

# NHS GRAMPIAN - ANNUAL CLIMATE EMERGENCY AND SUSTAINABILITY REPORT 2021/22

## Introduction

This is NHS Grampian'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 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 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](http://www.who.int/news-room/fact-sheets/detail/climate-change-and-health)

NHS Grampian provides health care to the ~500,000 people who live in the Grampian area and employs 18,048 (FTE) people.

## Leadership and Governance

- Who is the Sustainability Champion on the Board?
  - Derick Murray (Non-Executive Board Member)
- Who is the Executive Lead?
  - Paul Allen (Director of Infrastructure & Sustainability)
- What is the committee with lead responsibility for climate change and sustainability?
  - NHS Grampian's Sustainability Governance Group
- How is the Health Board showing leadership in tackling climate change and becoming environmentally sustainable?
  - NHS Grampian has a Sustainability Governance Group, in addition to a Sustainability Operational Group. In relation to leadership the Governance Group is represented across all directorates within the Health Board. Active engagement is encouraged within the health board, with the development of a sustainability eLearning module and sustainability workshops.
  - Our Sustainability Champion has undertaken IEMA learning modules and our Sustainability Lead is actively engaged and involved in both infrastructure and community aspects.
  - In addition there is a Transformation Oversight Group, with which sustainability as one of the areas of focus, and the same applies for NHS Grampian as an anchor organisation.

## Greenhouse Gas Emissions

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 greenhouse gas produced annually by NHS Grampian.

Source	Description	Amount of greenhouse gas (tonnes of CO <sub>2</sub> equivalent)			Percentage change since 2019/20
		2019/20	2020/21	2021/22	2021/22
<b>Building energy use</b>	Greenhouse gases produced in providing electricity and energy heat for NHS buildings	35,980	40,702	40,413	+10.96
<b>Non-medical F-gas use</b>	Greenhouse gases used for things like refrigeration and air conditioning	No data available	No data available	No data available	No data available
<b>Medical gases</b>	Greenhouse gases used in anaesthetics - nitrous oxide (N <sub>2</sub> O), Entonox (which contains nitrous oxide), desflurane, sevoflurane and isoflurane	4,112	3,337	3,985	-3.2
<b>Metered dose inhaler propellant</b>	Greenhouse gases used as a propellant in inhalers used to treat asthma and chronic obstructive pulmonary disorder (COPD)	1,014.6	209.2	222.3	-792.3
<b>NHS fleet use</b>	Greenhouse gases produced by NHS vehicles	1,025.94	941.17	1,084.31	+5.3
<b>Waste</b>	The greenhouse gases produced by the disposal and treatment of waste produced by the NHS	590.07	623.52	544.5	-8.3
<b>Water</b>	The greenhouse gas produced from the use of water and the	475.04	162.8	90.3	-426

	treatment of waste water				
<b>Business travel</b>	Greenhouse gases produced by staff travel for work purposes, not using NHS vehicles.	No data available	No data available	No data available	No data available
<b>Sub-Total</b>		<b>43,197.65</b>	<b>45,948.69</b>	<b>46,339.41</b>	<b>+7.3</b>
<b>Carbon sequestration</b>	The amount of carbon dioxide captured per by woodland, trees, grassland and shrubs growing on NHS grounds.	No data available	No data available	No data available	No data available
<b>Greenhouse gas emissions minus carbon sequestration</b>		N/A	N/A	N/A	N/A

## National Sustainability Assessment

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

In 2021/22, NHS Grampian scored 50% overall. Our three highest scoring areas were:

- Welfare (86%);
- Ethical Issues (80%) and;
- Capital Projects and Waste jointly (67%).

Our three areas with the most room for improvement were:

- Adaptation (27%);
- Biodiversity (33%) and;
- Greenspace and Sustainable Care jointly (34%).

## 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 new conditions we are facing.

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

*What have we done to better understand the impact of climate change on NHS Grampian and the people and places we serve?*

- NHS Grampian has initiated work on its Climate Change Risk Assessment and Adaptation Plan. Our staff are undergoing training on how to utilise the toolkit and start reporting on climate risks for the organisation. We have identified flood risks which has been incorporated into the tool.
- Ecological surveys were carried out at Foresterhill Health Campus, Royal Cornhill Hospital, Woodend Hospital and Dr Gray's Hospital. Details from these surveys have been incorporated into our Biodiversity Action Plan; including the alleviation of flooding using nature based solutions.
- NHS Grampian works in partnership with climate actions groups in all three local authorities.

