



NHS Dumfries and Galloway

Annual Climate Emergency and Sustainability Report 2023/24

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NHS DUMFRIES & GALLOWAY

ANNUAL CLIMATE EMERGENCY AND SUSTAINABILITY REPORT 2023-24

Introduction

This is NHS Dumfries and Galloway's third annual Climate Emergency and Sustainability Report.

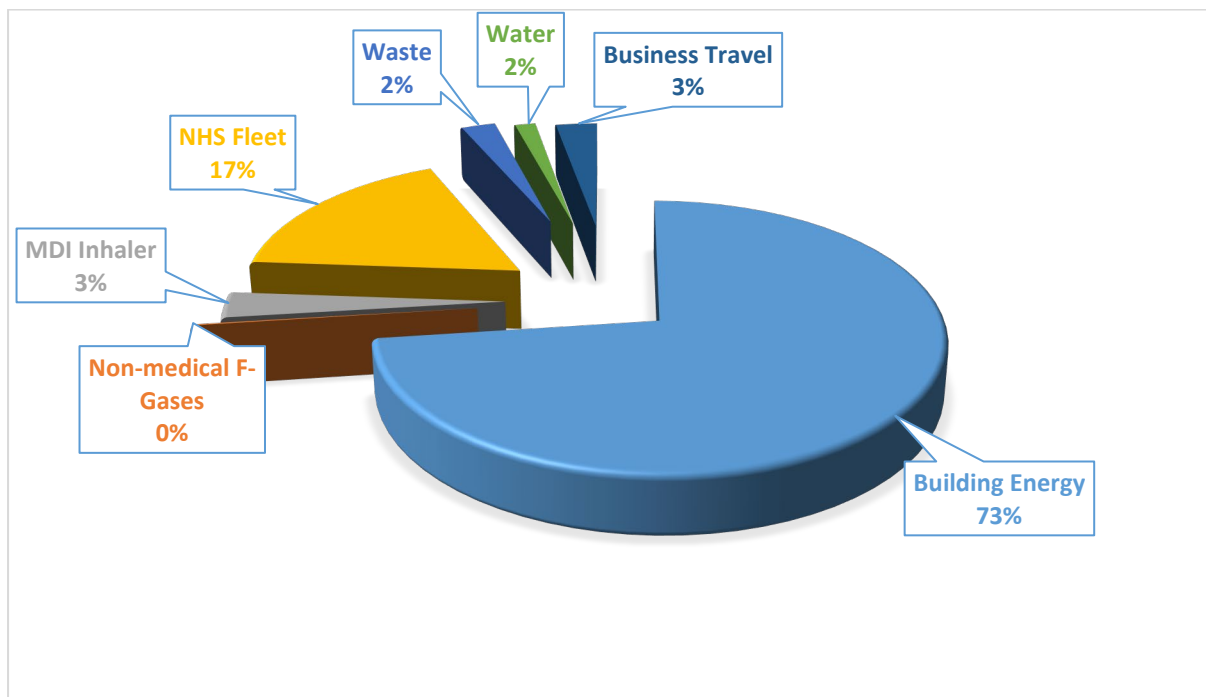
The planet is facing a triple crisis of climate change, biodiversity loss and pollution as a result of human activities breaking the planet's environmental limits.

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

NHS Dumfries and Galloway provide health care to around 146,500 people who live in the Dumfries and Galloway region and employ around 4,500 people. It carries out this work out on a property network of over 174,000m², including a major Acute Hospital, Acute Mental Health Hospital and numerous community hospitals and practices across the region.

A breakdown of the emissions related to Dumfries and Galloway are shown in the chart below.

Breakdown of Emissions



Leadership and Governance

The Sustainability Champion on the Board is Marsali Caig who is the Non-Executive and Board Champion for climate emergency and sustainability.

The Executive Lead for the NHS Dumfries and Galloway is Katy Kerr who is Director of Finance and Executive Champion for climate emergency and sustainability.

The Climate Emergency and Sustainability Programme Board (CES Programme Board)

The CES Programme Board's primary remit is to oversee the development of both a strategic plan and flowing from that an annual workplan in relation to the DL (2021) 38 and the Strategy.

Key responsibilities:

- Inform the content of and approve an annual work plan in line with the requirements of DL (2021) 38 and the Strategy
- Provide scrutiny in relation to progress reporting of the delivery requirements in the workplan, including in relation to targets
- Ensure that the Scottish Government's requirements are met in relation to 5-yearly Climate Change Risk Assessments, the production of a Climate Change Adaptation Plan and the annual Public Bodies' Climate Change Duties Report
- Inform the content of and provide scrutiny of the strategic planning for NHS Dumfries and Galloway to be a net zero organisation by 2040 at the latest
- Act as an escalation point for issues and risks by providing advice and support to assist with delivery
- Act as the forum for discussion about the Corporate Risk in relation to achievement of net zero by 2040, and all other risks which are identified in relation to delivery of the DL or Strategy arising from the Climate Change Risk Assessment
- Ensure appropriate resources are available to enable delivery of the approved workplan and to inform strategic planning
- Identify opportunities to work with external partners in the public, third and private sectors to pursue a common agenda on sustainable actions
- Actively seek and support the use of innovative solutions to the challenges
- Identify local and national initiatives which may benefit the Board in relation to sustainability
- Provide a dedicated network of expertise in relation to net zero
- Exploit any sustainability related training opportunities which may arise and share with other colleagues; inform the development of net zero awareness raising and training, where appropriate, and ensure the nationally developed mandatory training (when available) is achieved
- Oversee the development of an annual Communications and PR plan to build a culture of stewardship and ensure success and challenges are celebrated and shared appropriately, right across the workforce of NHS Dumfries & Galloway
- Set up and oversee specific, operational workstream groups as required
- Take the lead in ensuring the aims of DL (2021) 38 are fully integrated into all planning, management decisions and operational practices across NHS Dumfries and Galloway.

