

# NHS Grampian's Annual Climate Emergency & Sustainability Report

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2023/24



Date of Issue: 10<sup>th</sup> October 2024

**NHS Grampian**

**Annual Climate Emergency and Sustainability  
Report 2023/2024**

**DATE OF ISSUE – 10<sup>th</sup> October 2024**

**Note:**

We have prepared NHS Grampian's Annual Climate Emergency & Sustainability Report in accordance with the Scottish Government's proforma. The report has been structured to ensure full compliance with the proforma's guidelines, with specific questions highlighted in a text box for clarity and ease of reference. This approach ensures transparency in addressing the key areas outlined by the Scottish Government, enabling a clear alignment with national sustainability and climate emergency objectives.

## 1. Introduction

NHS Grampian's Annual Climate Emergency and Sustainability Report 2023/24, is issued in accordance with paragraph 65 of "A Policy for NHS Scotland on the Climate Emergency and Sustainable Development (DL (2021) 38)"

The report demonstrates NHS Grampian's approach and commitment to embedding and integrating climate resilience and sustainable development in to our core operational models supporting delivery of high-quality, accessible and effective healthcare to the population of Grampian.

### 1.1 Background

NHS Grampian is responsible for leading efforts to improve the health of the population of Grampian, serving approximately 588,000 people across Aberdeen City, Aberdeenshire and Moray, and for providing the health care services that people need. NHS Grampian is the fourth largest health board in Scotland by general funding allocation. Approximately 17,000 directly employed staff and a range of independent primary care practices (69 General Medical, 130 Pharmacy, 91 Dental and 54 Opticians) provide the full range of primary, community and specialist health services to the people who live in Grampian.

Services are managed through a portfolio management structure covering Integrated Family Health Services, Surgical and Clinical Support Services, Medical and Unscheduled Care, Mental Health and Wellbeing, Population Health and a range of Primary and Community Care services delegated to three <sup>1</sup>Integration Joint Boards (IJBs). All our direct clinical services are supported by corporate functions such as Infrastructure and Sustainability, Digital, Finance and People and Culture.

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***How is the health board showing leadership in tackling climate change and becoming environmentally sustainable?***

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## 2. Leadership and Governance

The NHS Grampian Board acknowledges that an effective response to climate change and the planning and delivery of the required sustainable development initiatives require active and meaningful engagement, supported by a robust governance and management framework.

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<sup>1</sup> IJB's are legally constituted cross-sector bodies providing a focus for NHS Grampian to work in partnership with other agencies, including Local Authorities and Primary Healthcare contractors, in the provision of integrated services to the local communities across Aberdeen City, Aberdeenshire, and Moray.

## 2.1 Strategy Development

NHS Grampian is demonstrating its commitment to tackling climate change and achieving environmental sustainability through the development and implementation of key strategies aligned with our sustainable development goals. Our Climate Emergency & Sustainability Strategy serves as the cornerstone of our efforts, focusing on climate change adaptation, environmental sustainability, and biodiversity action as part of NHS Grampian's *Plan for the Future*. The Heat & Power Strategy outlines our approach to progressing towards net zero, while our forthcoming Biodiversity Strategy will detail our plans to enhance the natural environment across our estate.

## 2.2 Embedding Delivery in Core Operating Activities

NHS Grampian are committed to embedding and integrating the key principles and direction contained in our strategy in to our core operating practice and decision making processes across all levels of our operations.

Our delivery activities focus on the following key areas:

1. **Governance and Policy:** Ensuring appropriate policies are in place and governance is well-structured.
2. **Active Travel:** Promoting sustainable transport solutions like walking, cycling, and public transport.
3. **Biodiversity:** Protecting and enhancing ecosystems within healthcare settings.
4. **Capital Projects:** Incorporating sustainability in new developments and improving the sustainability of current infrastructure.
5. **Greenspace:** Creating and preserving green areas in and around healthcare facilities.
6. **Transport:** Reducing carbon emissions from fleet and business travel.
7. **Awareness and Education:** Increasing staff and community knowledge of sustainability.
8. **Communities:** Engaging with local communities on climate and environmental issues.
9. **Ethical Issues:** Addressing ethical concerns related to sustainability, including resource use.
10. **Sustainable Care:** Delivering healthcare services in an environmentally conscious way and implementing changes as guided by the National Green Theatre Programme.
11. **Welfare:** Ensuring that sustainability efforts consider the welfare of both staff and patients.
12. **Adaptation:** Preparing for the impacts of climate change on healthcare delivery.
13. **Environmental Management:** Implementing systems for monitoring and improving environmental performance.
14. **Greenhouse Gases:** Reducing NHS Grampian's carbon footprint.

15. **Procurement and Supply:** Sourcing sustainable goods and services.
16. **Waste Management:** Waste minimisation through correct segregation and promoting re-use and recycling.

## 2.3 Governance and Accountability

The Board operates within an agreed governance and assurance framework designed to ensure that there are clear links between the governance responsibilities of the Board, the lines of accountability across the Chief Executive Team and supporting management structure and the assurance activities of the committees of the Board.

Whilst the Board has overall responsibility for setting the direction for the organisation, the supporting sub-committees and the management structure ensure that there is regular monitoring of performance and the management of risk.

Accountability and responsibility for sustainability are held at appropriate levels to ensure successful implementation

### **Governance Structure:**

- **NHS Grampian Board:** Comprised of both executive and non-executive members, the board is responsible for setting the strategic direction.

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### ***Who is the Sustainability Champion on the Board?***

*The NHS Grampian Board have appointed Mr Derick Murray, a non-executive board member, as the Sustainability Champion.*

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- **Performance Assurance Finance and Infrastructure (PAFI) Committee** is the Board sub-committee tasked with providing assurance to the Board on the adequacy of the governance arrangements for infrastructure, including compliance with sustainability and climate emergency requirements within Scottish Government strategy and policy.
- **Chief Executive:** Holds overall responsibility for ensuring that the organisation complies with sustainability policy and legislation.

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### ***Who is the Executive Lead?***

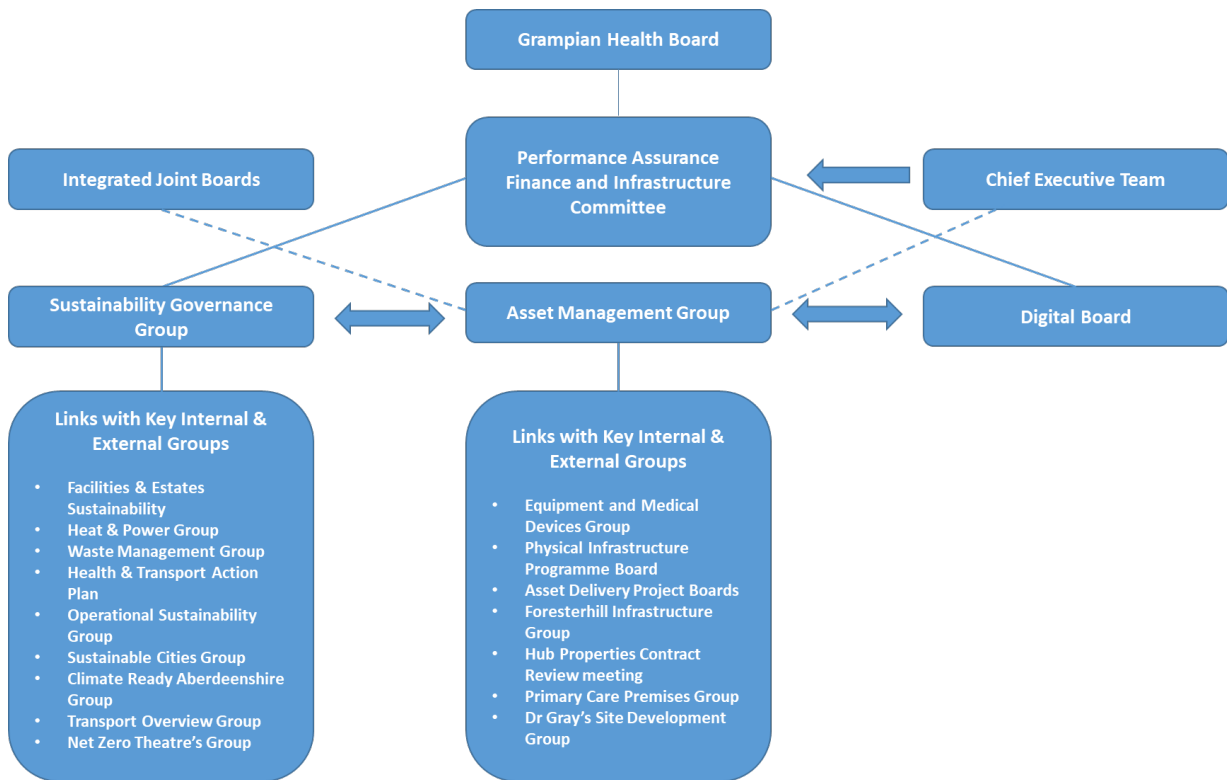
*The Chief Executive has delegated responsibility to Mr Alan Wilson, Director of Infrastructure, Sustainability and Support Services as Executive Lead for NHS Grampian's Climate Emergency and Sustainability response.*

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- **Sustainability Governance Group:** Meets monthly to provide operational oversight of the planning, implementation and delivery of the Board's carbon reduction and

sustainability strategy. All senior and operational managers and groups, with sustainability in their remit, report to the Sustainability Governance Group.

