

Annual Climate Emergency and Sustainability Report

2021-2022



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1. Introduction

This is NHS Fife's first annual Climate Emergency and Sustainability Report.

The planet is facing a triple crisis of climate change, biodiversity loss and pollution as a result of human activities breaking the planet's environmental limits.

The World Health Organisation (WHO) recognises that climate change is the single biggest health threat facing humanity. Health organisations have a duty to cut their greenhouse gas emissions, the cause of climate change, and influence the wider society to take the action needed to both limit climate change and adapt to its impacts.

More information on the profound and growing threat of climate change to health can be found here: www.who.int/news-room/fact-sheets/detail/climate-change-and-health

NHS Fife provides health care to the 375,000 people who live in Fife and employs 9,850 members of staff.

2. Leadership and Governance

The Director of Public Health is the Sustainability Champion of the Board.

The Director of Property and Asset Management is the Executive Lead for sustainable buildings, land, travel and reporting.

The Public Health and Wellbeing Committee has lead responsibility for climate change and sustainability.

NHS Fife's Board is making significant changes to the structure within the Estates Department to enable a change in roles and duties assigned to sustainability.

The Annual Delivery Plans (ADPs) are due to be completed by June 2023 with guidance due to be issued during February 2023. Within this guidance, there will be a requirement for a section in respect of Climate Change and Sustainability to be included in each Board's ADP. A simple pro-forma for this section is being developed in conjunction with the Regional Chairs and the Scottish Government (SG).

An increase in our dedicated and specialist workforce will be required to implement the Climate Emergency and Sustainability Policy, specifically in respect of the roles required by the Policy. Sharing skills and technical expertise in relation to Climate Change and Sustainability presents a key opportunity for a regional approach.

There will be requirements to develop the roles, knowledge and skills of staff across NHS Fife to support the delivery and development of the Strategy.

Interest and commitment of staff to a Greener NHS continues to grow and there are clear synergies and opportunities in relation to staff health and wellbeing. Examples include active travel, access to green space and positive staff engagement.

The expectation is that the NHS Fife Executive Director Group (EDG) will be kept updated and engaged through the delivery of key parts of the Strategy as identified below. This approach will encourage collective ownership and system leadership and will enhance discussions and decision making.

Executive Director	Executive Input to Objective	Role (to be further developed)
Director of Property and Asset Management	Lead	Proposed 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	Contributor	Proposed role is Board Champion (BC) 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.
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	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.

Notwithstanding the need to develop core capacity and expertise within NHS Fife, there is also an opportunity for shared learning and shared development of expertise across the East Region.

In order to support this collaboration, an East Region Climate Emergency and Sustainability Group has been implemented. Membership includes LE's from each Board together with other relevant colleagues.

Board leads meet every two months to discuss opportunities for collaborative working and also contribute to and influence national work.

3. Greenhouse Gas Emissions

NHS Fife aims to become a net-zero organisation by 2040 by reducing 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:

Source	Description	Amount of greenhouse gas (tonnes of CO2 equivalent)			Percentage change since 2019/20
		2019/20	2020/21	2021/22	
Building energy use	Greenhouse gases produced when providing electricity and energy heat for NHS buildings	21712	20247	20395	-6.07%
Non-medical F-gas use	Greenhouse gases used for refrigeration and air conditioning	Not available	Not available	3033.9	Not available
Medical gases	Greenhouse gases used in anaesthetics - nitrous oxide (N2O), Entonox (which contains nitrous oxide), desflurane, sevoflurane and isoflurane	Not available	1542	1465	Not available
Metered dose inhaler propellant	Greenhouse gases used as a propellant in inhalers used to treat asthma and chronic obstructive pulmonary disorder (COPD)	Not available	5511	5828	Not available
NHS fleet use	Greenhouse gases produced by NHS vehicles	Not available	Not available	Not available	Not available
Waste	The greenhouse gases produced by the disposal and treatment of waste produced by the NHS	Not available	714.9	846.9	Not available
Water	The greenhouse gas produced from the use of water and the treatment of waste water	97.6	101.4	37.9	-61.2%
Business travel	Greenhouse gases produced by staff travelling to work (not using NHS vehicles)	Not available	Not available	Not available	Not available
Carbon sequestration	The amount of carbon dioxide captured per by woodland, trees, grassland and shrubs growing on NHS grounds	Not available	Not available	259.715531	Not available
Greenhouse gas emissions minus carbon sequestration		Not available	Not available	Not available	Not available