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

- The Sustainable Design and Construction (SDaC) principles are being incorporated into all future new build projects and refurbishments. The guide takes into account the integration of resilience to future climate change risks.
- NHS Grampian has an active Resilience Group and Civil Contingencies Team who are aware of the increasing risks from climate change.

## **Building Energy**

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

NHS Grampian has over 170 buildings such as Aberdeen Royal Infirmary (part of Foresterhill Health Campus), Woodend Hospital, Dr Gray's Hospital & Fraserburgh Hospital.

In 2021/22, NHS Grampian used 220,694,139 kWh of energy. This was increase of 1.17% since the year before.

In 2021/22, NHS Grampian generated 5,736,063 kWh of energy from renewable technologies.

In 2021/22, 40,413 tonnes of CO<sub>2</sub> equivalent were produced by NHS Grampian use of energy for buildings. This was a decrease of 0.7% since the year before.

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

- We invested heavily in upgrading our Building Management Systems (BMS) to allow for more accurate monitoring of buildings to reduce overheating and wasteful energy usage. This project will be ongoing with a goal of NHS Grampian moving to one BMS for the whole site.

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

- This year we have made the Biomass Boiler at Foresterhill Health Campus the lead boiler to maximise the emissions reduction possible from this fuel source.
- We have invested in building fabric improvements replacing old wooden ash and case windows with new uPVC, improving the U value and stopping cold drafts.
- We had a number of decarbonisation feasibility studies done which we are planning to start acting upon to reduce our emissions in the coming year and grant funding has been applied for to help support these.

## Sustainable Care

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

### *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 Grampian’s emissions from these gases are set out in the table below:

<b>Anaesthetic gas use</b>			
<b>Source</b>	<b>2018/19 (baseline year) tCO<sub>2</sub>e</b>	<b>2021/22 - tCO<sub>2</sub>e</b>	<b>Percentage change since 2018/19</b>
<b><u>Volatile gases</u></b>			
Desflurane	896.6	158.1	-82.4
Isoflurane	9.7	3.8	-60.8
Sevoflurane	108.3	228.5	-38.5
<b>Volatile gas total</b>	<b>1,014.6</b>	<b>228.5</b>	<b>-77.5</b>
<b><u>Nitrous oxide and Entonox</u></b>			
Piped Nitrous oxide	1,601	1,310	-18.2
Portable Nitrous oxide	81	67	-17.3
Piped Entonox	2,149	2,348	-9.3
Portable Entonox	282	260	-7.8
<b>Nitrous oxide and Entonox total</b>	<b>4,113</b>	<b>3,985</b>	<b>-3.1</b>
<b><u>Anaesthetic gas total</u></b>	<b>5,127.6</b>	<b>4,213.5</b>	<b>-17.8</b>

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

- NHS Grampian has not renewed its desflurane contract and it has mostly stopped being used with theatres.
- We no longer have piped nitrous oxide provided via manifolds included in the project for the new Baird Family Hospital.

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

- Further removal of piped nitrous oxide manifolds across Grampian hospitals.

*What are we doing this year to make surgery greener?*

- We are in the process of installing the Neptune Stryker system in our theatres at Aberdeen Royal Infirmary (ARI) for a two month trial period.
  - o This is a suction system for fluids during operations, which holds the fluids in a tank.

