme gives staff the opportunity to save money as well as reduce their environmental impact.

We are also in the process of finalising our NHS Fife active and sustainable Travel Strategy in collaboration with Travel Knowhow Scotland which provides the basis to implement the necessary behaviour change to encourage more active and sustainable travel within our workforce and our implementation plan across the next 6 years.

We offer free cycle training in collaboration with Greener Kirkcaldy to all staff. This involves beginner, intermediate and advanced cycle training.

What did we do last year to improve public and community transport links to NHS sites and services?

NHS Fife promotes existing discounts from public transport providers such as Stagecoach to its employees through the staff network.

What are we going to do this year to improve public and community transport links to NHS sites and services?

With the recent publication of the 2035 Regional Transport Strategy, SEStran are seeking to develop a Health and Transport Action Plan for the region. They are keen to engage with stakeholders and would welcome involvement from NHS Fife. This offers the opportunity to engage with region-wide resources and contribute to a joined up strategy relating to transport & health, including impacts on wider public health outcomes.

The draft of the 'Local Transport Strategy for Fife 2023-2033' sets out a vision that *'by 2033, Fife's transport system will support communities with affordable, seamless, and sustainable access to all aspects of our daily lives'*. Fair access to daily activities is one of four priorities within the strategy, noting that *'access to work, education, healthcare, and leisure is crucial for our wellbeing and our economy'*, with a commitment in Year 2-4 to explore options to improve supported bus services within Fife, including frequency and operating hours. The implementation of this strategy will directly impact NHS Fife and transport links to our sites and services.

What are we going to do this year to reduce the need to travel?

To reduce the need to travel we will encourage staff to adopt the travel hierarchy when making decisions about when is suitable to travel. This will outline that staff should only travel to work when necessary and work from home where possible.

What are we going to do this year to improve active travel?

This year we are hoping to make further progress with our Mobility Ways partnership and encourage more PTP (Personalised Travel Plan) sign ups.

We are going to keep pushing the Lift share scheme as a viable and preferable commuter option.

We worked with Greener Kirkcaldy to create a cycling action plan that we hope to implement in 2024. Within this, we focused on how to specifically increase the provision of cycling within our workforce. This will involve a programme of events such as

- Cycle training
- Led rides
- Dr Bike events
- Improving cycling facilities and infrastructure

We are going to revamp our cycle-to-work scheme to set this up as a year-round scheme for staff to use. We hope this new format will have a much greater uptake than the previous scheme which was only open for set windows each year.

We are working to remove all petrol and diesel fuelled cars from our fleet by 2025.

The following table sets out how many renewable powered and fossil fuel vehicles were in NHS Fife fleet at the end of March 2022 and March 2023:

	March 2022		March 2023		Difference in % Zero Emissions Vehicles
	Total vehicles	% Zero Emissions Vehicles	Total vehicles	% Zero Emissions Vehicles	
Cars	55	13%	58	22%	+9%
Light commercial vehicles	78	27%	72	37.5%	+10.5%
Heavy vehicles	0	0	0	0	0

Class	March 2022			March 2023			
	Zero Emission Vehicles 2023	Diesel/Petrol	Total	Class	Zero Emission Vehicles 2022	Diesel/Petrol	Total
Cars	4	51	55	Cars	13	45	58
Vans	17	61	78	Vans	27	45	72
HGV	0	0	0	HGV	0	0	0
HB Total	21	112	133	HB Total	40	90	130

The following table sets out how many bicycles and eBikes were in NHS Fife's fleet at the end of March 2022 and March 2023:

	March 2022	March 2023	Percentage change
Bicycles	0	0	0
eBikes	0	0	0

8. Greenspace and biodiversity

Biodiversity

Biodiversity, or the wide variety of living organisms within an environment, has declined at a rapid rate in the last 50 years. Evidence demonstrates that these trends are attributed to human activities, such as land use change, habitat degradation and fragmentation, pollution and the impacts of climate change. The State of Nature report published in 2023 has highlighted the decline of nature across Scotland, with 11% of species now classed as threatened with extinction.

Public bodies in Scotland have a duty under the Nature Conservation (Scotland) Act 2004 ([Nature Conservation Scotland Act 2004](#)) to further the conservation of biodiversity, taking care of nature all around us. Furthermore, the Wildlife and Natural Environment (Scotland) Act 2011 ([Wildlife and Natural Environment Scotland Act 2011](#)) requires every public body to summarise their activities to meet this duty, through the production of a publicly available report.