4. National Sustainability Assessment

NHS Scotland has developed a National Sustainability Assessment Tool (NSAT) which all Health Boards use on an annual basis to measure progress across sixteen different areas of sustainability.

In 2021/22, NHS Fife achieved an overall score of 39%. This score is a reduction on last year's score; however, significant efforts have been made towards increasing sustainable actions such as active travel options, reduction in the use of gas and electricity etc.

5. 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 any new conditions we face.

The changing climate is increasing risks for health and health services. More information on these risks 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 have we done to better understand the impact of climate change on NHS Fife and the people and places we serve?

A Climate Change Impact and Risk Assessment (CCRA) with adaptation measures has been completed on our multi-disciplinary approach. This has been submitted to the NHS Scotland Head of Climate Change and Sustainability Manager.

What are we doing to build resilience and prepare for the increasing risks from climate change to NHS Fife and the people and places we serve?

Any measures identified in the Adaptation Plan can be taken forward for funding, where appropriate action can be taken to mitigate against any climate related risks identified as part of the CCRA process.

6. Building Energy

NHS Fife has 46 buildings including hospitals, health centres and clinics.

NHS Fife aims to use renewable heat sources for all of its buildings by 2038.

In 2021/22, NHS Fife used 99,696,485 kWh of energy. This was an increase of 0.9% from the previous year.

In 2021/22, 20,247.8 tonnes of CO2 equivalent was produced by NHS Fife for building energy use. This was an increase of 0.26% from the previous year.

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

In 2020, a project funded through NDEEF with an award of £1.8 million was started. The project will span over 2 years and includes:

- 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?

In 2022 and 2023:

- The installation of double glazed windows at Whyteman's Brae Hospital to improve efficiency is underway
- The decentralisation of steam to ground source heat at Cameron Hospital, Windygates with the aim of becoming net zero, has been commission to design stage RIBA 3
- Several smaller projects on the improvement of street lighting have been undertaken across various sites

Priorities for 2023 will be to deliver projects across Fife comprising of:

- Fife College of Nursing, Kirkcaldy - route to net zero by installing LED lighting
- Improving insulation in loft spaces and on pipe work across various sites
- Replacing windows and the installation of solar PV across various sites
- All NHS Fife properties to have street lighting designed to replace costly running and maintenance light fittings with LED

7. Sustainable Care

The way NHS Fife 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.

Anaesthesia and Surgery

Greenhouse gases are used as anaesthetics and pain killers. These gases are Nitrous Oxide (laughing gas), Entonox (which contains nitrous oxide) and the 'volatile gases' - Desflurane, Sevoflurane and Isoflurane.

NHS Fife's emissions from these gases are set out in the table below:

Anaesthetic Gas Use			
Source	2018/19 (baseline year) tCO2e	2021/22 tCO2e	Percentage Change since 2018/19
<u>Volatile Gases</u>			
Desflurane	67.9	8.9	87%
Isoflurane	1.5	0.6	60%
Sevoflurane	54	40.4	26%
Volatile Gas total	123.4	49.9	60%
<u>Nitrous Oxide and Entonox</u>			
Piped Nitrous Oxide	188	217	15.4%
Portable Nitrous Oxide	128	84	31.7%
Piped Entonox	1064	1056	0.75%
Portable Entonox	113	107	5.3%
Nitrous Oxide and Entonox total	1493	1464	1.94%
Anaesthetic Gas Total	1616.4	1513.9	6.34%

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

There are 3 theatres in the NTC – Fife Orthopaedic, Victoria Hospital, Kirkcaldy and none of these theatres or beds have piped Nitrous Oxide.