- Following the procedure, the remote unit of the Neptune Stryker system is attached to docking station and the fluid is drained. The mobile unit can be used in any theatre then wheeled through to a docking station.
- This reduces the use of Vac-Sax (a cumbersome containment unit which is then processed as clinical waste) and subsequent manual handling.
- As an example, Urology procedures can produce between 70-128 L of fluid per procedure. This is the equivalent of ~100 Vac-Sax which are all lifted into Eurobins.
- The Net-Zero Theatre group within NHS Grampian aims to trial and establish net-zero operating lists across the region. There are aims to pilot this in a small theatre area/unit within the board and look into several aspects such as:
  - Anaesthetic Gases
  - Waste Management (can this be done in a less carbon intensive way)
  - Single use plastic/disposables reduction
  - Energy usage
  - Ventilation
  - Procurement of theatre consumables

### ***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 was 222.3 tonnes of CO<sub>2</sub> equivalent.

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

- Educational sessions were held for Healthcare Professions at the Respiratory MCN Conference on improve control of respiratory conditions, in particular asthma and chronic obstructive pulmonary disease (COPD).
- Inclusion of Greener Respiratory Care section in the [Respiratory MCN Prescribing Guidance for Asthma – Adults \(Dec 2021\)](#) document.

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

- Review and update of respiratory prescribing guidance with increased focus on sustainability and greener prescribing.
- Greener Respiratory Care Quality Improvement projects in conjunction with Clinical Lecturer from University of Aberdeen.
- Improved pathways of care for patients including a Community Respiratory Team to offer enhances patient care, reduced symptoms burden, improved control and reduced reliever inhaler requirements.

### **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 the most to those emissions.

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

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

- We offered online or phone consultations for patients via “Near Me” service. Staff, whose roles allow, are given the opportunity to work flexibly, under the Flexible Working Policy. This includes the opportunity to work remotely (including from home). This is being done under our Smarter Working Programme. As part of the Smarter Working Programme, two directorates also trialled hybrid working (a mix of remote/office).

*What did we do last year to improve active travel?*

- We organised behaviour change initiatives to encourage staff to take up active travel including a staff step challenge and a “Bike for a bite” challenge during Bike Week.
- We also took part in national activities including the Scottish Workplace Journey Challenge and Love to Ride’s global Cycle September.
- We held several on site Dr Bike and bicycle security tagging events to encourage staff to cycle.
- We continued to promote the Cycle 2 Work scheme to staff along with other national schemes such as EST e-bike loans and the Scottish Cycle Repair Scheme.
- We opened new walking routes at Royal Cornhill Hospital to encourage staff to walk on their lunch breaks and have since been awarded with Paths for All’s Walk at Work Award for Cornhill. A new path also opened connecting Foresterhill Health Centre and Woodhill House to encourage active travel to and between the sites.
- In addition, a new secure bike hanger and a public bike pump was installed at the Aberdeen Maternity Hospital, another bike pump was installed at Woodend Hospital and bike toolboxes have been stationed at Woodend, Cornhill and ARI for staff to use.

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

- NHS Grampian takes a lead role in the partnership around the Health & Transport Action Plan (HTAP), which includes membership of commercial bus operators First and Stagecoach, and the Community Transport Association. The group also includes representatives from Scottish Ambulance Service (SAS), Health & Social Care Partnerships (HSCP), Nestrans (the regional transport partnership) and Local Authority transport colleagues.
- The HTAP group has ensured that NHS Grampian has contributed to transport corridor studies carried out by local authorities and contributed to wider understanding of planned health locations.
- The objectives of the HTAP group this year have been:
  - o For partners to use their collective influence and resources within/between their own organisations and at a national level to further increase provision of high-quality infrastructure for active travel, and to promote, inspire and enable more people to walk and cycle as part of their everyday lives.
    - Quarterly sub-groups meetings to share information and identify opportunities.
    - Sustrans Workplace Engagement Officer has been promoting active travel to NHS Grampian staff including events such as bike maintenance, step challenges, undertaking a staff travel survey etc.
    - Spaces for People has delivered a number of improvements to cycle parking, walking and cycle infrastructure, including the opening of Blackbird Walk at the main Foresterhill Health Campus site.
  - o For health professionals to ensure planners and decision makers are informed of the adverse public health impacts of the transport system and to support those partners already working to resolve them, most notably in order to:

- Reduce air pollution, especially within Air Quality Management areas;
- Reduce the number of people exposed to high transport noise levels;
- Reduce the number of people killed or seriously injured on the transport network;
- Reduce the number of people isolated from their communities and key services by lack of appropriate transport;
- Ensure that transport policies support sustainable and healthy communities.
- For partners to gain a detailed understanding of the gaps or inequalities in access to or from health and social care services, and to resolve identified problems.
- For partners to more fully co-ordinate the planning and delivery of health and social care and transport in order to improve the efficiency and financial sustainability of services.
  - We have continued to use the Travel to Health & Social Care Information Centre (THInC). The project is staffed by colleagues at Aberdeenshire Council's Passenger Transport Unit who offer advice and liaise with community transport providers to co-ordinate transport for health and social care appointments.
- For partners to work together to ensure that Transport to Health & Social Care is undertaken wherever possible, or that care is provided without travel if appropriate.