What actions have been taken to identify, protect and enhance biodiversity across your organisation?

We are working with a range of partners including Fife Council, Fife Coast and Countryside Trust, Scottish Natural Heritage and the Fife Environmental Partnership to share sustainability opportunities, improve community links and gain biodiversity advice and methods of improvement. We also have connections with the Fife Biodiversity Partnership which allows NHS Fife to link in with the LBAP for Fife. This alongside our 2030 Greenspace Strategy will be crucial to protecting and enhancing biodiversity across NHS Fife. We plan to visit the Botanic Gardens in Edinburgh to gain insight into nature-based solutions we could implement at the board that would tackle climate risk whilst enhancing biodiversity. We take information from the Fife Environmental Partnership and liaise with the grounds and gardens teams to make improvements where we can. We are also in the early stages of developing a Green Health Partnership for Fife which adds additional potential for nature-based activities within the NHS Fife estate that will promote health and well-being for patients, staff and communities.

We carried out site greenspace audits in 2021 which highlighted available greenspace, concerns, and priorities for action moving forward. We had tree condition surveys carried out at Whyteman's Brae Hospital and Cameron Hospital in 2022 by BNTW Scotland Environmental Consultancy. These reported on overall tree condition, a quantified tree risk assessment, recommendation of risks to reduce the risk of harm and identification of future management requirements.

Over the past 3 years, we have carried out several projects aimed at increasing biodiversity including:

- Creating a garden at St Andrew's Community Hospital as well as a mixture of hedgerow and grassland planting around the site.
- Replanting at Cameron Hospital.
- Meadow land developed at QMH.
- Continual development of the Haven Garden at QMH with the support of an active group of volunteers.

- Horticultural Gardens at Stratheden continually developed and upgraded. Courtyards at this site have been rejuvenated and a dedicated walk-through of natural woodland has been created on site with the help of Elmwood College.
- Grass cutting reduced at Lynebank Hospital to let meadow area be created. A walking route has also been established and bird boxes and 7 feeders have been put in the walled garden.

What actions have been taken to contribute to the NHS Scotland Estate Mapping programme, or to develop an internal mapping programme?

In August 2022 NHS Fife mapped its entire estate using ESRI GIS technology. This digital map of our estate gave us an accurate and complete record of our natural capital; allowing us to understand where our greenspaces are and what types of greenspaces we have that will lead to better management in the future.

What actions have been taken by mainstream biodiversity across the organisation?

The development of our 2030 Greenspace Strategy has allowed us to identify shared opportunities, and partnership working and provided opportunities for any NHS Fife employee who wishes to be involved in greenspace/biodiversity improvement to have the opportunity to do so. Having this strategy alongside our mapped estate has mainstreamed our approach to greenspace and biodiversity moving forward and given us a framework to work within for greenspace development.

How have nature-based solutions been utilised to address climate and biodiversity emergencies?

After completing the CCRA, the NHS Fife board, as required by the Programme (SCCAP), is preparing strategic programmes for adaptation to climate change, based on the highest climate-related risks to the board. As part of this, we are exploring the use of nature-based solutions to tackle climate risks such as flooding as part of our adaptation plan.

What actions have been undertaken to raise awareness, engagement, and understanding of biodiversity and nature?

Alongside mapping our estate, we also created publicly available story maps and highlighted ways we have developed our greenspaces and enhanced biodiversity already as well as proposals for future development. These story maps are extremely interactive and engaging for people to look at meaning we can share the outputs of our work in a very visual and captivating way. We intend to continually update our story maps as we develop our greenspace and this will allow us to keep staff, patients, the wider community and any other stakeholders up to date and informed on what is going on about our green estate.

We published our 'NHS Fife 2030 Greenspace Strategy' in May 2023, and this outlines how we are going to develop our greenspace to bring an array of health and wellbeing benefits to patients and staff whilst addressing biodiversity loss and the climate emergency. This strategy will outline the ways we hope to develop our greenspace under six key themes to deliver a range of benefits to the board and the wider community.

We also have a section within our sustainability staff hub that outlines greenspace developments and other relevant information to keep staff informed and up to date.

We have a range of volunteering roles across NHS Fife, including gardening. Presently, we are engaging a garden volunteer at Queen Margaret Hospital to maintain and enhance the courtyard garden that serves two of our medicine of the elderly/rehab wards. A volunteer has also started at the Victoria Hospital Hospice to complement and supplement the work of their sessional gardener.