What are we doing this year to make surgery greener?

NHS Fife has learned through our Regional Group of the steps taken in the implementation of Green Theatres by NHS Lothian and are looking to incorporate these into our Action Plan which is being developed in 2023.

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 available; such as dry powder inhalers, which can be used where clinically appropriate.

NHS Fife estimates that during 2021-22 emissions from inhalers was 5,828 tonnes of CO2 equivalent.

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

- A formulary review of respiratory inhaler choices - through the East Region Formulary (ERF) on the environmental impact of inhalers has been examined. The ERF encourages prescribers to have a full discussion of inhaler choices with patients, taking into account environmental impact, inhaler technique and patient factors and where clinically appropriate, prescribe a dry powder inhaler (DPI) as a first choice.
- Person-centred reviews - to optimise disease control and ensure quality prescribing:
 - Prioritising reviews of patients with asthma who are over-reliant on short-acting beta-agonist (SABA) relievers
 - Review individuals prescribed SABA alone, check diagnosis and review treatment
 - Streamline inhaler devices for patients (device consistency)
 - Review separate inhalers where a combination inhaler device would be a possibility
 - Prescribe dry powder inhalers (or soft mist inhalers), if clinically appropriate
 - Review patients on HFA 227ea contain inhalers (eg Flutiform and Symbicort MDI) and, where possible, switch to inhalers with a lower global warming potential
 - Specialist 'difficult asthma clinics' to ensure treatment is optimised, including the use of biological treatment
- Communication:
 - Presentation to GP Clusters Quality Leads
 - Communication of formulary choices and changes to prescribers and pharmacy professionals in primary and secondary care

What are we doing this year to improve patient care and reduce emissions from inhalers?

- Implement recommendations from Respiratory Quality Prescribing Guide (Scottish Government Effective Prescribing and Therapeutics Division)
- Review of local prescribing guidance following publication of the Respiratory Prescribing Guide and reflecting formulary choices, which have considered environmental factors
- Further local communication and education
- Person-centred reviews (as above)
- Utilise ScriptSwitch® and other electronic prescribing systems to promote formulary choices and to highlight overuse of SABAs
- Respiratory prescribing will be reviewed through the Fife Prescribing Forum, utilising primary and secondary care prescribing data, benchmarking, and National Therapeutic Prescribing indicators

8. Travel and Transport

Domestic transport (not including international aviation and shipping) produced 24% of Scotland's greenhouse gas emissions in 2020. Car travel is the type of travel which contributes most to these 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 with the implementation of our Agile Working Policy, enabling staff who can work from home to have the ability to do so.

What did we do last year to improve active travel?

2021 and 2022 saw the implementation of e-bike Loan Schemes and bike repair stations at various locations across Fife.

The Bike to Work Scheme was also available to encourage staff to apply for funding in order to purchase a bicycle or e-bike.

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

We installed two electronic timetable information screens at the bus stances at Victoria Hospital, Kirkcaldy funded by Fife Council and in partnership with Sustran and Journeo.

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

NHS Fife's Agile Working Policy which allows staff to work from home, where practicable, will continue.

NHS Fife has committed to a 5-year contract with Mobility Ways, the only software solution dedicated to decarbonising the commute to work. As part of this commitment, on-going engagement continues with staff via the Communications team with branded surveys and an option available to opt into a Lift Share Scheme which makes significant savings to personal fuel costs and reduces the carbon footprint.

Personal travel plans can also be developed through the Mobility Ways Software to detail the sustainable travel options available to staff.

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

NHS Fife is working to remove all petrol and diesel fuelled cars from our fleet by 2025.