This Governance Structure is detailed in Figure 1 below.



**Figure 1:** An outline of the organisation's governance structure for climate action and sustainability.

## 2.4 Communication and Engagement

The promotion of sustainability is a key priority. We have conducted sustainability awareness workshops for Board members which has highlighted sustainability achievements and challenges, developed a sustainability eLearning module for staff which will be launched by the end of 2024, and celebrated the achievements of teams and individuals in advancing sustainability within NHS Grampian through the Green STAR Award. Additionally, we have established a strong network of Sustainability Champions who are actively improving sustainability practices within their departments and cultivating grassroots initiatives across the organisation

### 3. Summary of Performance and Impacts

NHS Grampian 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 emissions produced annually by the organisation.

Greenhouse gas emissions 2022-2023 & 2023-2024, tonnes CO <sub>2</sub> equivalent					
Source	2022/23 emissions (tCO <sub>2</sub> e)	2023/24 emissions (tCO <sub>2</sub> e)	Percentage change – 2022/23 to 2023/24	2023/24 – target emissions	Percentage difference between actual and target emissions – 2023/24
Building energy	39,187	43,219.8	+10.3% <sup>1</sup>	37,228	+16.09%
Non-medical F-gas	No data <sup>2</sup>				
Medical gases	4,156 <sup>3</sup>	3,068	-26.2%	No local/national targets set for emissions relating to these areas.	N/A
Metered dose inhaler propellant	6,441.9	7,823.32	+21.4%		
NHS fleet travel	800.3	973.4	+21.6% <sup>4</sup>		
Waste	583.1	592.3	+1.6%		
Water	80.8	135.2	+67.3% <sup>5</sup>		
Business travel	936.1	1,248.71	+33.4%		
<b>Total emissions</b>	<b>42,317.6</b>	<b>57,060.73</b>	<b>+34.8%</b>		
Carbon sequestration	NHS Scotland bodies do not sequester carbon as part of emission reduction practices in these areas.				
<b>Greenhouse gas emissions minus carbon sequestration</b>					



1	Due to prolonged essential maintenance, the Biomass Boiler was not used to its full season, therefore resulting in a higher gas usage and associated CO <sub>2</sub> emissions. Culmination of increased building inefficiencies due to ageing infrastructure and degradation of heat and energy raising equipment, and increase of baseload through new and additional equipment. 23/24 had lower average temperatures through the year (degree days), which meant building energy use increased from the previous year.
2	Emissions data from F-gases is currently unavailable, however NHS Grampian has a program of work in place to develop a comprehensive and SEPA-compliant F-gas register.
3	The emissions figure of 4156 for medical gases in 22/23 is restated from the previously reported figure of 1,533 tCO <sub>2</sub> e, due to previously incomplete data sets.
4	The figures reported for business travel reflect improved recording systems in 2023/24 compared to the previous year.
5	The introduction of a new invoicing system from our water suppliers has highlighted inconsistencies in water reporting figures which has been raised as an issue through the national procurement process.

The table below sets out how much of key resources we used over the last two years:

Source	2022/23 Use	2023/24 Use	Percentage change – 2022/23 to 2023/24
Building energy (kWh)	215,540,691	230,575,195	+7% <sup>1</sup>
NHS fleet travel (km travelled)	5,862,386	6,300,549	+7.4% <sup>2</sup>
Waste (tonnes)	1,800.828	1,778.416	-1.24%
Water (cubic metres)	278,779	466,179	+67.2% <sup>3</sup>
Business travel using personal cars (km travelled)	5,289,822	5,598,568	+5.8% <sup>2</sup>
Business travel using public transport (km travelled)	N/A	2,136,819	N/A

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2	The figures reported for fleet/business travel reflect improved recording systems in 2023/24 compared to the previous year.
3	The introduction of a new invoicing system from our water suppliers has highlighted inconsistencies in water reporting figures which has been raised nationally and needs to be addressed. There are outstanding complaints to our water supplier from several health boards on water billing.

- NHS Grampian’s Heat & Power Strategy has been approved by the Board’s Asset Management Group. The strategy outlines the health board’s plan to enhance building efficiencies and decarbonise its estate over various timescales, leveraging a range of technologies from traditional insulation methods to renewable energy solutions. NHS Grampian is also collaborating with local partners to ensure optimal energy transition on a regional basis. . This will incorporate investment in the use of new technology as opportunity allows, increasing energy efficiency of buildings and move towards non-fossil fuels. There has been much progress in this area but the

performance detailed in this annual report reflects the effect of limitations on available technology and funding on the programming of action necessary to reduce carbon emissions from heat and power generation on our largest sites, an essential step to achieving a net zero carbon estate by 2038

## 4. Climate Change Adaptation

Scotland's climate is changing faster than expected according to research published by the James Hutton Institute in December 2023. According to this research:

- Between 1990 and 2019, February – and to a lesser extent, April – have seen significant increases in rainfall, especially in the western region of Scotland, with precipitation levels rising by as much as 60%. This increase already surpasses the projected change of 45-55% expected by 2050.
- Scotland is on track to exceed “a 2°C increase in temperature by the 2050s, with the months from May to November experiencing up to 4°C of warming over the next three decades (2020-2049).
- The number of days of consecutive dry weather – an indicator for drought and wildfire risk – are also expected to increase in drier months, such as September.

Climate change exacerbates existing health risks and introduces new challenges, ranging from the spread of infectious diseases to the intensification of heatwaves and extreme weather events that will impact the health of the population, healthcare assets and services. NHS Scotland plays a pivotal role in safeguarding the life and health of communities by developing climate-resilient health systems capable of responding to these evolving threats.

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/](http://www.ukclimaterisk.org/independent-assessment-ccra3/briefings/)

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

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#### **4.1 Current Impacts to Healthcare Service Delivery**

Building construction and materials are maladapted for higher temperatures and warming weather, particularly in the summer months. Solar gain mixed with restricted ventilation capability is causing some buildings to regularly reach temperatures above 28°C. The lack of natural ventilation (e.g. inability to open windows in wards) is exacerbating these conditions.

In addition, buildings are not designed to mitigate/cope with the current increased severity of precipitation events, creating risks to business continuity.

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***What actions has the health board taken to reduce those risks – what has changed since the last report?***

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NHS Grampian created a working database that catalogues incident reports related specifically to building overheating and flooding damage. Weather data is also extracted at the time of the logged incident so that we can better discern whether the event was caused/exacerbated by severe weather conditions.

All new builds model for future climatic conditions and are built to mitigate for climate risk. Soft and hard engineering elements are embedded such as sustainable drainage systems and building positioning.

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

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The challenges presented by climate change have underscored the importance of adaptability in ensuring the consistent delivery of high-quality care. As medical technologies advance, patient needs evolve, and unforeseen crises test the resilience of healthcare systems, the capacity to adapt becomes more critical than ever. To ensure the uninterrupted provision of care, our business continuity plans are meticulously designed to safeguard patient services, protect healthcare professionals, and minimise operational disruptions. By proactively strengthening these measures, we affirm our commitment to maintaining excellence in patient care under any circumstances.

## **4.2 General Severe Weather**

Hybrid working is made available where possible to staff not required to be on site. Opportunities to hot desk within partner agency offices are in place (council, police, ambulance, etc.). Patients can also phone their GP for an appointment and be redirected to services more local to them in periods of unsafe travel conditions so that any unnecessary travel is avoided. Pharmacies and care homes under health and social care partnerships all have business continuity plans in place.