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

- The Smarter Working Programme will continue to encourage, and provide advice on, flexible working in areas where, e.g. hybrid working, is not part of current practice.

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

- We will continue to encourage staff to take up active travel through behaviour change initiatives such as events, activities and challenges. We are starting off the year with our 4<sup>th</sup> annual staff Step Count Challenge, which this year has a record-breaking 400 teams, twice as many as last year.
- We will also continue to promote the Cycle 2 Work scheme and plan on changing the conditions of the scheme to make it more inclusive.
- We will be installing secure bike storage at Woodend and Dr Gray's Hospitals.
- We also aim to improve shower facilities and increase knowledge and awareness of available facilities to encourage walking, cycling and running to work.
- We are planning to work with Brompton to offer free bike trials to staff.
- We hope to improve the use of our e-bike fleet to replace business journeys currently made by car.
- We will finalise the NHS Grampian Active Travel Strategy and the Foresterhill Active Travel Plan to ensure that we have medium term and long-term goals for the organisation and our main health campus.

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

- Improving public and community transport links to NHS sites and services will be challenging with rising fuel costs, decline in bus patronage, ageing volunteers, recruitment challenges in the third sector, cuts to subsidised bus services, pressure on the SAS Patient Transport Service etc. HTAP will liaise to address these challenges.
- NHS Grampian leads nationally in having partnership between health, care and transport agencies and operators – we have strong working relationships with THInC

and will continue to provide the best information on what is available for patients to attend appointments.

- We will also work on promoting awareness of these services available to the public, and access to refunds for the public transport when they are entitled, so that we can address financial barriers and travel poverty.

We are working to remove all petrol and diesel fuelled cars from our fleet by 2025. The following table sets out how many renewable powered and fossil fuel vehicles were in NHS Grampian's fleet at the end of March 2022.

	<b>Renewable powered vehicles</b>	<b>Fossil fuel vehicles</b>	<b>Total vehicles</b>	<b>Percentage renewable powered vehicles</b>
<b>Cars</b>	5	176	181	2.8
<b>Light Commercial Vehicles</b>	5	122	127	4.1
<b>Heavy Vehicles</b>	0	13	13	0

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

	<b>Number</b>
<b>Bicycles</b>	0
<b>eBikes</b>	35

## **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 greenspace and increase biodiversity?*

- NHS Grampian staff garden opened in March 2022. This has provided an area for pollinators and continues to be looked after by volunteers, with new plants and blubs being planted throughout the year. There is a small area dedicated to wild meadows and was established this year. Staff are able to take time out during their busy day for lunch and a walk in greenspace.

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

- The Greenspace project supported by NatureScot started on the 10th October 2022 covering an area of 12,602.5 m<sup>2</sup>.
- The aims and objectives of the Greenspace Project can be described as follows:
  - o To develop a destination greenspace to act as a focus for outdoor activity for patients, staff, visitors and the surrounding communities to help enhance ecosystem services.
  - o To develop a strong planted structure across the campus that defines routes, creates human scale outdoor spaces and integrates planned future development and improves biodiversity.
  - o To develop a connected green network across the campus, that provides valuable habitat and enhances biodiversity and increases the ecological value of the site.