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

	Renewable powered vehicles	Fossil fuel vehicles	Total vehicles	Percentage renewable powered vehicles
Cars	3	18	21	14%
Light commercial vehicles	26	48	74	35%
Heavy vehicles	0	0	0	0

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

	Total
Bicycles	0
eBikes	0

9. Greenspace and Biodiversity

In addition to health benefits for patients and staff, investment in greenspace around hospitals and healthcare centres helps tackle climate change and biodiversity loss.

What did we do last year to improve our green space and increase biodiversity?

A Greenspace and Biodiversity Workshop was held in May 2022 involving multi-disciplinary directorates across NHS Fife and external third part specialist organisations. Fife Coast and Countryside Trust, Nature Scot and Fife Food Partnership attended the Workshop with a view to starting early meaningful discussion on the development of an NHS Fife 2030 Greenspace Strategy.

All NHS Fife sites have been mapped using ESRI GiS software during 2022. This software was developed by the Estates Officer - Sustainability and populated by two St Andrews University Interns who were employed by NHS Fife over the summer period of 2022.

Fife Health Charity generously gifted funding for the transformation of a rooftop to create a dedicated critical recovery garden at Victoria Hospital, Kirkcaldy, where ICU patients, their loved ones and staff can spend time.

Improving biodiversity on our mowed grass areas on various sites throughout NHS Fife continues along with identifying areas of improvement particularly around planting at site boundaries. This will enable movement of animals and propagation of flowers including native species by providing connecting corridors and supporting birds and wildlife.

What are we doing this year to improve our greenspace and improve biodiversity?

NHS Fife will take forward the outcomes of the 2030 Greenspace Strategy which is due to be finalised in March 2023.

10. Sustainable Procurement, Circular Economy and Waste

Circular Economy

NHS Fife aims to reduce the impact the use of our resources has on the environment by adopting circular economy principles.

We will work with other NHS Scotland Health Boards to maximise our contribution to reducing supply chain emissions to net-zero by 2045.

Across NHS Fife, waste produced by disposing of out of date medical consumables, clinical furniture and equipment beyond economical repair, or no longer meeting UK standards can be high. These items are disposed of as landfill or WEEE waste neither of which is particularly sustainable.

NHS Fife has been afforded the opportunity to work in collaboration with the International Fire and Rescue Association (IFRA). Based in Fife, IFRA assists fire fighters and emergency services worldwide, including donating supplies and equipment to hospitals and children's homes and providing international aid to those in need.

In 2021, over 400 items were donated to the IFRA.

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

Working with NHS NSS National Procurement, NHS Fife is part of a Sustainability Steering Group. Supplier/category prioritisation has been delivered by this group, and we are aware of where to target our efforts moving forward.

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

NHS Fife has engaged with clinical leads across NHS Scotland to remove from use Desflurane, an anaesthetic gas. This gas has a notably higher environmental impact than other gases (2,540 times more than Carbon Dioxide).

The National Procurement team have been working on driving supply visibility across its 400 strong supplier base primarily in support of resilience. It also provides us with a heat map of manufacturing locations across its 9,000 products and this can be used as the basis for mapping supply chains from an environmental footprint point of view. It also provides us with insights from an ethical viewpoint, with country of manufacture information allowing us to assess labour practice risk across the supply chain.

We are continuing our training programmes with the NHS Scotland procurement with the launch of our training portal. Our team is signposting to existing sustainability content, which is easily accessible and held in a central location. Due to go live by mid-December 2022,

elearning content is also underway to provide support to staff on sustainability topics, with the aim to start rolling this out in February 2023.

If NHS Fife is to achieve its goal of becoming a net zero health care service, we require assurance that our suppliers are committed to achieving similar targets.

We have identified NHS Scotland's top 100 suppliers by spend and, to date, are in receipt of Climate Change plans from 38 of these suppliers.