For critical staff, NHS Grampian has a 'memorandum of understanding' (MOU) with local hotels that will provide them with temporary localised accommodation. An MOU also is in place with COTAG, our local 4x4 rescue fleet that supports the Grampian region.

We have a database of the vulnerable home patients at risk in the event of disrupted service provision due to disrupted staff access - e.g., of everyone reliant on electrical medical equipment. Hospital sites including community hospitals have been provided with emergency kits. Power resilience workshops have been held at each hospital site and at

GPs, pharmacies, and dental practices to build awareness and robust business continuity plans.

### 4.3 Flood Risks

As we continue cataloguing reported incidents involving leaks internally after periods of heavy rainfall, we are embedding Property Flood Resilience measures to fortify existing buildings. Flood risk assessments are now mandatory for all new build projects, with sustainable drainage systems (SuDS) being the preferred mitigation solution.

Greenspace areas on our estate are being explored to see whether they can be adapted to include SuDS (e.g. bio-swales, retention and detention basins, rain gardens) to attenuate storm water more effectively. Other opportunities exist to retrofit fit building facades to include living walls and roofs, which will help to reduce runoff and help reduce ventilation requirements which is considered when following the Sustainable Design and Construction (SDaC) guidance, all of which implementation is dependent on funding envelope.

Flood warning systems are in place and get disseminated across all social media platforms, including NHS Grampian's Daily Brief. Additionally, MET Office weather warnings and staff alerts are in place to warn staff of difficulties during commuting.

### 4.4 Heat-related Stresses

As far as reasonably practicable, uniform rules are relaxed during heatwaves to help prevent staff overheating. The frequency of breaks is increased during periods of elevated temperature and staff are encouraged to stay hydrated. Sunscreen is available within NHS Scotland procurement platform in the national catalogue for staff who work outside. All new buildings now undergo thermodynamic modelling so that they are adapted to changing climatic conditions.

Solar foil is available for windows to reduce solar heat gain.

Additional fans have been installed in areas to combat overheating in wards, however dated ventilation systems and sometimes restricted (for Infection Prevention reasons) ability to open windows for air flow remains problematic.

To address overheating, NHS Grampian is looking into holistic approaches whereby greenspace is positioned/utilised to capitalise on passive cooling e.g. tree shade, grassland, which will reduce the urban heat island effect.

## 5. Building Energy

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

NHS Grampian operates 97 buildings including several major acute hospitals, various community hospitals, health centres and other buildings such as vaccination centres.

In 2023/24, 43,219.8 tonnes of CO<sub>2</sub> equivalent were produced by NHS Grampian use of energy for buildings. This was an increase of 10.3% since the year before.

In 2023/24, NHS Grampian used 230,575 MWh of energy. This was an increase of 6.3% since the year before.

In 2023/24, NHS Grampian generated 1,252.1 MWh of energy from renewable technologies.

<b>Building energy emissions, 2015/16, 2022/23 and 2023/24 – tCO<sub>2</sub>e</b>				
	<b>2015/16 energy emissions</b>	<b>2022/23 energy emissions</b>	<b>2023/24 energy emissions</b>	<b>Percentage change 2015/16 to 2023/24</b>
Building fossil fuel emissions	38,588.9	34,296.4	37,739.5	-2.2%
District heat networks and biomass	67.3	64.67	13.45	-80% <sup>1</sup>
Grid electricity	22,646.61	4,825.69	5,466.8	-75.86%
<b>Totals</b>	<b>61,302.81</b>	<b>39,186.76</b>	<b>43,219.75</b>	<b>-29.5%</b>

<sup>1</sup> Biomass boiler run hours were significantly lower in 23/24.

<b>Building energy use, 2015/16, 2022/23 and 2023/24 – MWh</b>				
	<b>2015/16 energy use</b>	<b>2022/23 energy use</b>	<b>2023/24, energy use</b>	<b>Percentage change 2015/16 to 2023/24</b>
Building fossil fuel use	197,864.429	186,535.928	205,024.937	+3.6%
District heat networks and biomass	5,095.498	6,141.765	1,252.058	-75.43% <sup>1</sup>
Grid electricity	45,260.477	22,862.998	24,298.2	-46.3%
Renewable electricity	Do not currently receive feed-in tariff/meter reads from PV panels on our buildings (three small-output locations).			
<b>Totals</b>	<b>248,220</b>	<b>215,541</b>	<b>230,575</b>	<b>-7.1%</b>

<sup>1</sup> Biomass boiler run hours were significantly lower in 23/24.

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### ***What did we do in 2023/24 to reduce emissions from building energy use?***

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- Braemar Health Centre has had a series of sustainable upgrades aimed at reducing its carbon footprint. The facility had its kerosene boiler replaced with an air source heat pump, resulting in an estimated annual reduction of 5 tonnes of CO<sub>2</sub> emissions. In addition, sheep wool insulation was installed, along with solar panels, LED lighting, and electric vehicle charging points, further enhancing the health centre's energy efficiency.
- Solar panels were added as part of the roof replacement project for Rothieden Ward at Huntly Hospital.

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### ***What are we doing in 2024/25 to reduce emissions from building energy use?***

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- Following NHS Grampian's Heat & Power Action Plan which has a targeted approach for decarbonising the built infrastructure. This will incorporate investment in the use of new technology as opportunity allows, increasing energy efficiency of buildings and move towards non-fossil fuels. There has been much progress in this area but the performance detailed in this annual report reflects the effect of limitations on available technology and funding on the programming of action necessary to reduce carbon emissions from heat and power generation on our largest sites, an essential step to achieving a net zero carbon estate by 2038.

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

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- Heat from Waste Water.
  - Working with Scottish Water Horizons to measure water flow and temperature of sewage flowing on Royal Cornhill Hospital site in order to inform a study on the potential of heat recovery.
- Hydrogenated Vegetable Oil (HVO) in back-up generators.
  - The Baird Family Hospital, ANCHOR Centre, and New Integrated Mortuary will all utilise HVO from certified palm-free source, for use in the back-up generators. When used this reduces the emissions by up to 90% in comparison to traditional fuel oil e.g. diesel.
  - NHS Grampian is one of the first health boards to undertake this.
- Solar Panels will be installed on the Baird Family Hospital, ANCHOR Centre and New Integrated Mortuary, ensuring a renewable source of energy for these buildings.
- Deep Geothermal.
  - Due to the geological constituents of the ground in the Grampian area, there is the potential to harness geothermal heat. This is in preliminary stages of investigation.

## 6 Sustainable Care

The way we provide care influences our environmental impact and greenhouse gas emissions. NHSScotland 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 Grampian’s total emissions from these gases in 2023/24 was 3,068 tCO<sub>2</sub>e, a decrease of 1,088 tCO<sub>2</sub>e from the year before.

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

Nitrous Oxide and Entonox emissions, 2018/19, 2022/23, 2023/24 – tCO <sub>2</sub> e				
Source	2018/19 (baseline year)	2022/23	2023/24	Percentage change 2018/19 to 2023/24
Piped Nitrous Oxide	1,601	1,274	823	-48.59%
Portable Nitrous Oxide	81	125	158	+95.06%
Piped Entonox	2,149	2,357	1,788	-16.8%
Portable Entonox	282	267	217	-23%
<b>Total</b>	<b>4,113</b>	<b>4,023</b>	<b>2,986</b>	<b>-27.4%</b>

Volatile medical gas emissions, 2018/19, 2022/23, 2023/24 – tCO <sub>2</sub> e				
	2018/19 (baseline year)	2022/23	2023/24	Percentage change 2018/19 to 2023/24
Desflurane	896.6	58	1	-99.88%
Isoflurane	9.7	2	5	-48.45%
Sevoflurane	108.3	74	76	-29.82%
<b>Total</b>	<b>1,014.6</b>	<b>133</b>	<b>82</b>	<b>-91.91%</b>

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### ***What did we do in 2023/24 to reduce emissions from anaesthetic gases?***

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- Replaced many anaesthetic machines with new models that had no nitrous oxide pipeline connection, and only a single vaporiser attachment.
- Discouraged the use of Desflurane and removed it from routine connection to the anaesthetic machine. No new Desflurane bottles were ordered from Pharmacy.
- Agreed and arranged decommissioning of the nitrous oxide piped supply, saving emissions from leakage.