- To develop an integrated water management system across the campus, to reduce current site runoff and to accommodate necessary attenuation associated with future planned development which will improve ecosystem services.
  - To develop a legible network of on-street and off-street public realm and green routes focused on pedestrian movement, also connecting into wider active travel routes.
- The green infrastructure interventions in the western portion of the campus. The works include:
    - The creation of the destination greenspace in the western part of the campus, adjacent to the health centre
    - Structural tree planting to define routes and spaces
    - The creation of integrated water storage basins and linear storage features to manage surface water run-off
  - The linked benefits of the green infrastructure strategy works will be as follows:
    - Significant increase in the habitat and ecological value of the site through expansion of connected green spaces.
    - Enabling and encouraging outdoor activity for all users of the site, encouraging healthy lifestyle choices and realising therapeutic and clinical benefits for patients through easy access to high quality green space and healing environment.
    - A reduction in pressure on existing drainage infra-structure and reducing downstream flooding in central Aberdeen.
    - Improving the character, visual quality and perception of the campus, through the establishment of a strong landscape framework
    - Enabling and increasing the volume of pedestrian and cycle movement across the campus, for all users of the site: patients, staff, visitors and the surrounding communities.
    - Improving the legibility and quality of the pedestrian experience for all users of the site including enhanced access for those with a disability to the amenities on the site.
  - NHS Grampian has designed a Biodiversity Action Plan. This has been delivered at board level. We are currently in the process of identifying areas where NHS Grampian can increase biodiversity within greenspace areas. The proposed outcomes include:

### **Our Strategic goals and transformations**

- **Amenity** - Maintenance a key priority (Implement an ecologically sympathetic grounds maintenance management regime) – greenspace management plan policy and grassland guidance. NHS Grampian strategy of native species throughout all NHS Grampian sites
- **Mainstreaming Biodiversity** – To halt biodiversity loss. To increase the biodiversity within NHS Grampian’s greenspace by 30% by 2030 and provide public awareness of this.
- **Development** - Green infrastructure is developed for all new build projects. Biodiversity loss from construction projects is mitigated.
- **Surveying and Monitoring** – Baseline data and reports
- **Engagement** – reports, newsletters, open days, promote achievements. To increase the use and appreciation of biodiverse greenspace, Develop selected areas of greenspace as an educational resource. Encourage active travel to our sites. 20 Minute Neighbourhoods | Our Place.
- **Site Specific Action Plans** – Foresterhill Health Campus, Dr Gray’s, Royal Cornhill Hospital, Woodend and Community Hospitals

## Health Benefits

- **Supports mental wellbeing** (1 in 4 people will be affected by mental health in their life) “Spending time in my biodiverse space supported my recovery” NHS Forests 2022
- **Greenspaces** can help make us physically **healthier and improve our wellbeing** from rehabilitation after **surgery to improving mental health**
- **Nature alleviates stress, stabilises blood pressure** and treats **anxiety and depression**. Its effects have even been shown, reduce the incidence of underweight births, and accelerate **recovery from surgery**. (Woodland Trust 2022)
- **Green prescribing:** reducing the need for pharmaceutical intervention
- Social and community factor – COVID and post
- **‘Nature itself is the best physician.’** – Hippocrates
- Petrichor – unique earthy smell after the rain promotes wellbeing

## Biodiversity Benefits

- **Greenspace project** (flood protection provides **£8.90** return in investment for every £1.00 spent and includes biodiversity (NatureScot 2022).
- **Biodiversity benefits to the NHS** - natural capital that supports biodiversity including regulating **air quality, taking up carbon** and increasing **health and wellbeing**. **Supports pollinators**, bird song reduces stress – **noise pollution** is less sound of the wind and trees.
- To halt and **reverse biodiversity loss**. **Valuing and protecting and managing our greenspace**.
- **“The direct experience of nature has been shown to improve health outcomes and is recognised as important in the treatment of mental illness and in supporting good mental wellbeing more generally.” (NatureScot 2012)**

## 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 2020, the Global Earth Overshoot Day was 22nd August. In 2021, it was 29th July. The current global trend shows a concerning picture of over consumption. For the UK, the picture is more worrying. In 2022, the UK’s Earth Overshoot Day was 19th May. The current level of consumption of materials is not sustainable, it is the root cause of the triple planetary crises of climate change, biodiversity loss and pollution.

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

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

- We are an active member of the National Procurement Sustainable Procurement Steering group.
- We have developed a training module which has been included within the NHS Grampian Management Induction Course and includes sustainable procurement for non-procurement staff.
- Procurement staff undertook the Scottish Government Sustainable Procurement eLearning.