We are committed to reducing the amount of waste produced with a view to increasing our recycling figures.

The table below provides information on the type of waste we produce:

Type	2020/21 (tonnes)	2021/22 (tonnes)	Percentage Change
Waste to landfill		30%	
Waste to incineration	1176.6	1185	1%
Recycled waste	843.1	691.1	-15%
Food waste	56.6	79.2	2%
Clinical waste	714.9	846.9	13%

What did we do last year to reduce our waste?

In early 2021, during the Covid-19 pandemic, all waste within affected areas was disposed of as clinical waste.

What are we doing this year to reduce our waste?

In 2022, post Covid-19, we are returning to patient recycling and segregation of waste.

There are Infection Control and Waste Audits in place as a preventative measure to divert non-clinical waste from the orange waste stream.

Plastic waste, including sterile outer packaging placed within orange clinical bag waste is cleaned and recycled for future use.

CIRECO waste contractor, in conjunction with other treatment companies, are investing in plant and equipment to prevent waste from landfill or Energy from Waste (EFW) and encouraging re-use of plastics.

Deposit Return Schemes are being researched for plastics, glass and aluminium cans in line with Scottish Government legislation which comes into effect in August 2023.

11. Environmental Stewardship

Environmental stewardship involves acting as a steward, or caretaker of the environment and taking responsibility for 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 are we doing this year to improve our environmental performance?

NHS Fife has identified a suitable consultant to progress with the population of our EMS system to allow NHS Fife to monitor, review and improve our environmental goals.

The target completion date for our acute site, Victoria Hospital, Kirkcaldy is March 2023.

Progress with the remainder of NHS Fife sites will continue into 2023.

12. Sustainable Construction

Where there is a need for new healthcare facilities in Fife, there is a requirement for the buildings and grounds to be safe, nature-rich, sustainable, resilient and accessible.

NHS Fife is working on the following building projects:

- National Treatment Centre - Fife Orthopaedics, Victoria Hospital, Kirkcaldy
- Lochgelly Health and Wellbeing Centre, Lochgelly (design stage)
- Kincardine Health and Wellbeing Centre, Kincardine (design stage)

The NTC - Fife Orthopaedics has been taken forward in accordance with BREEAM 2018 and is predicted to score 'good' at completion.

BREEAM 2018 has since been superseded as policy for new build healthcare developments in Scotland with the Sustainable Design and Construction (SDaC) Guide (SHTN 02-01) now taking its place.

The Lochgelly and Kincardine Health and Wellbeing Centres are being taken forward in line with this new guidance.

13. 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 who 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
- Use buildings and spaces to support communities
- Reduce NHS Fife environmental impact
- Work more closely with local partners

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

NHS Fife is developing 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.

14. Conclusion

NHS Fife has made progress in many areas of the sustainability agenda including active travel, renewable technologies and greenspace improvements.

Since 2020, significant efforts have been made to reduce our overall energy consumption resulting in a 7% reduction from the previous reporting period. It is estimated that we will achieve an on-going reduction year-on-year.

We will identify the range of activities that need to be undertaken as part of the Sustainability Action Plan being developed by June 2023.

Overall, NHS Fife is looking at ways of meeting the demands of the sustainability agenda by adopting collaborative working practices with local Government and other external organisations and engaging with staff across specialised departments such as theatres and pharmacy.

We provide accessible communication in a variety of formats including for people who are speakers of community languages, who need Easy Read versions, who speak BSL, read Braille or use Audio formats.

Our SMS text service number **07805800005** is available for people who have a hearing or speech impairment.

To find out more about accessible formats contact:

fife.EqualityandHumanRights@nhs.scot or phone **01592 729130**

NHS Fife

Hayfield House
Hayfield Road
Kirkcaldy, KY2 5AH

www.nhsfife.org

 facebook.com/nhsfife

 twitter.com/nhsfife

 instagram.com/nhsfife

 linkedin.com/company/nhsfife