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### ***What are we doing in 2024/25 to reduce emissions from anaesthetic gases?***

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Continuing to encourage the use of total intravenous anaesthesia (TIVA) which negates the use for polluting anaesthetic gases.

A National Green Theatres Programme was officially launched in 2023 to help reduce the carbon footprint of theatres across NHS Scotland and enable more environmentally sustainable care by:

- Working with clinicians and professionals to develop actions that reduce carbon emissions, waste and resource use.
- Supporting Boards to implement, measure and report on these improvements.

The Green Theatres Programme is based on actions developed by frontline staff and the Green Theatre Project at Raigmore, NHS Highland.

In 2023/34, NHS Grampian did the following to make operating theatres more sustainable:

- Replaced aesthetic machines to newer models with no nitrous oxide pipeline connection.
- Encouraged recycling in every theatre.

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### ***What are we doing in 2024/25 to make surgery more sustainable?***

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- NHS Grampian's Net Zero Theatre Group will reconvene following a brief hiatus, necessitated by ongoing service pressures. The group will focus on integrating sustainable practices within the theatre environment, with the aim of reducing direct emissions, particularly those associated with heating and ventilation systems. By prioritising these efforts, we seek to enhance the environmental sustainability of our theatre operations while maintaining high standards of patient care. This initiative is a critical part of our broader commitment to achieving net zero emissions across the organisation.



- We are continuing our collaborative efforts with the Infection Prevention & Control and Sustainability teams to advance the "Gloves Off Campaign." This initiative aims to promote the appropriate use of gloves within the organisation, reducing unnecessary glove use, and thereby minimising waste and carbon emissions. By encouraging correct glove practices, we not only improve infection control but also contribute to our sustainability objectives by reducing the environmental impact associated with excess waste and resource consumption.
- We are reviewing opportunities to support the circular economy by exploring the replacement of disposable items with reusable alternatives across our operations. The Elective Orthopaedic Team at Theatres within Woodend Hospital has pioneered the implementation of reusable theatre caps for staff. These caps are personalised for each individual and colour-coded to enable easy identification of staff roles within the theatre environment. This initiative has contributed to a reduction in waste generated by theatre operations. We will explore opportunities to have similar systems in place in other Theatres in our organisation.

## 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 Grampian were 7,823.32 tonnes of CO<sub>2</sub> equivalent in 2023/24.

<b>Inhaler propellant emissions, 2018/19, 2022/23, 2023/24 – tCO<sub>2</sub>e</b>				
<b>Source</b>	<b>2018/19 (baseline year)</b>	<b>2022/23</b>	<b>2023/24</b>	<b>Percentage change 2018/19 to 2023/24</b>
Primary care	5,996.43	6,320.32	7,702.18	+28.44%
Secondary care	117.17	121.57	121.14	+3.39%
<b>Total</b>	<b>6,113.6</b>	<b>6,441.89</b>	<b>7,823.32</b>	<b>+27.97%</b>

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### ***What did we do in 2023/24 to reduce emissions from inhalers?***

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- Introduced a Greener Respiratory Care Toolkit.
- Education events at MCN Conference and Roadshows highlighting SABA over use.
- Script Switch messages created to promote inhaler guidance.

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### ***What are we doing in 2024/25 to improve patient care and reduce emissions from inhalers?***

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- Updated Inhaler Prescribing Guidance including some key changes.
  - Recommendation of using DPI as preferred inhaler choice (if patient can use).
  - Recommendation of using DPI as preferred inhaler choice (if patient can use).
  - Listing DPIs as the first option seen by clinicians on the guidance.
  - Introducing carbon footprint rating system (green, amber, red).
  - Highlighting options to use an alternative novel treatment approach for asthma using DPI with Symbicort Anti-inflammatory reliever.
  - A review of the currently available prescribing data for Grampian that is produced quarterly will be undertaken by the MCN team to establish data collection opportunities and monitoring of change.
- National Therapeutic Indicators and Strategy.
  - Prioritisation of recommendations within Grampian by MCN Prescribing Subgroup.
  - Toolkit in progress to aid implementation of agreed priorities across Grampian.
  - Liaise with Primary Care Prescribing Group to help deliver changes.
  - Liaise with Acute Sector to help deliver changes.
- Unplanned Admissions review.
  - Identification of high admission practices with the objective of providing targeted interventions and support where needed and agreed.
- MCN Educational Events.
  - Key note presentation at MCN Conference May 24 by Pharmacy Leads for National Strategy presented to over 100 delegates.
  - Respiratory Roadshows – Sept and Oct 24 confirmed, likely also Feb / March 2025.
  - MCN Winter Conference – focused on improving care as we enter winter.
  - MCN Annual Conference – Spring 2025 – broad educational and quality improvement themes to improve respiratory care.
- Grampian Respiratory Improvement Programme.
  - Dedicated team providing enhanced support to Aberdeen City GP practices to focus on identifying high risk patients and tackling this, improving prescribing habits and re-establishing chronic disease management.
- CHSS Community Respiratory Team

- Established in June 2023, the team are increasing the capacity of enhanced care for respiratory patients. The keys areas of work within the team are:
  - New diagnosis support for COPD patients.
  - Post-exacerbation care (both hospital and community exacerbations).
  - Access to online pulmonary rehab via myCOPD.
  - Complex chronic disease management support.
- Multi-inhaler triple therapy (MITT) to single inhaler triple therapy (SITT) switch programme.
  - A specific project is underway to change to SITT where it is safe to do so. This can improve patient care and outcomes by reducing the risk of inhaler errors affecting clinical benefit and also helps to reduce inhaler emissions by reducing the number of inhalers prescribed.

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### ***What are we doing to raise awareness with staff and patients, including primary care?***

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- Updated Grampian Guidance sections on a variety of topics including inhaler prescribing (see above), step down in asthma inhalers, step down in COPD, severe asthma pathway, bronchiectasis and interstitial lung disease all with aim of improving pathways of care and prescribing patterns in Grampian. These were highlighted through the Primary Care Update bulletin.
- Respiratory Roadshows as above are targeted primarily at primary care and community teams such as community pharmacy.
- Toolkits around NTI prescribing priorities will be distributed to all practices via Primary Care update bulletin.
- Working with Public Health and Corporate Communications to develop public press releases with a focus on sustainability and reducing inhaler emissions.

### **6.3. Other Sustainable Care Action**

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#### ***What else did we do in 2023/24 to make care more sustainable?***

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- Staff within Dietetics have made a concerted effort to improve sustainable practices by recycling significant quantities of food-grade plastics, such as supplement bottles frequently used in healthcare settings. NHS Grampian utilises thousands of these bottles each week, with a substantial portion of the waste being incorrectly classified as clinical waste. The “Recycle Plastics, It’s Fantastic” initiative has been



Photo: Staff behind the “Recycle Plastic, It’s Fantastic” Initiative at Aberdeen Royal Infirmary.

celebrated within the health board with a Green STAR Award, shared on local/social media and brought to the Scottish Parliament.

- Inappropriate use of gloves can contribute to skin damage and disrupt proper hand hygiene practices, potentially leading to increased infection rates. At NHS Grampian, we promote glove awareness through the “Gloves Off Campaign” and encourage the use of gloves only when necessary. This approach helps protect staff skin, reduces the risk of infection transmission, minimises waste production, lowers our carbon footprint, and enhances sustainability and environmental outcomes.

Example of the information around the “Gloves Off” Campaign which has started in NHS Grampian and gaining traction nationally.



### ***What else will we do in 2024/25 to make care more sustainable?***

- As part of our Climate Emergency & Sustainability Strategy we are developing an eLearning module. This module will guide staff through the significant health and environmental challenges posed by climate change, introducing key concepts, terminology and the obstacles NHS Grampian faces in responding to the global climate crisis. By increase staff understanding of these issues, they will gain valuable insights into how sustainable practices can help mitigate climate risks, enhance public health, and protect the planet for future generations.
- NHS Grampian is planning to promote greener social prescribing as a core component of our sustainability strategy. By integrating nature-based activities and environmentally sustainable practices into social prescribing, we aim to enhance the wellbeing of our communities while reducing our environmental footprint. As part of this initiative, greenspace improvement projects are currently in the planning stage in coordination with local authorities such as Moray Council. These projects aim to promote the use of the existing network of core paths for both solo and guided health walks. The focus will be on promoting quieter routes that offer greater opportunities for interaction with nature, ensuring they are accessible to all residential areas.