- Procurement staff have undertaken bespoke sustainable procurement training through training delivered as part of the Scotland Excel run NHS People development course.

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

- Procurement will continue to implement Circular Economy principles promoting our reuse portal Warp-It.
- We will continue to identify opportunities to procure goods via the NHS National Distribution Service (NDS) to consolidate deliveries. For non-NDS supplies, procurement are continuing to work with the organisation to identify opportunities to buy products from local suppliers. Both of these actions will continue to reduce delivery miles.
- We will continue to use the Scottish Government sustainable procurement tools.

We want to reduce the amount of waste we produce and increase how much of it is recycled. The table below provides information on the type of waste we produce.

Type	2020/21 (tonnes)	2021/22 (tonnes)	Percentage change
<b>Waste to landfill</b>	94	96	+2%
<b>Waste to incineration</b>	1637	1513	-7.6%
<b>Recycled waste</b>	1440	1531	+6%
<b>Food waste</b>	221	184	-17%
<b>Clinical waste</b>	N/A*	1683	N/A

\*Still in contingency for healthcare waste nationally, therefore unable to provide data

*What did we do last year to reduce our waste?*

- Minor amounts of waste segregation promotion.

*What are we doing this year to reduce our waste?*

- Promotion of correct waste segregation;
- Updated and re-wrote our waste eLearning modules to increase awareness of the waste hierarchy;
- Increased the number of locations with food waste recycling facilities;
- Investigating options to reduce unnecessary wastes being disposed of in healthcare waste streams.

## **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.

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

- Due to lack of staff resource, we have been unable to further improve our environmental performance in this period.

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

- We will be recruiting a full-time Environment Manager to lead on improving environmental performance for the organisation.

## **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 is working on the following building projects: The Baird Family Hospital, The Anchor Unit, The National Treatment Centre, The MRI Scanner Project at Dr Gray's Hospital and The North East Scotland Integrated Mortuary Project.

*What did we do last year to make our construction projects more environmentally sustainable?*

- Specify energy efficient lighting and associated controls.
- Setting expected energy efficiency levels and monitoring through the use of Building Energy Management Systems (BEMS) for critical systems for maximum efficiency.
- Use of energy efficient ventilation and air conditioning plant.
- Omit or reduce use of refrigerants to lowest environmental impact level.
- Increased insulation (external envelope, including windows and to internal pipework etc.).
- Use of sensor taps in public areas to reduce water waste.
- Adopting suitable measures to control rainwater discharge to public sewers e.g. attenuation.
- Installation of solar panels.
- Installation of electric vehicle charging points on major projects.
- Creation of cycle storage facilities for active travel in Foresterhill Health Campus and Royal Cornhill Hospital.
- Greenspace Project initiated at Foresterhill Health Campus site – including the opening of Blackbird Walk.
- Incorporation of external louvres (bri-soliel) to reduce heat gain through windows.
- Adoption of material with lower carbon footprint and embodied carbon e.g. floor coverings.
- Inclusion of appropriate external landscaping where possible.
- Setting expected arrangements for contractors to reduce site waste e.g. segregation and recycling measures on major projects.
- Create linkages to local Board Sustainability Groups for those involved with project delivery.
- Create healthy indoor environments through design features e.g. atrium with natural lighting in major projects.
- Use of appropriate sound attenuating materials, particularly in large internal spaces.
- Incorporating natural ventilation where possible.
- Use of Building Information Modelling (BIM) to help design out waste through review of models.
- Use of existing district heating network where available on large sites.
- Enhances quality inspection process to reduce need for re-work e.g. use of sample rooms for benchmark standards.
- Use of sustainable energy sources to reduce CO<sub>2</sub> (electric).