Core membership is set out in the table below. However, at the Chair’s discretion additional internal and external individuals can be co-opted onto the Board or attend for a particular issue. This is particularly relevant for clinical staff. Membership will be formally reviewed on an annual basis:

Chair	Marsali Caig	Non-Executive and Board Champion for climate emergency and sustainability
Vice Chair	Katy Kerr	Director of Finance and Executive Champion for climate emergency and sustainability
Member	Dr Emily Kennedy	Green Prescribing Group
Member	David Rowland	Director of Strategic Planning and Transformation
Member	David Bryson	General Manager, Facilities and Clinical Support Services
Member	Lesley Wilson	Procurement Manager
Member	Graeme Bryson	Director of Pharmacy
Member	Nick Mitchell	Charity Operational Manager
Member	Rod Edgar	Communication and Engagement Manager
Member	Dean McLean	Energy, Environment and Sustainable Development Programme Manager
Member	Katie Percival	Clinical Teaching Fellow, ScotGEM Programme
Member	David Wright	Speciality Doctor (Anaesthetics)/Green Theatre Lead
Member	Robyn Ruddick	Project Manager
Member	Bill Irving	Non-Executive Board Member/ACF
Member	Lynsey Fitzpatrick	Equality and Diversity Lead
Member	Sara Nicolson	General Manager, Highwood Health
Member	Michael Dickie	General Manager, Highwood Health
Member	Charlene Anderson	Senior Infection Control Nurse
Member	Emily Faulds	Speech & Language Therapist (Allied Health Profession Representative)
Member	Sandra Milne	RCN Steward
Member	Emma McRobert	Programme Support Office
Member	Eleanor Cronin	GP IT Re-provisioning Project Support Officer
Member	Evan Keir	Steward & Safety Rep with the Royal College of Nursing

Attendees and Professional experts can be called upon to attend when required.

Summary of Impacts

NHS Dumfries and Galloway 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 NHS Dumfries and Galloway.

Greenhouse gas emissions 2022-2023 & 2023-2024, tonnes CO2 equivalent					
Source	2022/23 Emissions (tCO2e)	2023/24 Emissions (tCO2e)	Percentage change – 2022/23 to 2023/24	2023/24 – Target emissions	Percentage difference between actual and target emissions – 2023/24
Building energy	12,402	12,332	-0.6%	12,500	-1.34%
Non-medical F-gas	18	22.25	+23.6%	-	-
Medical gases	487.1	521	+6.7%	325	+60%
Metered dose inhaler propellant	3,023.8	2,928 (primary Care)	+1.9%	39% from base line	+1.5%
NHS fleet travel	465.5	393.3	-15.5%	372.5	+5.6%
Waste	165.5	249.4	+50.7%	-	-
Water	46.9	54.6	+16.4%	-	-
Business travel	No data	475	-	-	-
Total emissions	16,457	16,963	+3.1%	-	-
Carbon sequestration	-	-	-	-	-
Greenhouse gas emissions minus carbon sequestration	16,457	16,963	+3.1%	-	-

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)	67,314,312	66,660,212	-1%
NHS fleet travel (km travelled)	1,704,328	2,013,425	+18.1%
Waste (tonnes)	846	754	-10.8%
Water (cubic metres)	123,777	162,446	+31.2%
Business travel (km travelled)	Not Available	2,906,931	

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/)

NHS Dumfries and Galloway carried out a Climate Change Risk assessment utilising the tool provided by NHS Scotland in 2022. A Climate Change Adaptation Plan has been drawn up from this.

Assessments were made for critical services during future predicted weather extremes, patient demand and demographics. This included vulnerable communities.

Business Continuity

Business continuity is dependent on many different aspects of the services and assets of NHS Dumfries and Galloway. The following aspects are essential to the delivery of health services:

- Staff and contractors (and their ability to get to and from different locations)
- Resources (food, water, hospital supplies, etc.)
- Assets and infrastructure
- Wider transport infrastructure
- Energy supply
- IT and communications
- Waste disposal
- Supply chains (local, national and international)
- Emergency planning

The following are the top six actions from the Climate Change Adaptation Plan.

Top six actions Climate Change Adaption Plan

	Nature of potential impact	Risk Exposure	Mitigating Action	Risk
Higher average temperature and extended periods of hot weather (including heatwave)	Increased use of cooling systems (air conditioning)	8	Forward planning in building specification	8
Higher average temperature and extended periods of hot weather (including heatwave)	Issues raised by Climate Change	16	Building regulations and Future Proofing of Specifications	8

	Nature of potential impact	Risk Exposure	Mitigating Action	Risk
Combined climatic effects (including storms, high winds, lightning, fog, mist and low cloud)	Issues caused by the outcomes of climate change	16	Building regulations and Future Proofing of Specifications	8
Cold spells (including frost, snow and ice)	Increasing number of patients	12	Forward planning with Sustainable Care Models	8
Heavy downpours and driving rain (includes changes in moisture content of air and soil)	Transportation and site access	6	Planned maintenance of drainage and guttering	6
Heavy downpours and driving rain (includes changes in moisture content of air and soil)	Localised Flooding	6	Planned maintenance of drainage and guttering	6

To reduce the risks highlighted in the Climate Change Adaption plan, a number of different actions have been taken:

- Ensured ongoing maintenance of areas highlighted in the report, gutter and drainage cleaning
- Ensured planned preventative maintenance and repairs are made to power, light and heat system within all buildings in the estate
- Planned maintenance and testing of secondary fuel sources for heating systems to ensure redundancy during colder and wetter winter months
- Major projects carried out to future proof roofing systems of buildings

In preparation for future climate change impacts NHS Dumfries and Galloway is carrying out the following work:

- Continual review and development of Climate Change Adaptation Plan and Risk Assessment
- Periodic review and updating of site Emergency Water Plans
- Ensure all current and future maintenance contracts cover and address potential issues from highlight climate change risks
- Periodic review of site flood risks
- Develop and review business continuity plans for critical services such as uninterrupted health provision, utility supply and waste collection
- Staff training in Climate Change and impacts on Health Care

Building Energy

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

NHS Dumfries and Galloway has 44 buildings such as 1 large acute hospital, 11 community hospitals, health centres, GP practices and a dental centre.