## 7. Travel and Transport

Domestic transport (not including international aviation and shipping) produced 28.3% of Scotland's greenhouse gas emissions in 2022. Car travel is the type of travel which contributes the most to those emissions.

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

### 7.1 Active Travel

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#### ***What did we do in 2023/24 to reduce the need to travel?***

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- NHS Grampian offers very flexible working policies. Obviously most clinical staff need to attend their place of work most days, but for clerical and some other staff in many cases there remains the option of working from home for at least part of the working. This remains a positive effect from the COVID-19 pandemic when the Board had to quickly adopt new technologies and policies. And there are remote professional & patient interactions including the use of 'Near Me'.
- Hybrid working continues and our employment policies reinforce this.

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#### ***What did we do in 2023/24 to improve active travel?***

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- The Cycle to Work scheme for staff was revamped with an increase in the maximum spend an individual can make (now up to £20k), plus offering more options for repayment periods (12 months / 18 months / 24 months instead of just 12 months).
- In both January 2023 and January 2024 NHS Grampian ran its annual Step Count Challenge in conjunction with Paths For All. These competitions are for 4 weeks each year. These attracted around 10% of the entire staff roll to participate and evaluated well. A second evaluation was conducted after 3 months in both years and these indicated that a significant minority of staff continued to be more active than before the Challenge. In 2024 we also undertook some research work on the Challenge in conjunction with the University of St Andrews. This work provided evidence that the Challenge was making a positive impact on staff mental wellbeing.
- We ran staff activities, including free bicycle maintenance sessions.
- We promote Cycle September (Love to Ride) every year and in 2023 Aberdeen Royal Infirmary came top in the large employer category in Grampian. We also promote other Love to Ride activities and events
- NHS Grampian has a fleet of over 30 pool eBikes.

- NHS Grampian is an active partner in Getabout, a group led by NESTRANS and Aberdeen and Aberdeenshire Councils. Working together, the partners want to promote healthy and sustainable transport choices for everybody travelling within the region and beyond. <https://www.getabout.org.uk/>

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### ***What did we do in 2023/24 to improve public and community transport links to NHS sites and services?***

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- THInC is the Transport to Healthcare Information Centre for the NHS Grampian area which provides advice on travelling to health or social care appointments. This service is well known to Health & Social Care staff but is regularly promoted via NHS Grampian's social media channels to make the general public more aware. There are also hard copy resources to promote the service.

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### ***What are we going to do in 2024/25 to reduce the need to travel?***

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The following projects/services will be implemented subject to funding:

- Travel survey
- Changes to Foresterhill site
- Shuttle bus

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### ***What are we going to do in 2024/25 to improve active travel?***

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- We will re-run the Step Count Challenge in January/February 2025. We are in preliminary discussions with Paths for All around conducting further research on this competition after the success of the previous year.
- We are hoping to be a one of the first organisations in Scotland to participate in Paths for All's 'Walking Workplaces' programme. This will also involve partnership working with NESTRANS who are the budget holders for the programme in Grampian. If we participate then we will receive specific and targeted support from Paths for All to improve the culture around walking. This will likely be for specific NHS Grampian sites only, not the entire estate, but the intention would be to roll out learnings to other sites.
- We ran a 'Bike for a Bite' where staff who evidenced cycling to work received a voucher for a free hot drink and a piece of fruit.
- Approximately £70k 'Spaces for People' budget has been carried over from the previous financial year, and will be spent on improving facilities for cyclists before the end of the financial year.
- We are also hoping to support areas that want to apply for SCVO / Cycling Scotland funding.

- We will continue to offer staff activities, including free bicycle maintenance sessions. We worked in partnership with National Services Scotland to offer a Dr Bike to staff over the summer.
- We are offering bicycle security events to staff in conjunction with Police Scotland. Aberdeen Royal Infirmary and hopefully Dr Gray's in Elgin.
- We will promote 3rd party events and promotional activities where appropriate based around our health event calendar which we regularly review: <https://www.hi-netgrampian.scot.nhs.uk/wp-content/uploads/2024/08/hi-net-2024-calender-2.pdf> We do this via our networks and social media channels. Both Public Health and NHS Grampian's Sustainability Team have their own social media channels.
- If Aberdeen City Council re-instigates its cycle rental scheme, then NHS Grampian will endeavour to have some of the fleet based on the main hospital site (Foresterhill), as was the agreement with Big Issue Bikes.

While we acknowledge that these initiatives, such as promoting greener social prescribing and improving greenspaces, contribute to reducing carbon emissions from transport, they represent marginal activities in our broader sustainability efforts. The larger impact lies in our work on developing sustainable pathways of care, optimising the use and maintenance of our buildings, and re-evaluating where and how care is delivered. These efforts, alongside encouraging more active forms of travel when necessary, form the cornerstone of our strategy to significantly reduce our carbon footprint and create a more sustainable healthcare system.

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### ***What are we going to do in 2024/25 to improve public and community transport links to NHS sites and services?***

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NHS Grampian has the opportunity to raise and hear issues with the public transport operators, council operators and third sector operators through the Health and Transport Action Plan (HTAP) Access to Health & Social Care Sub-Group. Partners plan to hold the Grampian Volunteer Transport Awards along with a recruitment push for drivers.

## **7.2 Fleet Transport**

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

The following table sets out how many renewable powered and fossil fuel vehicles were in NHS Grampian fleet at the end of March 2023 and March 2024:

	March 2023		March 2024		Difference in % zero tailpipe emissions vehicles
	Total vehicles	% Zero tailpipe emissions vehicles	Total vehicles	% Zero tailpipe emissions vehicles	
Cars	173	2.9% (5)	188	2.1% (4 Electric) 8.5% (16 Hybrid)	+7.7
Light commercial vehicles	119	5.9% (7)	107	9.3% (10)	+3.4
Heavy vehicles	13	0	13	0	0
Specialist vehicles	N/A	N/A	N/A	N/A	N/A

The following table sets out how many bicycles and eBikes were in NHS Grampian's fleet at the end of March 2023 and March 2024:

	March 2023	March 2024	Percentage change
Bicycles	0	0	0
eBikes	31	31	0

The following table sets out the distance travelled by our cars, vans and heavy vehicles in 2023/24.

Distance travelled, km	Cars	Light commercial vehicles	Heavy vehicles	Specialist vehicles	Total
2023/24	3,273,405	2,388,260	632,862	6,022	6,300,549

### 7.3 Business Travel

Business travel is staff travelling as part of their work in either their own vehicles or public transport. It covers travel costs which are reimbursable and doesn't cover commuting to and from work. The table below shows our emissions from business travel by transport type:



Business travel emissions, tCO <sub>2</sub> e	Cars	Public transport	Flights	Total
2023/24	988.63	224.96	35.12	1,248.71

Ultimately, our focus on developing different pathways of care and bringing care closer to home aligns with NHS Grampian’s *Plan for the Future*, our work as an anchor organisation, and our initial Programme Initial Assessment process. These efforts are essential to building a more sustainable healthcare system, reducing our environmental footprint, and improving patient outcomes. By reimagining how and where care is delivered, we are committed to strengthening community health while addressing the broader challenges of climate change and sustainability.

## 8. Greenspace and Biodiversity

### 8.1 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.

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

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NHS Grampian participated in No Mow May for the first time in 2023, which is part of a national campaign to improve biodiversity through the simple act of reducing mowing regimes for the month. This was undertaken in various areas across Foresterhill Health Campus.

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#### ***What actions have been taken to contribute to the NHSScotland Estate Mapping programme, or to develop an internal mapping programme?***

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We have submitted a list of all NHS Grampian owned properties to Public Health Scotland, who are leading on mapping greenspaces nationally. We will use this data to earmark areas for priority biodiversity enhancement.

- We have increased media coverage around planting for pollinators and biodiversity, reaching further audiences than in previous years.
- Increased engagement with local partners (e.g. Aberdeen City Council, Aberdeenshire Council and Moray Council), biodiversity networks (e.g. North East Scotland Biodiversity Partnership) and conservation organisations (e.g. Buglife) to

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### ***What actions have been taken to mainstream biodiversity across the organisation?***

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raise awareness and carry out projects that improve connectivity for wildlife across the region.

- We are writing a comprehensive, overarching Biodiversity Strategy that will guide land management practices and Grounds actions for at the next 5 years. With endorsement from NHS Grampian's executive and non-executive health board members, progress on biodiversity initiatives will be expedited.
- We are actively working with our Grounds team to identify land areas that can be tolerated with longer grasses and wildflower, along with where leaf litter and deadwood can be left *in situ* to benefit a range of insects, mammals, and reptiles.