*What are doing this year to make our construction projects more environmentally sustainable?*

- Engaging with consultants to look at Thermal Dynamic Modelling of all new Capital Projects to reduce heat gain and maximise natural daylight.
- Setting energy targets associated with embodied carbon.
- Specifying tighter limits in U values for floors, walls, windows and roofs.
- Engaging with cost adviser to look at whole life cycle costing from inception to replacement including capital and revenue costs as well as replacement costs and environmental impact.
- Utilising the NHS Assure NHS Scotland Design Assessment Process (NDAP), Sustainable Design and Construction (SDaC) guide and Key Stay Assurance Review (KSAR) toolkits on all projects from initial assessment to post occupancy evaluation.
- All projects to be net-zero carbon from day of opening for heating and hot water as a minimum.
- Looking at the need and number of medical gas outlets on a project-by-project, room-by-room basis to reduce use.
- Utilising the Place Standards process and the Achieving Excellence Design Evaluation Toolkit (AEDET) to encourage introduction of additional greenspace into all new builds and access to external spaces for patients, staff and visitors.

## **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.

*What are we doing to act as an anchor institution for our local community / communities?*

- NHS Grampian provide a chair and lead contract to the Aberdeen City Council (ACC) Local Outcomes Improvement Plan (LOIP) Sustainable City Group. This group brings together the statutory services, academic and third sector organisations to address three goals in collaboration with communities:
  - o Reducing Aberdeen’s carbon emissions by 61% by 2026 and adapting to the impacts of our changing climate.
  - o Increase sustainable travel: 38% of people walking and 5% of people cycling as main mode of travel by 2026.
  - o Protecting / managing 26% of Aberdeen’s area for nature by 2026.
- NHS Grampian are instrumental in developing a Place and Wellbeing Network that extends across Grampian communities. It arose following a symposium led by Public Health and the network is pursuing links with NatureScot’s Our Natural Health Service and the Think Health, Think Nature partnership in Highland. The group is currently developing a document of intent and its initial aims are likely to include:
  - o Establish green health pathways
  - o Protect our natural environment
  - o Improve access to nature in both urban and rural areas
  - o Provide a resource for place-based work to share across the system
  - o Bring together multiple perspectives

*What are we doing to improve the resilience of our local community / communities (delete as appropriate) to climate change?*

- Improving the resilience of our local community is part of the remit of the Sustainable City group. Colleagues from ACC and the third sector are managing an improvement

project to build flood resilience in the first instance. They have identified community champions through engagement with networks and community councils and provide education and training on deal with severe weather events and flooding. Following a process of plan writing with one group they hope to adopt the same approach in other areas of the city.

## **Conclusion**

As a healthcare organisation, we are intrinsically aware of the of the impact our services have on the environment; we realise that addressing these will not only benefit our planet, but also provide the best opportunity to improve the overall health and wellbeing of our population. In order to meet both our ambitious targets and those legislated by the Scottish Government, we require a whole system approach with tangible actions needed to promote change in the organisation.

NHS Grampian is currently developing a Climate Emergency and Sustainability Strategy for the organisation, which will come with an accompanying work plan. This will provide a strategic perspective on our journey to net-zero, improving sustainable practices in the organisation and provide interim target dates through the work plan. This is being developed by members of our Sustainability Governance Group with input from colleagues throughout the health board via workshops. This document is due for completion and publication in 2023.

In the past year we have also been working on sustainability awareness within the health board. Behavioural change is a large aspect to successfully making more sustainable changes. We are developing learning modules on sustainability within a healthcare setting to all staff, to make them more aware of the impacts of their role within the NHS. Additionally, we are in the process of developing guidance documents to colleagues to allow them assess sustainability in their business cases, projects and papers to the board. We also have a growing network of enthusiastic Sustainability Champions within the organisation who advocate behavioural change at a grassroots level throughout the organisation and we are aiming to incorporate more clinical staff into this group where possible.

In the coming year, we are focussing on the development of more electric vehicle (EV) infrastructure on our properties. The aim is to make this infrastructure project a priority, by identifying relevant installation points across our geographical range, ensuring that direct supplies can be provided where electrical capacity may be an issue, looking into hybrid requirements for vehicles to ensure that contingency vehicles are available and reviewing our procurement plan for vehicle replacements to EVs.

We are also in the process of recruiting an Environment Manager and a Decarbonisation Manager for the organisation. These additional resources will allow the organisation to focus on creating and further developing our Climate Change Risk Assessments, ensuring the board is focussing on its compliance with various environmental legislation and making sure sustainable design and construction is being incorporated into all capital projects as we transition into a net-zero organisation.