In 2023-24, NHS Dumfries and Galloway used 66,660,212 kWh of energy. This was a decrease of 1% on the previous financial year.

In 2023-24, NHS Dumfries and Galloway generated 2,095,9800 kWh of energy from renewable technologies.

In 2023-24, 12,332 tonnes of CO2 equivalent were produced by NHS Dumfries and Galloway use of energy for buildings. This was a decrease of 0.5% on the year before.

Building energy emissions, 2015/16, 2022/23 and 2023/24 – tCO2e				
	2015/16 energy emissions	2022/23 energy emissions	2023/24 energy emissions	Percentage change 2015/16 to 2023/24
Building fossil fuel emissions	6,631.9	9,795.3	9,339.7	+47.7%
District heat networks and biomass	56.1	27.1	26.5	-52.8%
Grid electricity	5,169.4	2,579.6	2,966.6	-42.6%
Totals	11,857.4	12,402	12,332.8	

Building energy use, 2015/16, 2022/23 and 2023/24 – MWh				
	2015/16 energy use	2022/23 energy use	2023/24, energy use	Percentage change 2015/16 to 2023/24
Building fossil fuel use	35,955.3	52,516.5	50,898.4	+41.6%
District heat networks and biomass	4,251.7	2,576.4	2,095.9	-50.7
Grid electricity	11,184.5	12,221.3	13,185.4	+17.9%
Renewable electricity	0	0	0	0
Totals	51,391.5	67,314.2	66,179.7	

This reduction in tonnes of CO_{2e} was, in part by using the following projects.

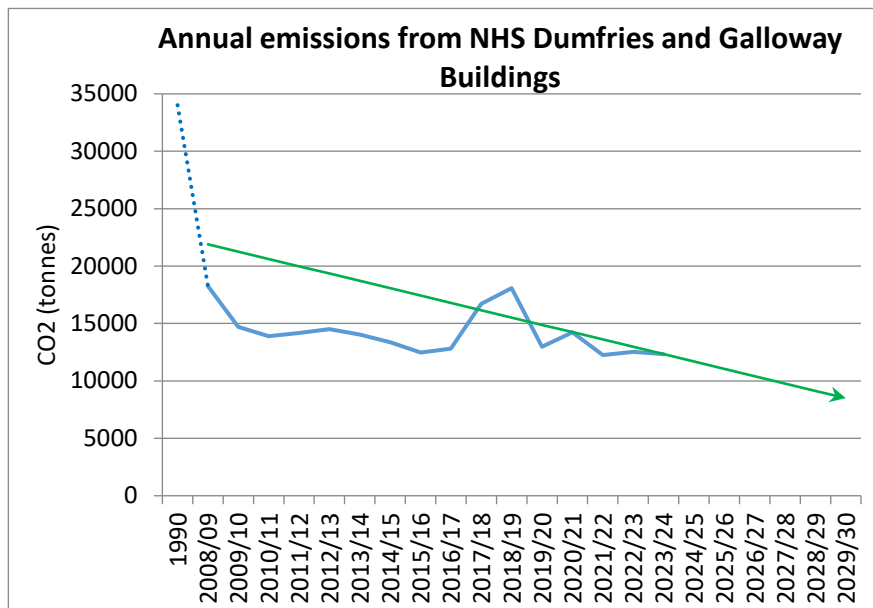
- Building re-roofing projects including increased loft insulation levels.
- Further Nithbank residencies overhauled which included installation of Air Source Heat Pumps, LED lighting throughout and additional loft insulation.
- A programme of works to replace older lighting with LED lighting throughout the Board. These include the following buildings.
 - Mountainhall Treatment Centre Core areas
 - Thornhill Hospital and health Centre
 - Newton Stewart Hospital
 - Newton Stewart Health Centre
 - 50% of Galloway Community hospital
 - Thomas Hope Hospital
 - Annan Hospital
 - Kirkcudbright Hospital & Health Centre
 - Lochmaben Hospital
 - Moffat Hospital
 - Darataigh
 - Waverley Medical Centre

The main areas still to complete include DGRI, Midpark Hospital, Dental Centre, Castle Douglas Hospital and Gardenhill medical Centre, all of which are being worked up. It has been agreed that any light fitting for repair will be swapped out for LED fittings in DGRI as part of the contract.

- Building heating optimisation and temperature reductions where possible.
- The continuation of a space utilisation project to better use our buildings and dispose of those which are not required.

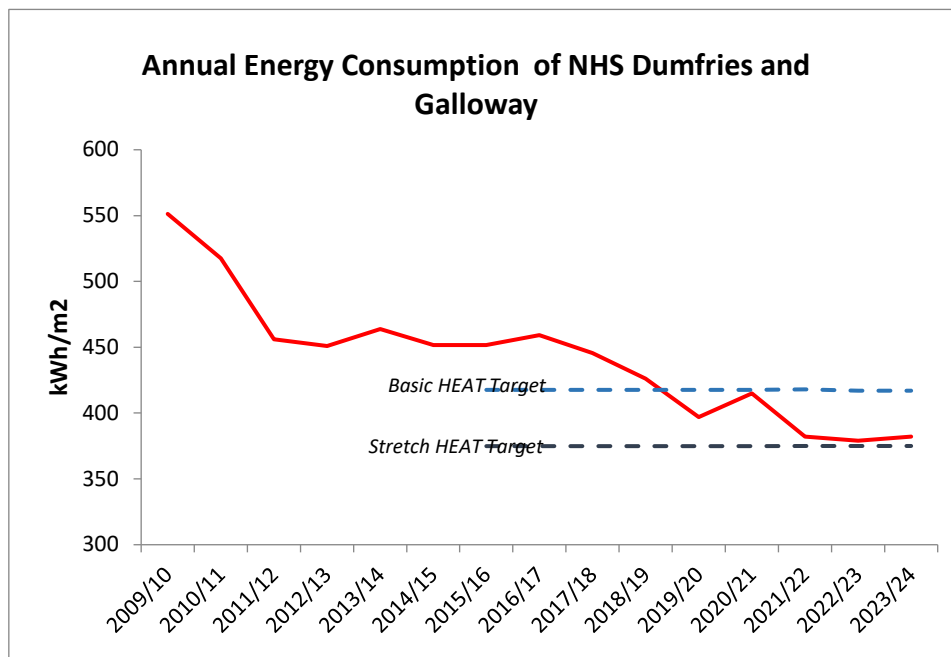
The chart below shows the Boards progress at reducing emissions. A reduction of 63.7% has been achieved against a 1990 baseline.