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

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We have developed an overviewing typology of green infrastructure for NHS Grampian that will be fed into future development plans to provide additional climate change resilience, aesthetic, and habitat provision for biodiversity. We have also compiled a list of ideas and actions for new build projects to include appropriate microhabitats (e.g. hibernacula), building design and materials (e.g. integrated swift boxes), and solutions to mitigate pressures or detrimental impacts currently facing wildlife on our sites (e.g. use of red lighting for bats, bird-safe glass).

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

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NHS Grampian now has a stronger presence and input feeding into public health and local authority nature improvement campaigns and initiatives. We are currently progressing with assemblage of volunteer groups to undertake biodiversity management across various community hospitals.

EnviroCentre carried out four ecological and environmental appraisals, one for each of NHS Grampian's acute hospital sites. We have used the findings and recommendations from these to inform our biodiversity strategy. However, without additional funding, we will be unable to accurately monitor long-term impacts to biodiversity.

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

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## **8.2 Greenspace**

The design and management of the NHSScotland 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 wellbeing 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
No Mow May	<ul style="list-style-type: none"> <li>Increases habitat and foraging potential for pollinators during critical time in their lifecycles.</li> <li>Increases rainwater attenuation during periods of heavy rain.</li> <li>Increases CO<sub>2</sub> sequestration potential of areas permitted to grow wilder.</li> <li>Increases exposure of people to wildlife and biodiversity, thereby improving awareness, acceptance, and importance of nature.</li> </ul>	<p>In 2023, NHS Grampian piloted No Mow May (NMM) across 7 different land areas at Aberdeen Royal Infirmary. Feedback from the public and staff alike was overwhelmingly positive.</p> <p>In Spring 2024, we extended this to more than 20 land areas, with agreement from stakeholders that 3 of these will remain permanently free from routine mowing.</p> <p>We hope to expand the number of participating sites and areas further still next Spring.</p>
Sustrans – Active Travel Fund	<ul style="list-style-type: none"> <li>Encourages staff and able patients to travel more sustainably to hospitals and clinics.</li> <li>Reduces CO<sub>2</sub> emissions.</li> <li>Increases fitness and wellbeing of those participating.</li> </ul>	<p>Funding from Sustrans was available to provide hospital sites with key infrastructure related to active travel. The project, which is ongoing, will see a number of benches, cycle storage facilities, and cycle repair stands installed at hospitals and clinics across NHS Grampian.</p>
Nature Garden	<ul style="list-style-type: none"> <li>Increase of pollinator habitat at Foresterhill Health Campus.</li> <li>Improved visitor and staff experience by way of introducing a viable walking path between the Royal Aberdeen Children’s Hospital and the Radiotherapy Centre. Installation of benches across the garden gives staff, patients, and members of the public an opportunity to spend time outdoors in a maintained, but biodiverse environment.</li> </ul>	<p>Project is co-funded by NHS Grampian Charities and Starbucks via the Greener Communities Fund.</p> <p>This project will see the transformation of an area of greenspace which has low quality biodiversity and poor amenity space, into an ecological haven for struggling pollinator species. The area lies central within our largest acute hospital site (Foresterhill). Through the project, we will hold participation events to increase visitor and staff engagement with hospital grounds as well as local wildlife.</p>

	<ul style="list-style-type: none"> <li>• When complete, the garden will be used as a local green space for amenity and learning, as well as a healing landscape that complements the buildings around it.</li> <li>• Increases the bond between the public and nature.</li> </ul>	<p>Hard infrastructure works is expected to commence in winter of 2023-2024 the aim of this area to be open to the public by late summer 2024.</p>
Meadow-in-a-Box	<ul style="list-style-type: none"> <li>• Increases habitat for pollinators in areas otherwise dominated by concrete and grey infrastructure.</li> <li>• Increases knowledge and capacity in those maintaining the boxes.</li> <li>• Increases partnership and cross-sector working.</li> <li>• Improves aesthetics and softscape of buildings.</li> </ul>	<p>Aberdeen City Council will deliver wooden boxes measuring 60 cm x 60 cm x 60 cm, constructed by inmates at Peterhead Prison. Boxes are filled with compost and native wildflower seed in Autumn, with blooming times occurring in Spring. Approximately 50 of these are due to be distributed across NHS Grampian healthcare within Aberdeen in late Autumn.</p> <p>This will likely be put in place in Autumn 2024.</p>
Buglife	<ul style="list-style-type: none"> <li>• Increases pollinator habitat and foraging potential.</li> <li>• Provides a resource to monitor change or impact of species found in the area.</li> <li>• Increases community participation and engagement with their environment.</li> </ul>	<p>Subject to application approval, conservation organisation Buglife will carry out wildflower planting and invertebrate surveying on two different land areas within NHS Grampian. Buglife will assist with volunteer recruits and engagement events to include staff and/or patients to take part in surveys and workshops. The land used is required to stay free of development for a minimum of 10 years, allowing biodiversity progression.</p> <p>This will likely be rolled out in 24/25.</p>

## 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 2024, Global Earth Overshoot Day is 1 August, a day earlier than in 2023.

For the UK, the picture is more worrying. In 2024, the UK's Earth Overshoot Day was 3 June. 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.

### 9.1 Sustainable Procurement

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#### ***What did we do in 2023/24 to reduce the environmental impact and the quantity of the good and services we buy?***

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Procurement Officers within Procurement and devolved areas have undertaken the Procurement Climate Literacy Training and are aware Scottish Government Sustainable Procurement Tools. The Procurement Service continue to review products purchased to identify sustainable alternatives. Examples from 23-24 include moving from plastic to paper medicine cups and from disposable to reusable slide sheets in Theatres.

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#### ***What are we doing in 2024/25 to reduce the environmental impact of the goods and service we buy?***

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NHS Grampian Procurement Service will continue to engage nationally through the National Procurement Sustainable Procurement Steering Group (SPSG) and with the NHS Grampian Sustainability Team to identify opportunities to reduce the environmental impact of the goods and services purchased. The Procurement Service will work to develop and implement a system to capture sustainability benefits and will work on rationalisation of products and deliveries.

### 9.2 Circular Economy & Waste

We want 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:

Type	2021/22 (tonnes)	2022/23 (tonnes)	2023/24 (tonnes)	Percentage change – 2021/22 to 2023/24
Waste to landfill	45	64.4 <sup>1</sup>	64.76	+43.91%
Waste to incineration	1,518	1,792	1,713.6	+12.88% <sup>2</sup>
Recycled waste	1,048.51	1,025.49	1,299.53	+23.9%
Food waste	184.2	141.79	159.5	-13.41%
Clinical waste	1,683.21	1,799.21	1,797.1	+6.8%

1	Incorrect figure previously reported as 16.1 tonnes. Due to the limitations in the waste data provided by our contractor, there has been a discrepancy in the reported figures regarding waste sent to landfill. While our contractor previously reported that approximately 5% of waste was directed to landfill, it has come to our attention that the actual figure is closer to 20%. This increase is largely attributed to waste from Dr Gray's Hospital still being sent to landfill via skip disposal. We are actively addressing this issue to ensure more accurate reporting and to implement improvements in our waste management practices.
2	It is important to note that a third waste management option, diverted off-site, is missing from these reports. Waste sent to a Materials Recovery Facility (MRF) is reported separately from incineration and landfill in our contractor's data, but was not requested for inclusion in this particular report, which accounts for some fluctuations in the figures. Additionally, we are constrained by the actions of our waste contractors, particularly in the handling of general waste, which is beyond our direct control. This also contributes to the variations observed since the 2021/22 reporting period.