We have two volunteers at Glenrothes Hospital. Their role is to maintain and enhance the courtyard garden areas serving three medicine of the elderly wards. In addition to maintaining the gardens, they regularly make up lavender bags using cut lavender for distribution to both staff and patients. They also decorate recycled candle jars to generate funds (donations only) to purchase seeds and plants. One volunteer will be placed in St Andrews Community Hospital in the coming few weeks, again to do light gardening tasks to maintain the garden area.

NHS Fife has an allotment in Kelty that is looked after by a volunteer (previously a patient). All produce grown on the allotment is recycled for the benefit of patients attending the allotment as part of their ongoing therapy.

We are currently advertising on our website and with Fife Voluntary Action for volunteers to attend the gardens in Adamson Hospital, Cupar, and Cameron Hospital, Windygates.

At our Horticultural Gardens at Stratheden, we have nature signage that helps individuals explore the gardens easily and understand the work that is taking place there.

What surveys, monitoring, or assessment of biodiversity have been undertaken? If you have – have systems been developed to continue monitoring long-term?

As aforementioned, we carried out site greenspace audits in 2021 which highlighted available greenspace, concerns, and priorities for action moving forward.

Greenspace

The design and management of the NHS Scotland green estate for human and planetary health offers an opportunity to deliver a range of mutually beneficial outcomes. These include action on climate change (both mitigation and adaptation), biodiversity, health and well-being for patients and staff, community resilience building and active travel.

The table below outlines any key greenspace projects and their benefits.

Project name/ location	Benefits of project	Details of project
AU2 staff wellbeing courtyard at Victoria Hospital	Creating a attractive space for staff to relax and enjoy outdoor greenspace whilst at work. Planting materials, plant containers, and native species will all be considered as part of our commitment to sustainability and biodiversity.	At the design stage now
3-part garden upgrade at Cameron Hospital	Upgrade to a garden that will facilitate OT inpatient rehabilitation. Looking at ways to incorporate different planters, trees, and feeders that will enhance biodiversity whilst maintaining patient benefits.	At the design stage now
Renewables	Looking at the potential for renewable energy on sites to align with our greenspace strategy commitments. Solar car ports, battery storage.	Discussed internally only at this stage with a view to commitment

9. Sustainable procurement, circular economy and waste

Earth Overshoot Day marks the date when our demand for resources exceeds what Earth can regenerate in that year. In 2023, Global Earth Overshoot Day is on 2 August.

For the UK, the picture is more worrying. In 2023, the UK's Earth Overshoot Day is 19 May. The current level of consumption of materials is not sustainable and is the root cause of the triple planetary crises of climate change, biodiversity loss and pollution.

We aim to reduce the impact that our use of resources has on the environment through adopting circular economy principles, fostering a culture of stewardship, and working with other UK health services to maximise our contribution to reducing supply chain emissions to net zero by 2045.

What did we do last year to reduce the environmental impact of the goods and services we buy?

Provided various Sustainable Procurement training sessions, including the Sustainability Test, and the Sustainability Tools for procurement officers involved in tendering to ensure consideration of sustainability in specifications and scoring for all regulated procurements.

Review of single-use products within theatres, moving to reusable slide sheets and BP cuffs, resulting in procurement cost savings as well as environmental benefits.

What are we doing this year to reduce the environmental impact of the goods and services we buy?

This year we are introducing the warp-it system to NHS Fife. Warp-it is a web service and re-use platform, used by numerous public sector organisations for redistributing surplus furniture and equipment. If utilised, warp-it can bring an array of benefits to NHS Fife by reducing the requirement to purchase new, hence reducing procurement costs and manufacturing as well as reducing waste and associated disposal costs, which brings carbon savings and environmental benefits too. This system is in its infancy stages, but we are working on getting it engrained as a centralised way of moving surplus furniture and equipment around the organisation, and hope this will be fully operational by the end of 2023. The initial products used to test the system have already resulted in:

- Carbon Saved - 62 kg.
- Waste Avoided - 40 kg
- Savings - £228.00

Continuing to support Sustainable Procurement training requirements for procurement officers and expanding training to service users to provide Sustainability Awareness sessions to ensure enhanced specifications including sustainability considerations.

Most products in NHS Fife are procured nationally by National Procurement, therefore we will continue to work in partnership with them to deliver the transition to a circular economy through circular economy application in contracts and influencing procurement strategies toward circular approaches.

Continue to review single-use products across the wider organisation, to move to reusable products, to drive procurement cost savings and environmental benefits.

We aim to reduce the amount of waste we produce and increase how much of it is recycled.