Annual emissions from NHS Dumfries and Galloway buildings



The chart below shows the Boards progress in improving energy efficiency. A reduction of 30.7% has been achieved since 2009-10. This is 10% better than the benchmarked national average.

Annual energy consumption of NHS Dumfries and Galloway



A new Emissions Reduction Strategy has been developed with an initial focus on the following:

- Replacement of steam as a heating medium at the Mountainhall Treatment centre site

- Building Fabric
- Replacement Windows
- Continuation of the programme of LED lighting replacement
- Heating Controls and Building Energy Management System (BEMS) Optimisation
 - Including increased sub-metering capability
- Inverters/frequency converters for motor drives control
- Use of high efficiency motor drives
- Review of solar PV potential
- Large scale maintenance overhaul of DGRI Combined Heat and Power Units

The following has been developed as a workplan for Building Energy in NHS Dumfries and Galloway.

Workplan – Building Energy

BUILDING ENERGY
Work stream Targets
<ul style="list-style-type: none"> • All owned buildings to have renewable heating by 2038 with interim targets from 2024 • Reduce emissions by 75% compared to 1990 • All electricity from renewable sources by 2035 • Adaptive capacity (high winds, storms, water security) following best practice in line with ISO14090 • Use NHS Scotland Sustainable Construction and Design Guide (SHTN 02-01) for any new facilities or refurbishments
2023-24
<ul style="list-style-type: none"> • Analyse Jacobs Zero Route map work received June 2023. • Conduct Climate Change Risk Assessment covering all operational areas and produce a Climate Change Adaptation Plan; incorporate into risk register - Complete • Review Estates Strategy including the utilisation of space. – A Property Strategy and an Emissions Reduction Strategy have been produced. • Develop Energy strategy - A Property Strategy and an Emissions Reduction Strategy have been produced.- Complete • Ensure integration of SHTN 02-01 into any governance processes in relation to capital spend on buildings • Explore applicable learning from NHS Highland project on medicines and micro-plastics entering environment through NHS waste water • Explore resources from Healthcare Ocean to inform work in this area • Engage in the NHS Scotland Circular Economy Programme • Identify any local opportunities to reduce the impact of our supply chains and make better use of and reduce use of plastics • Continue to explore local opportunities for energy generation
2024-25
<ul style="list-style-type: none"> • Ministerial review to include CES • Undertake appropriate Internal Audits to measure progress • Deliver any actions identified as necessary
2025-26
<ul style="list-style-type: none"> • Ministerial review to include CES
2026 Onwards
<ul style="list-style-type: none"> • 2028/2029 – update Climate Change risk assessment and review Climate Change Adaptation Plan

The Sustainability and Modernisation Team are part of NHS Dumfries and Galloway who also work with the Integrated Joint Board and Dumfries and Galloway Council.

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.

We have embedded the principles set out in Realistic Medicine to ensure we have a whole system approach for the best use of ALL resources including financial, staff, patients, public, infrastructure and natural. We have undertaken a formal evaluation which demonstrates that the principles have been applied within our models of care. This is evidenced in the Sustainability and Modernisation Programme Update Report. This features the following:

- Re-design of Urgent Care
- Community Health and Social Care
- Home Teams
- Care and Support at Home
- Dementia Care
- Orthopaedics
- Ophthalmology
- Community Treatment and Care (CTAC)
- Virtual Consultations
- Harnessing Technology
- Prescribing Efficiency, Effectively and Improvement
- Workforce Efficiency and Productivity
- Locum Spend Review

The Sustainability and Modernisation team are part of NHS Dumfries and Galloway who also work with the Integrated Joint Board and Dumfries and Galloway Council.

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 Dumfries and Galloway total emissions from these gases in 2023/24 were 500.8t, an increase of 13.8t 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 ₂ e				
Source	2018/19 (baseline year)	2022/23	2023/24	Percentage change 2018/19 to 2023/24
Piped nitrous oxide	231	98	177	-23.4%
Portable nitrous oxide	20	5	13.6	-32%
Piped entonox	423	343	275.4	-34.9%
Portable entonox	48	41	34.8	-27.5%
Total	722	487	500.8	

In 2023/24 the following work was carried out to reduce emissions from anaesthetic gases:

- The decommissioning of the main acute hospital, DGRI, Nitrous Oxide manifold
- Board wide survey of all anaesthetic systems and bottles

In 2024/25 this work will continue with:

- The review of Nitrous Oxide use and the manifold system at our Galloway Community Hospital
- Determine root cause for increased use in both volatile and anaesthetic gases

Green Theatres

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.

Volatile medical gas emissions, 2018/19, 2022/23, 2023/24 – tCO ₂ e				
	2018/19 (baseline year)	2022/23	2023/24	Percentage change 2018/19 to 2023/24
Desflurane	51.8	1	0	-100%
Isoflurane	0.6	0	0	NA
Sevoflurane	22.9	16	20	-12.7%
Total	75.3	17	20	

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 Dumfries and Galloway did the following to make operating theatres more sustainable:

By introducing a series of achievable actions within the theatres in NHS Dumfries and Galloway a reduction in carbon emissions associated with the theatres. Bundle A of actions in the National Green Theatres Programme are shown below:

- Remove Desflurane from use
- Switch off anaesthetic gas scavenging system out of hours
- Change to surgical fluid system that discharges to a grey water system
- Change pre-operative paracetamol from intravenous to oral
- Embed waste segregation and recycling
- Decommission nitrous oxide (N2O) manifolds
- Implement 'set back' for Theatre ventilation systems

The reduction in the use of some anaesthetics is one of the first actions already to have been progressed. The anaesthetic Desflurane has a global warming potential 2,500 times greater than carbon dioxide. Led by clinicians, NHS Dumfries and Galloway has reduced the use of Desflurane to zero and replaced it with more environmentally friendly anaesthetics.