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

<b>Reduce domestic waste by a minimum of 15%, and greater where possible compared to 2012/2013 – by 2025</b>	
Target – reduce domestic waste by	663.28 (tonnes)
Performance – domestic waste reduced by	1,150.13 (tonnes)
Outcome	ACHIEVED – 26% reduction
Further reduction required	NIL

<b>Ensure that no more than 5%, and less where possible, of all domestic waste is sent to landfill – by 2025</b>	
Target – reduce waste sent to landfill by	89.04 (tonnes)
Performance – waste sent to landfill reduced by	64.76 (tonnes)
Outcome	ACHIEVED
Further reduction required	NIL

<b>Reduce the food waste produced by 33% compared to 2015/16 – by 2025</b>	
Target – reduce food waste by	110.96 (tonnes)
Performance – food waste reduced by	177.14 (tonnes)
Outcome	ACHIEVED
Further reduction required	NIL

<b>Ensure that 70% of all domestic waste is recycled or composted – by 2025</b>	
Target – recycle or compost	2,151.88 (tonnes)
Performance – recycled or composted	1,504.60 (tonnes)
Outcome	NOT ACHIEVED YET
Further increase required	647 (tonnes)

NHS Grampian's recycling rate has improved from 30% (2015/16) to 43% (2022/23) over a period of 6 years. However, as demonstrated in the above tables, the current recycling rate remains below our target and currently stands at 46%. This incremental increase in recycling rate improvement is largely attributable to the prioritisation of resources towards the management of clinical waste, which has limited the capacity to advance recycling efforts in other waste streams. Addressing this imbalance will be essential in meeting our future recycling objectives and enhancing overall waste management performance.

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### ***What did we do in 2023/24 to reduce our waste?***

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In our ongoing efforts to reduce the reliance on single-use items, discussions have been coordinated with Procurement colleagues to identify viable alternatives and promote sustainable purchasing practices across the board. Additionally, enhancing waste segregation at the ward level remains a priority. To achieve this, we have implemented comprehensive board-wide communications and engaged directly with ward staff. Additionally, targeted discussions on waste reduction practices were held with management colleagues within the Waste Management Group, which includes representatives from both clinical and non-clinical teams.

The role of Sustainability Champions was critical in this initiative, and they continue to receive updates on waste reduction and recycling programs. Their involvement helps drive awareness and adoption of these practices throughout the organisation.

Furthermore, we are one of the few NHS Scotland boards that has mandated Waste eLearning for all staff. This ensures a consistent level of understanding and awareness of sustainable waste management practices across the workforce.



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### ***What are we doing in 2024/25 to reduce our waste?***

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We will continue ongoing discussions and have a concerted effort to promote the reduction of single-use items across NHS Grampian. Whilst our overall waste reduction targets have already been achieved, to further enhance our waste management practices, audits are currently being conducted across NHS Grampian, with particular attention to areas that present the greatest opportunities for improvement.

In addition, new general waste and recycling waste contracts are being implemented. These contracts will introduce new waste streams, thereby improving recycling rates by diverting high-quality plastics and paper towels from the general waste stream into the recycling process.

## **10. Environmental Stewardship**

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

This includes any activities which may adversely impact on 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.

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### ***What steps did we take in 2023/24 to develop and implement our EMS?***

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Staff from the Sustainability, Compliance and Risk team, as the custodians of NHS Grampian, have created and developed a legal register. This has been distributed to all departments via SharePoint. Jacobs was nationally contracted to develop a net zero route map for health boards, and this route map serves as a compass for performance and monitoring. The key members of the health board and the heads of the departments are responsible for compliance with the legal register and all its aspects.

As mentioned in the 22/23 report, there are several areas of increased compliance. Each department is actively reviewing the dynamic legislation which is expected to be an ongoing process. Regular meetings with statutory bodies, such as SEPA, have been initiated to assist us in this procedure.

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### ***We have fully implemented EMS to ISO 14001 standard at the following sites:***

*There are no sites that fully implement an EMS to ISO 14001.*

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Two management areas have commenced efforts toward achieving compliance with legislation and the establishment of a legal register, these are:

- Asbestos management
- Waste management

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***What steps will we take in 2024/25 to further develop and implement our EMS?***

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The board maintains continual consultations with colleagues and external statutory consultants to determine NHS Grampian's legal obligations ensuring its environmental compliance.

We will be taking an Environmental Policy Statement to the Sustainability Governance Group for approval in Q4 of 24/25. Quarterly meetings with responsible departments as per the EMS legislation. The meetings will be convened from Q4 of 24/25 to monitor the progress of the legal requirements within the EMS register.

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***What did we do in 2023/24 to reduce our environmental impacts and improve environmental performance?***

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The health board has carried out a substantial reduction in the dissemination of promotional materials from Public Health Scotland to all NHS Grampian hospitals and GP offices.

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***What are we doing in 2024/25 to reduce our environmental impacts and improve environmental performance?***

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The new ANCHOR Centre, along with the impending Mortuary and the Baird Hospital (the new maternity/family hospital structure), has transitioned from diesel generators to hydro-treated vegetable oil (HVO), thereby reducing emissions without necessitating additional infrastructure.

Our forthcoming agenda will consider the feasibility of geothermal energy as a viable alternative fuel source. A series of meetings has transpired in recent months, with ongoing deliberations slated for the future.

Finally, the incorporation of mandatory Sustainable Design and Construction (SDaC) criteria will warrant the integration of environmentally responsible and sustainable materials and services, thereby fostering a circular economy.

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***What factors have prevented implementation of EMS to ISO 14001 standard for any site in NHS Grampian's estate which have not yet reached that standard?***

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Implementing an EMS to the ISO 14001 standard presents several challenges for our organisation. The following are common impediments that can hinder sites from attaining this standard:

1. **Resource Constraints:** Implementing an EMS demands substantial resource investment in terms of time, finances, and personnel.
2. **Complexity of Legal Requirements:** Comprehending and adhering to environmental regulations is intricate and time-consuming. Sites may encounter challenges in identifying and fulfilling all legal requirements.

## 11. Sustainable Construction

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

NHS Grampian take their corporate responsibility seriously and recognises its operations and actions on the environment is of significant importance and is a fundamental part of its responsibility for the health and wellbeing of the region. The following projects under construction have applied strategic measures for sustainable development.

- The Baird Family Hospital
- The ANCHOR Centre
- Aberdeen Integrated Mortuary
- Foresterhill Greenspace

The proposed Baird Family Hospital will include maternity, gynaecology, breast screening and breast surgery services. It will also include a neonatal unit, centre for reproductive medicine, an operating theatre suite and research and teaching facilities.

The proposed ANCHOR Centre will provide out-patient and day-patient investigation, consultancy and treatment services for patients with cancer and blood disorders. The centre will also include pharmacy, research and teaching facilities.

Aberdeen Integrated Mortuary project involves the replacement of the two existing Aberdeen based mortuaries with a purpose-built state of the art facility. This new facility will be operated as a single integrated multi-partner, multi-purpose mortuary serving all providers including NHS Grampian, Aberdeen City Council, Aberdeenshire Council, Moray Council, Orkney and Shetland Island Councils, the University of Aberdeen, Crown Office Procurator Fiscal Service and Police Scotland.

Foresterhill Greenspace involves the creation of active green travel corridors that prioritise green travel and increase the ecological and habitat value of Foresterhill Campus alongside improving the character, visual quality and perception of the site through the establishment of a strong landscape framework.

Greenspace aims to enable and encourage outdoor activity for all users of the site, fostering healthy lifestyle choices and realising therapeutic and clinical benefits for patients through easy access to high quality green space and healing environment.

The project also facilitates the introduction of sustainable drainage systems and flood management works to the Gilcomstoun Burn.

Across these developments the following measures have been applied to design and construction of the facilities:

- Energy strategies developed early in the design for options appraisal
- Application of NHSScotland Design Assessment Process (NDAP) ensuring robust assessment of design.
- Completion of Key Stage Assurance Review (KSAR) workbooks for structured review.
- EPC rating of A and BREEAM rating of Very Good.
- Photovoltaic panels to generate electricity.
- Specification of natural and low/zero emission materials where possible.
- Waste and Resource Action to embed Circular Economy.
- Envelope u values that are more onerous than the Non Domestic Technical Handbooks require resulting in a thermally comfortable and efficient building fabric.
- Use of a biofuel alternative of Hydrotreated Vegetable Oil in lieu of oil fuelled generators on site.
- Hard landscaping surfaces that are permeable to aid surface water run-off and mitigate the effect of flooding.
- Automated heating, cooling, ventilation and lighting to ensure efficient use of resources and use of Building Management Systems (BMS).
- A commitment to Electric Vehicle (EV) charging on site.
- Net zero greenhouse gas emissions target (post 2020).
- Soft Landings with the intent of smooth transition and narrowing the performance gap between design and operation.
- Investment in natural habitat and outdoor space to promote wellbeing of staff, patients and members of the public.
- Development of active travel.
- Flood alleviation including attenuation and water management.