The table below sets out information on the waste we produce and its destination for the last three years. *The figures below are displayed in tonnes (weight) with the CO₂e below:*

Type	2020/21 (tonnes)	2021/22 (tonnes)	2022/23 (tonnes)	Percentage change from 21/22
Waste to landfill	42.1 (18.89tCO ₂ e)	34.5 (15.4tCO ₂ e)	35.7 (15.93tCO ₂ e)	+3.5%
Waste to incineration	1176.6 (98.58tCO ₂ e)	1185 (86.92tCO ₂ e)	1290 (86.09tCO ₂ e)	+8.8%
Recycled waste	843.1 (1280.32tCO ₂ e)	691.1 (754.72tCO ₂ e)	713.9 (841tCO ₂ e)	+3.2%
Food waste	56.6 (0.5tCO ₂ e)	79.2 (0.71tCO ₂ e)	55.4 (0.49tCO ₂ e)	-30.1%
Clinical waste	714.9 (195.27tCO ₂ e)	846.9 (231.2tCO ₂ e)	758 (206.93tCO ₂ e)	-10.5%

We have set targets to reduce the amount of waste we produce, and the tables below provide information on our performance against those targets:

Reduce domestic waste by a minimum of 15%, and greater where possible compared to 2012/2013 – by 2025

Target – reduce domestic waste by	280 tonnes
Performance – domestic waste is reduced by.	Increased by 20 tonnes
Outcome	Not achieved yet
Further reduction required.	300 tonnes

Ensure that no more than 5%, and less where possible, of all domestic waste is sent to landfill – by 2025.

Target – reduce waste sent to landfill by 2025.	1771 tonnes
Performance – waste sent to landfill reduced by	1886 (tonnes)
Outcome	ACHIEVED
Further reduction required	0 (tonnes)

Reduce the food waste produced by 33% compared to 2015/16 – by 2025.

Target – reduce food waste by	20 (tonnes)
Performance – food waste reduced by	7 (tonnes)
Outcome	Currently achieved 35% in 2022/23
Further reduction required.	13 (tonnes)

Ensure that 70% of all domestic waste is recycled or composted – by 2025.

Target – recycle or compost.	1320 (tonnes)
Performance – recycled or composted.	759 (tonnes)
Outcome	Currently achieved 40% in 2022/23
Further increase required.	561 (tonnes)

What did we do last year to reduce our waste?

In the last year, we have concentrated on our audit programme which has achieved significant reductions in the clinical waste streams. Two specific achievements have been improved segregation (which has increased domestic waste to a degree) and a reduction in the ‘over-packaging’ of clinical waste.

Significant progress has been made in the promotion of waste reduction and recycling across disciplines.

What are we doing this year to reduce our waste?

NHS Fife have reinigorated their waste action plan. Amongst other things, the focus will be on ensuring segregation is returned to the pre-Covid position. A short life working group was established specifically to look at catering waste. A review of staffing is underway to release resources to create additional waste management assistance. NHS Fife has an established 'Green Theatre' group. We will continue our emphasis on audit and will strengthen the post-audit actions.

10. Environmental stewardship

Environmental stewardship means acting as a steward, or caretaker of the environment and taking responsibility for the actions that affect our shared environmental quality.

This includes any activities which may adversely impact land, air, and water either through the unsustainable use of resources or the generation of waste and pollution. Having an Environmental Management System (EMS) in place provides a framework that helps to achieve our environmental goals through consistent review, evaluation, and improvement of our environmental performance.

What steps did we take last year to develop and implement our EMS?

Between 2022-2023, the board joined an EMS group with other health boards to coordinate and facilitate the implementation process of an EMS. A sustainability officer was employed in October 2023 with the direct responsibility of creating and implementing the EMS.

In March 2023 we worked with a consultancy to start the process of building our EMS. They visited our main site, Victoria Hospital and completed an audit of the site to identify relevant aspects and impacts to start updating our register on the RIO system. They will update some aspects of the system and are working on building an implementation plan for our pilot site, Victoria Hospital.

What did we do last year to improve our environmental performance?

In this last year, NHS Fife has set up projects such as solar/PV installation and the Fife College of Nursing decarbonisation project. The board has installed more EV charging points across its main sites and aims to introduce more in due course. The board has also started to implement the green theatre's programme to lower emissions from theatres. See point 5 for building energy projects.

The board collaborated with Mobility Ways to help lower emissions from business travel and encourage employees to try greener forms of transport such as lift sharing and public transport.

What steps will we take this year to further develop and implement our EMS?