Withdrawing desflurane is the first action of the National Green Theatres Programme which was formally launched in spring 2023 and NHS Dumfries and Galloway has now achieved this.

Another action has been to reduce the use of Nitrous Oxide and Entonox. As can be seen from the table above, the use of piped Nitrous Oxide in theatres has decreased by around 23% since the baseline year while the use of cylinder borne Nitrous Oxide has reduced by 32%.

Respiratory Medicine

Green Prescribing

Prescribing medication makes up a large amount of NHS Dumfries and Galloway's carbon footprint. The Green Prescription Group aims to reduce these emissions which will improve air quality, water quality and health.

One of the largest sources of greenhouse gas emissions associated with NHS Dumfries and Galloway and Primary Care in the Dumfries and Galloway area is the gas used as a propellant in metered dose inhalers which are used to treat asthma and COPD. One cylinder of propellant in an inhaler is equivalent to driving to Inverness from Dumfries in CO2 emissions.

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.

Emissions from inhalers in NHS Dumfries and Galloway were 2,997 tonnes of CO₂ equivalent in 2023/24. A breakdown of these emissions are shown in the table below.

Inhaler propellant emissions, 2018/19, 2022/23, 2023/24 – tCO₂e				
Source	2018/19 (baseline year)	2022/23	2023/24	Percentage change 2018/19 to 2023/24
Primary care	2,794	2,978.53	2,952	+5.7%
Secondary care	129	45.27	45	-65.1%
Total	2,923	3,023.8	2997	

The below table details the work plan for the reduction in inhaler emissions in 2023/24 and looking forward to 2024/25. With NHS Dumfries and Galloway benefiting from a small decrease in primary care emissions in 2023/24.

Workplan – Sustainable Care

SUSTAINABLE CARE/Green Theatres
Work stream Targets
<ul style="list-style-type: none"> Continue to implement shared decision making between clinicians and patients in line with Realistic Medicine aims to reduce low value and futile treatments e.g. in relation to prescribing Reduce emissions from inhaler propellants by 70% by 2028 Work towards zero emissions of anaesthetic gases (desflurane, isoflurane, sevoflurane) Achieve zero emissions of nitrous oxide by 2027
2023-24
<ul style="list-style-type: none"> Establish a sustainable clinical services delivery team as part of overall response to help clinical teams make sustainability a core consideration in improvement work Seek to baseline wasted medication Clarify NHS D&G's approach to realistic medicine Develop and deliver a local green theatres plan as part of the national Green Theatre Programme based on the NHS Highland plan Establish a team to work towards zero emissions of anaesthetic gases and engage in the national programme on nitrous oxide removal Support Green Prescribing Group to reduce Metered Dose Inhaler use and increase Dry Powder Inhalers; use SG awareness raising campaigns to inform locally
2024-25
<ul style="list-style-type: none"> Using learning from pilot Green Health Partnerships, develop a local green prescribing Plan and resources (this links to land stewardship and sustainable communities) Continue work on inhaler prescribing Continue work on anaesthetic gases Support SG work with medicine return to pharmacy schemes
2025-26
<ul style="list-style-type: none"> Cease the use of nitrous oxide by 2027

Travel and Transport

Domestic transport (not including international aviation and shipping) produced 28.3% of Scotland’s greenhouse gas emissions in 2020. Car travel contributes the most to those emissions.

Emissions due to business travel, not surprisingly, are mainly down to car journeys. NHS Dumfries and Galloway was associated with 475.1 tonnes of CO2 through business travel in 2023-24. Over 1,800,000 business miles were travelled in 2023-24.

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

To support and development healthier and more sustainable travel NHS Dumfries and Galloway has the following work plan. This details work completed and planned from 2023/24-25 in the areas of reducing the need to travel, improving active travel and improving public and community links to NHS facilities.

Workplan – Sustainable Transport and Travel

SUSTAINABLE TRANSPORT AND TRAVEL
Work stream Targets
<ul style="list-style-type: none"> • Achieve ‘Cycling Friendly Employer Award’ from Cycling Scotland by 2028 • Remove all petrol and diesel fuelled cars from owned and leased fleets by 2025 • All small and light NHS commercial vehicles to be powered by renewables by 2025 • To cease purchase or lease of any large fossil fuelled vehicles by 2030 • Decarbonise owned or leased fleet by 2032
2023-24
<ul style="list-style-type: none"> • Continue the evolution of the Cycle to Work scheme • Seek assurance about plan for fleet transition requirements by 2025 • In line with SG intentions, ensure continued use of NHS Near Me and other forms of remote consultation where clinically appropriate • Explore other digital opportunities for safe delivery of consultation/treatment • Explore potential use of e-Cargo bikes between sites • Include greenhouse gas emissions from business travel in annual Climate Change reports • Review policies for staff leased vehicles and business travel so they support sustainable travel
2024-25
<ul style="list-style-type: none"> • As part of biodiversity plans, ensure path networks link to the health care estate to encourage active travel • Add an Internal Audit into the programme in relation to use of digital consultation tools • Ensure Home working Policy is fit for purpose • Explore options or better integration of care to reduce separate journeys • Develop detailed and accessible information to patients and visitors on how to avoid using a car to visit major sites (including cycle routes and paths, facilities, public transport options) • Develop information for patients and visitors in relation to siting and arrangements for e-charging of vehicles • Use Community Planning routes to review where public transport links to NHS sites needs to be improved • Funding application for the purchase of more bikes
2025-26
<ul style="list-style-type: none"> • Undertake an internal audit into fleet requirements • Continue work to reach 2030 and 2032 targets

In 2023/24 a paper was presented to the board detailing potential pathways for improved public, social and community partnership transport. This work is continuing through 2024/25 with the project plan in development. Currently scheduled for first draft completion by end of 2024 and potential roll out in early 2025.