Through construction of these facilities it is our goal to not only have a sustainability led approach to construction and design but to minimise carbon emissions and to deliver a better built environment at NHS Grampian.

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### ***What did we do in 2023/24 to make our construction projects more environmentally sustainable?***

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In 2023/24 NHS Grampian have embedded Net Zero and sustainability into our procurement of a Measure Term Contract for construction activities across Grampian. Through this process NHS Grampian and our construction partners have embedded commitment to “improve the economic, social and environmental wellbeing of NHS Grampian.”

Scottish Health Technical Note (SHTN) 02-01 NHS Scotland Sustainable Design and Construction Guide (SDaC) has been included as a contractual supplement to ensure application across our refreshed supply chain with key focus on wellbeing, circularity and climate change.

EV charging has been installed to a number of sites throughout NHS Grampian to support services, staff and visitors to utilise clean energy solutions for transport.

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***What are we doing in 2024/25 to make our construction projects more environmentally sustainable?***

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In 2024/25, NHS Grampian aim to expand application of SHTN 02-01 across further procurement strategies including design consultancy, alongside the aspiration of upskilling project teams with the competencies necessary to deliver a sustainable net zero estate in the future. This will have a particular focus on the retrofitting of existing fabric in recognition that our next steps should focus beyond merely new developments.

EV charging will continue to be installed at sites throughout NHS Grampian to expand and strengthen our current network of charging.

## **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. We have 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’ organisation – to protect and support our communities’ health in every way that we can.

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***What are we doing to act as an anchor institution for our local communities?  
What are we doing to improve the resilience of our local communities to climate change?***

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NHS Grampian’s Anchors Strategic Plan 2024-2029 sets our vision to ensure the way we spend money, use our land and provide jobs supports everyone in our communities to stay in good health. Over the past year we have become an accredited Real Living Wage employer, created 23 new jobs as part of the Baird and Anchor construction projects, worked in collaboration with Barnardos to provide a supported employability programme, worked in partnership with Aberdeen City and Aberdeenshire councils to explore collaborative opportunities to increase local spend, approved a Community Asset Transfer for Leancoil Hospital and located a vaccination centre in Aberdeen City to improve footfall and the local economy. We are now considering how we take our Anchors activity forward with intentionality over a longer time period to embed this mindset in the organisation.

Our Annual Report of the Director of Public Health (2022) highlighted climate and environmental change as one of four key threats to Grampian’s population health. This referred to the effects of climate change on physical and mental health, its impact on water and food supply, vector-borne diseases, air pollution and the exacerbation of existing social and health inequalities.

Public health staff play a significant role in extending and enriching collaborations to deliver co-benefits from being climate resilient. This includes local, regional and national partnerships in planning and research. In the past year Public Health staff have input to Local Development Planning in Aberdeen and Aberdeenshire, providing evidence and impacts of climate change risks to health. We are also leading national work to scope NHS Scotland Adaptation planning. Public Health staff are embedded in NHS Grampian infrastructure planning through the Programme Initial Assessment process. This brings in the sustainability lens, with the Anchors work (led by Public Health) part of this.

Tackling climate change also presents an opportunity to seize co-benefits directly at local level. The following paragraphs spotlight some of the practical efforts to improve health, reduce harm and inequalities.

Aiming to reduce fuel poverty, health harms and carbon emissions, public health staff have been leading and overseeing the implementation of the 'warm home prescription' initiative across Grampian. Working with Energy Systems Catapult (a UK independent research and technology organisation), SCARF (a local social enterprise energy advisor) and funded by Scottish Power, we aim to increase uptake for a government scheme that provides home improvements which enable households to afford a warm home while reducing energy use. Warm home prescriptions are targeted at people who are vulnerable due to health risks and low income and this is the second year of implementation, having adapted the interventions based on the learning from the first test of change in 2022 in Aberdeen and Peterhead. Home improvements can be significant, such as installing insulation or upgrading a heating system and are sustainable. We are working with funders to extend this approach in future years and are particularly keen to include other vulnerable groups identified in our health equity plan.

Over the past year we have been engaged in a number of green space and nature developments. We are a core partner with Aberdeen council and voluntary agencies in conducting a nature awareness campaign because many people do not make the connection between nature, biodiversity loss and the negative impacts of climate change. This can mean having a negative view of actions taken to support improve or maintain land for nature. The project aims to address the disconnect with nature and raise awareness about its intrinsic value and wider importance.

The interest and support to enhance, spread and support social prescribing and green health pathways has been a prominent feature of the Grampian Place and Wellbeing Network. There are examples of social prescribing happening across our region but a common request is for help to spread and sustain activities across the North East with greater ease and support. Our efforts in public health are therefore focused on things that will help particularly, support with information governance solutions, lobbying and enabling the development of a single directory of social assets/services and evaluating different approaches of social prescribing. This involves public health staff working nationally (with Public Health Scotland and Scottish Government), regionally (with the North East Population Health Alliance) and locally, including nature based social prescribing in partnership with RSPB in Aberdeen, and place/nature initiatives in schools in Aberdeen and Aberdeenshire.

Adapting to the effects of severe weather is becoming increasingly important. We cannot stop icy weather but we can prevent harms and increase community resilience in doing so. A good example of this is through an initiative aiming to prevent falls during icy weather. Working alongside the Aberdeen City Council roads department and three Community

Councils, three volunteer ice crews were established during winter 2023/24. Focused on areas identified by health intelligence as being at highest risk, 15 volunteers gritted on many occasions during the winter and anecdotal evidence showed that the effected communities were appreciative that this was done. Over and above the gritting that was done by the ice crews and as a result of having more grit available, this allowed members of the community to help themselves and clear their areas which led to an overall benefit to all and helped build a level of community resilience and spirit. Initial evaluation indicates a reduction in the number of falls, benefiting individuals' health and wellbeing and the use of health services. This evaluation will inform how we can spread the initiative further throughout Grampian.

Capacity building is crucial to ensure that all public health professionals who are working within communities engage with climate and health and that they have the knowledge, skills and capability to work on mitigation and adaptation to the climate emergency and environmental breakdown. From educational programmes in the public health team and ensuring dedicated capacity and direction through our Public Health Delivery Plan, we have made progress in the past year whilst acknowledging that developing climate informed public health will continue to evolve rather than having a fixed end point for delivery.

### 13. Conclusion

NHS Grampian's Climate Emergency and Sustainability Strategy for 2023-2028 emphasises the necessity of a holistic approach to mitigate and adapt to the impacts of climate change. This strategy is designed to ensure a sustainable health system where planetary and human health are fundamentally intertwined. Our commitment entails embedding sustainability principles across all healthcare activities, supporting communities in this endeavour, and collaborating with various partners. These principles are foundational to Grampian's *Plan for the Future* and reflect our stewardship aspirations both within our healthcare system and as an Anchor Institution in the North East of Scotland.

This Annual Report reflects on our activities and progress during 2023/24. It highlights the successes and challenges towards our Annual Delivery Plan objectives and more, and provides a trailer for work we have already begun in 2024/25. We have made significant progress from 2022/23 in increasing awareness and gaining ownership of this crucial agenda. Organisationally there are many high profile efforts to create the conditions for change, including educational programmes, our work as an anchor institution, facilitating change alongside and within communities, and the development of tools and resources to improve understanding about health and climate.

The health board continues to face considerable challenges in its pursuit of reducing emissions and achieving net zero status. A significant obstacle is the high cost associated with transitioning to renewable energy sources and implementing sustainable practices across various sectors, especially during a period marked by financial constraints within the organisation.

Climate change exposes our health service to unprecedented threats, including extreme weather events, rising temperatures, and altered precipitation patterns, which can strain infrastructure designed for different climatic norms. This issue is inherently multifaceted and necessitates a comprehensive approach. The development and deployment of clean technologies, as well as the adaptation to evolving climate conditions, require significant investments.

Addressing these challenges demands a collaborative effort with partners and stakeholders, alongside targeted financial support. Additionally, establishing policy frameworks that prioritise feasibility and affordability is essential in the pursuit of a sustainable, net zero future.

We are identifying areas where we can advance our sustainability agenda. This includes the publication of a biodiversity strategy aimed at enhancing our greenspaces, the implementation of sustainability eLearning programs designed to empower and enable our workforce, celebrating the achievements of sustainability conscious individuals and teams within the organisation.

Collectively, we have made meaningful progress in the past year while recognising that the development of climate-informed healthcare is a continuous journey, one that will evolve rather than conclude at a fixed endpoint.