Following the employment of the dedicated EMS resource, the board will compile an aspects register and a legal register. Once these components are finished, the EMS team can move forward to write the EMS Policy and Procedure documents which will be signed off by the Chief Executive to be implemented across NHS Fife. Once the board makes progress on developing operational control of environmental procedures across the board, we will incorporate training and awareness of these procedures for all staff and communicate these changes and progress to our key stakeholders.

The board will start planning to hire two sustainability interns from the University of St Andrews for the Summer of 2024 to help with key EMS projects that NHS Fife aims to implement. Taking on interns allows the organisation to gain valuable insight and knowledge from a renowned institution leading in environmental and climate education. The board will also strengthen its connection with one of the best rated universities in the UK and provide opportunities for future employment with the board.

What are we doing this year to improve our environmental performance?

NHS Fife is currently undertaking a wide range of projects across its sectors, some examples that have not been mentioned previously include:

Sustainable buildings and land: Creation of net-zero roadmaps for all sites, laundry heat recovery, Warp-it program to recycle and repurpose furniture, NHS Fife 2030 Greenspace Strategy.

Sustainable Travel: Expanding electric fleet and charging points where possible, cycle to work scheme, and continuing with Mobility Ways collaboration to encourage sustainable travel.

Sustainable Care: Green inhalers and prescribing plan, implementing realistic medicine principles.

Sustainable communities: We are currently establishing community partnerships based on our Greenspace Strategy, collaborating with the local council on climate risk, adaptation and training programmes and internships.

11. Sustainable construction

Budgetary constraints, construction inflation, and zero carbon targets are enabling us to take more considered decisions around the form of construction developments. Refurbishment of existing assets is often more cost effective and reduces embodied carbon when compared to a new-build option. For these reasons, we are likely to be more selective in our decision making to build new assets moving into the future, whilst recognising there is sometimes still a clinical/technical need to do so.

For projects out with our delegated limits (currently £5m), they require to be developed and assessed using the Sustainable Design and Construction (SDaC) Guide (SHTN 02-01). This tool will help us to ensure that our construction projects are sustainable.

We have recently completed our National Treatment Centre which was awarded “very good” in accordance with BREEAM 2018 (predecessor to SHTN 02-01) and our two new proposed health and wellbeing centre’s at Lochgelly and Kincardine are being developed using SHTN 02-01.

12. Sustainable communities

The Climate Emergency undermines the foundations of good health and deepens inequalities for our most deprived communities.

The NHS touches every community in Scotland.

NHS Fife has a responsibility to use our abilities as a large employer, a major buyer and one of the most recognised brands in the world - an Anchor Institution - to protect and support our community’s health in every way we can.

What are we doing to act as an Anchor Institution for our local community?

NHS Fife has embedded Anchor Institution principles into the development of our Population Health and Wellbeing Strategy.

We have created an Anchor Institution Operational Group that will use the Progression Framework to monitor the implementation of key objectives.

The key objectives of the group are to:

- Increase local purchases to aid social benefit
- Widen access to quality work
- Service design and delivery
- To be an exemplar employer
- Use buildings and spaces to support communities
- Reduce NHS Fife's environmental impact
- Work more closely with local partners

We have developed a draft Anchor Strategy which will be published early next year. This strategy aims to support NHS Fife in maximising our social and economic impact in the local community.

What are we doing to improve the resilience of our local community to climate change?

NHS Fife has developed its Climate Change Risk Assessment and Adaption Plan to identify areas where we can mitigate the effects of climate change. We work in partnership with multiple agencies to achieve this and have recently combined our efforts by aligning the team at Fife Council to work together on climate adaptation within Fife.

13. Conclusion

Overall, it is evident that NHS Fife has made significant progress across many areas outlined in the NHS Scotland Sustainability Strategy and has excelled in its commitment to sustainability across the 2022/2023 financial year. We have made continued progress with transport, waste, and energy as well as many areas of sustainable care. Alongside reducing direct emissions, we have put great efforts into developing our Greenspace Strategy with direct links to the Population Health and Wellbeing Strategy.

This continued progress has been made through increasing staff resources to meet sustainability needs whilst planning further areas of focus and improvement. The strategy and detail that NHS Fife has presented in this report shows that the board is not only following climate adaptation policy but going beyond to support our local communities and staff wellbeing, whilst creating a more sustainable NHS for future generations. We acknowledge that the challenges we face will be arduous and challenging, but we are also confident that we possess the capacity to promote change and make significant progress over the coming years.