To complement the active travel and travel reduction work NHS Dumfries and Galloway is continually changing the mix of its vehicle fleet. We are working to remove all petrol and diesel fuelled cars from our fleet and have increased our EV charging capability by adding further 8 across the region in 2023-24. NHS Dumfries and Galloway has a further 45 EV cars and several other self-charging hybrids scheduled for delivery as contracts determine.

The following table sets out how many renewable powered and fossil fuel vehicles were in NHS Dumfries and Galloway 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	92	1%	120	21%	+20%
Light commercial vehicles	35	6%	23	0%	-6%
Heavy vehicles	1	0%	1	0%	0
Specialist vehicles	0	0	0	0	0

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

	March 2023	March 2024	Percentage change
Bicycles	21	21	0%
eBikes	19	19	0%

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

Distance travelled, kms	Cars	Light commercial vehicles	Heavy vehicles	Specialist vehicles	Total
2023/24	1,126,599	845,575	41,251	0	2,013,425
2022/23	980,234	639,917	84,087	0	1,704,238

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, tCO2e	Cars	Public transport	Flights	Total
2023/24	475.1	Unavailable	Unavailable	475.1

Greenspace and Biodiversity

Biodiversity

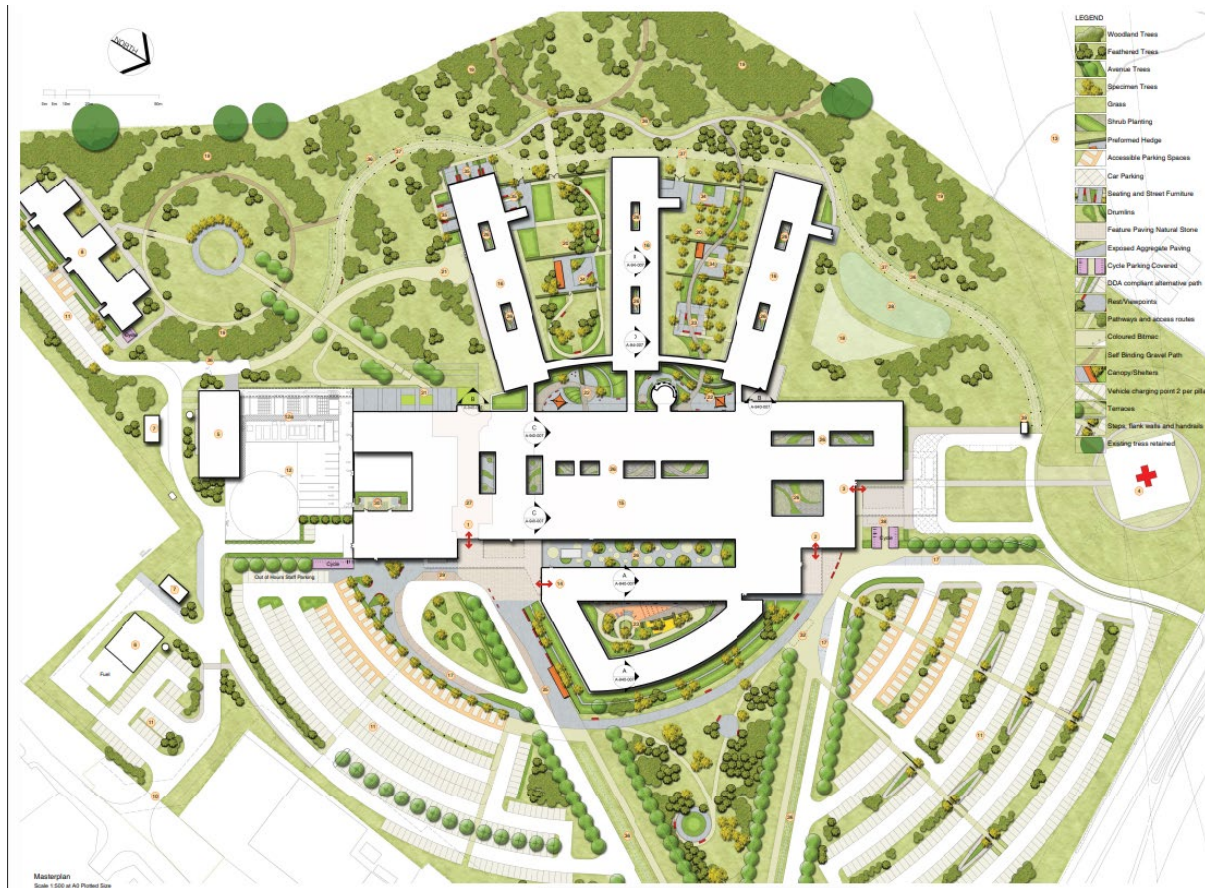
Biodiversity, or the wide variety of living organisms within an environment, has declined at a rapid rate in the last 50 years. Evidence demonstrates that these trends are attributed to human activities, such as land use change, habitat degradation and fragmentation, pollution, and the impacts of climate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

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

NHS Dumfries and Galloway has implemented a number of strategies and policies which both, directly and indirectly, affect biodiversity. The Board has an individual Sustainability Policy as well as a dual Climate Emergency and Sustainability policy. These directly relate to the protection and enhancement of biodiversity. To supplement these there are an Energy and Emissions Reduction Strategy, each aimed at lowering emissions and energy use and in consequence reduce environmental impact and loss of biodiversity.

A major component of Dumfries and Galloway commitment to improving biodiversity was during the construction of the new acute hospital DGRI. This has been specifically designed and built as a 'garden hospital' with a large number of courtyards and gardens incorporated with the building.

Landscape Layout at DGRI



A project commenced in November 2022 relating to land use across the NHS Dumfries and Galloway estate. This will involve mapping the boundaries of each site, and then mapping different types of land e.g. green space, building, car parks, and so on, within those boundaries. This will allow the Board to maintain a Greenspace Register

Biodiversity has been embedded within the organisation in a number of ways. NHS Dumfries and Galloway takes a pro-active approach to potential collaborations with external partners for the development of the estate's green spaces for health and wellbeing and environmental purposes. The board has now included a section on net zero and the environment in all new start inductions. NHS Dumfries and Galloway has a dedicated section on the website for the environment and net zero with content continually in development. This includes video and written pieces for climate week for NHS staff.

Working with external partners has been part of NHS Dumfries and Galloway’s strategy for an extended period. In 2015 the Galloway Community Hospital Community Garden was started. This was to provide allotment space for the local community, to complete and develop the project NHS Dumfries and Galloway worked in partnership with a numerous organisations including the Stranraer campus of D&G College, local primary and secondary schools and Better Life Partnerships. These allotments provide physical and mental health benefits, reduce isolation and help provide organic and sustainably produced local food.

This type of work has continued, NHS Dumfries and Galloway are currently collaborating with DesignHopes, Propagate and the CAPE Network to help develop greenspace on the Mountainhall estate. It is hoped that the estate could provide space to local organisations and the general public for projects such as orchards, produce gardens and nature trails among a number of other ideas. All providing benefits to the environment, biodiversity and health and wellbeing.

To ensure Biodiversity and the environment play a prominent part within NHS Dumfries and Galloway, opportunities have been leveraged to raise awareness and understanding in this area. The Board take part in Climate Change week with the creation of content that is then published on the website and in staff communications. This is followed up throughout the year with poster initiatives. The Board is proactive in the promotion of NHS Scotland Environmental training courses. Through the project to diversify the Mountainhall greenspace NHS Dumfries and Galloway has organised and held consultations and biodiversity themed events for both staff and the public to attend. These events are crucial in helping increase peoples understanding of biodiversity and the environment which surrounds us.

Green spaces and natural light

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 and community resilience building.

NHS Dumfries and Galloway will assess the extent and quality of the greenspace we own, the contribution its estate makes to biodiversity and undertake action to improve the contribution its estate makes to biodiversity.

Project name/ location	Benefits of project	Details of project
<i>Galloway Community Hospital Community Garden</i>	<i>Biodiversity Health and wellbeing Community Resilience</i>	<i>Creation of a community garden, raised beds and poly tunnels. Provides opportunity for a variety of groups to use, with disabled access to the gardens. Number of local partnerships involved in the development and running of the garden. The garden now provides both physical and mental health benefits through outdoor access and reduced isolation. The garden also creates a source of locally grown food.</i>

Project name/ location	Benefits of project	Details of project
DGRI 'Garden Hospital'	Climate Change Adaptation Climate Change Mitigation Biodiversity Health and Wellbeing	Use of green and energy efficient heating systems including CHP plant and ground source heat pumps. Redundancy built in energy supplies to ensure building is capable of adapting to climate change. Wards surround by garden spaces with 17 courtyards and gardens functioning as areas to relax. Use of light wells to give all ward room's access to natural light source.
Three Road Ends Project – Mountainhall Treatment Centre	Biodiveristy Health and Wellbeing Community Resilience	Project still in initial stages, with collaboration with a number of groups. Workshop's carried out highlighting a number of potential uses for the green space with focus on ecosystem services, biodiversity and conservation through creating a wildlife haven and community health and wellbeing such as community growing and farming, calm spaces and outdoor gyms.

Workplan – Land Stewardship

LAND STEWARDSHIP
2023-24
<ul style="list-style-type: none"> • Ensure the Board understands the decision making responsibilities in relation to SG Land Rights and Responsibilities Statement (LRRS) and SG Land Use Strategy as part of Board development • Develop Biodiversity return for 1st January 2024 • Develop a Greenspace Register
2024-25
<ul style="list-style-type: none"> • Develop and implement a strategic framework for greenspace • Develop plans for all major sites to plan future change and maximise opportunities to enhance biodiversity as part of this explore role of arts to encourage use of outdoor spaces • Development community partnerships for the development of NHS green spaces for public use

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, the Global Earth Overshoot Day is 1st August, a day earlier than 2023. 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 2024, the UK's Earth Overshoot Day was 3rd June. 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.

In 2023/24 local procurement renewed the taxi contract, and within the scoring and weighting of the tender included a question on Sustainability, this was weighted at 2.5%. A mini competition was ran for the purchase of ULEV and hybrid vehicles for the pool fleet. This now has a policy of limiting the maximum CO2 emissions allowed per km driven to 115g/km.

Major roofing work on the estate saw a change to the membrane used on the project from PVC, this new membrane has a far lower environmental impact and is cradle to cradle silver certified. Showing NHS Dumfries and Galloway continued commitment to sustainable procurement.

To continue in this effort, in 2024/25, Local Procurement is supporting National Procurement in the trialing of new, biodegradable pots for dispensing medication. At local level contracts issued for window cleaning held the requirement of the service provider to ensure environmentally friendly cleaning solutions were utilized. For the grounds maintenance contract that was tendered there were numerous environmental caveats applied, such as a weight factor for environmental management. There are also direct instructions for service including the non-use of herbicide treatments in specific woodland and conservation areas.

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	0	0	0	0
Energy from waste	825.5	668.9	422.73	-48.8%
Waste to incineration	0	0	0	0
Recycled waste	411	314.4	157.9	-61.6%
Food waste	166	180.7	173.7	+4.5%
Clinical waste	527	518.6	723	+37.2

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

Reduce domestic waste by a minimum of 15%, and greater where possible compared to 2012/2013 – by 2025	
Target – reduce domestic waste by 15%	177.7 tonnes
Performance – domestic waste reduced by	[402] (tonnes)
Outcome	ACHIEVED
Further reduction required	

Ensure that no more than 5%, and less where possible, of all domestic waste is sent to landfill – by 2025	
Target – reduce waste sent to landfill by	Maintain at 0 tonnes
Performance – waste sent to landfill reduced by	0 tonnes
Outcome	ACHIEVED
Further reduction required	Maintain performance

Reduce the food waste produced by 33% compared to 2015/16 – by 2025	
Target – reduce food waste by	67.6 tonnes
Performance – food waste reduced by 204.7te (2018/19)	24.6
Outcome	NOT ACHIEVED YET
Further reduction required	43 tonnes

Ensure that 70% of all domestic waste is recycled or composted – by 2025	
Target – recycle or compost	[528.03] (tonnes)
Performance – recycled or composted	[331.6] (tonnes)
Outcome	NOT ACHIEVED YET
Further increase required	196.43 (tonnes)

Workplan – Waste Management, Circular Economy, Recycling and Procurement

WASTE MANAGEMENT, CIRCULAR ECONOMY, RECYCLING AND PROCUREMENT
Work stream Targets
<ul style="list-style-type: none">• Reduce domestic waste by minimum of 15% compared to 2012/13 baseline by 2025• Maximum of 5% of domestic waste in landfill by 2025• Reduce food waste by 33% compared to 2015/16 baseline by 2025• Ensure that 70% of all domestic waste is recycled or composted• Develop plans for waste streams and key materials (clinical waste, medicines waste, residual waste, recycling streams, packaging, food, estates including furniture and equipment, plastics, metal, wood, textiles, organics)
2023-24
<ul style="list-style-type: none">• Review and communicate Waste Policy so that it is clearly understood (Food Waste to be completed separately)• Waste Manager to establish a programme to review opportunities to reduce clinical waste• Take necessary action to achieve 2025 targets• Review plant based catering options• Review food provision across sites, including use of plastics• Ensure attendance and feedback loop at NHS Scotland Sustainable Procurement group
2024-25
<ul style="list-style-type: none">• Finalise a reviewed Food Waste Policy to include national engagement in relation to menu choices• Develop a local sustainable Procurement strategy• Set appropriate targets for reducing the volume of clinical waste eg. extending life use, waste segregation, increased recycling (noting that SG is looking at a target for clinical waste reduction)• Ensure waste contracts align with ‘Duty of Care’ which includes audits and traceability.

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.

NHS Dumfries and Galloway is utilizing the Rio framework for the Environmental Management System. With progress made in the legislation system within the scope of estates and facilities. To supplement this a number of policies have been updated on the system including a confined space register and control of contractor’s policies.

In 2024/25 further EMS training sessions will be arranged for all staff involved with the development and management of the EMS system. This will allow further work within the legislation and Aspects and Impacts register to be completed at a more advanced pace.

In 2023/24 the board attempted to fill the environmental role within the board but ultimately this has taken an extended time. This resulted in delays to the EMS development across the Boards estate. A project to highlight the difference between clinical and commercial waste was carried out at DGRI which will hopefully show benefits in a reduction of clinical waste disposal in 2024/25.

In 2024/25 NHS Dumfries and Galloway will continue with the previously agreed work plan for the EMS system. To further improve environmental performance in the coming year the Board will continue to pursue green technologies for decarbonizing the estate and service, interact with local community groups and public bodies to better utilize greenspace, create more biodiversity and reduce environmental impacts.

Workplan – Good Environmental Stewardship

Good Environmental Stewardship
Work stream Targets
<ul style="list-style-type: none"> • Embed the Scottish Government (SG) Environmental Management System (EMS) across the organisation • Support staff, patients and visitors to understand the net zero agenda for the NHS and identify how by working together they can support
2023-24
<ul style="list-style-type: none"> • Embed environmental performance into all relevant governance reporting processes (eg. CES Programme Board, P&R Committee and the Board) • Continue work to cascade environmental management across the organization • Initiate work on policy development and Aspects & Impacts Register
2024-25
<ul style="list-style-type: none"> • Deliver Communications Plan • Plan final Rio training session to include all parties to be involved with EMS development and management. • Add EMS progress to Internal Audit programme • Review performance management approach and amend as required • Update Communications Plan for 2024/25 • Use Community Planning routes to share, seek support and work together • Board development session on CES • Explore synergy between environmental stewardship and realistic medicine; develop actions

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.

Through the use of the Good Corporate Citizen Model, operation of an Environmental Management System and use of a Sustainable Development Action Plans, NHS Dumfries and Galloway is able to promote environmental issues, such as bio-diversity and health and wellbeing, at the outset of any strategy.

Working with other stakeholders, community engagement is a fundamental part to many of our projects. This was shown in the decision making process for the site of our new Dumfries and Galloway Royal Infirmary which opened in 2018. Potential locations were reduced to a shortlist of five, these five locations then went to various public meetings via a road show and discussions with other stakeholders before a site was chosen.

Our main partnership working includes:

- Building Healthy Communities
- Third Sector First
- Dumfries and Galloway council
- Crichton Trust

Workplan – Sustainable Communities

SUSTAINABLE communities
Work Stream Targets
<ul style="list-style-type: none"> • Play a positive role in the community by minimising our own impact on the environment • Continue to work on the causes of poor health and inequalities • Use the Community Empowerment (Scotland) Act 2015 to have conversations about local land
2023-24
<ul style="list-style-type: none"> • Seek assurance on the delivery of public health priorities • Explore innovative partnerships with other sectors which promote and support good physical and mental health • Wherever possible, identify schemes which support the fair and green jobs agenda • Identify opportunities to support people living in low income households who might benefit from NHS sites heat and energy efficiency projects, thereby reducing fuel poverty
2024-25
<ul style="list-style-type: none"> • Work with other partners and local communities to share information about NHS land and identify opportunities to collaborate on development, use and management • Through community planning mechanisms, manage and protect greenspace • Explore how community groups and volunteers can support nature based activity on key sites

Workplan – Communications, Internal and External

Communications, Internal and External
Q4 2022-23
<ul style="list-style-type: none">• Set up staff email box for ideas, comments• Develop draft Communications Strategy with strong use of visual communication
2023-24
<ul style="list-style-type: none">• Deliver Communications Strategy and continue to identify opportunities for engagement• Targeted communications to support behaviour change of staff, patients and visitors• Targeted communication about 'where waste goes'• Identify networks which can be used to learn and share ideas
2024-25
<ul style="list-style-type: none">• Communications strategy review• Internal Audit on staff perspectives about their understanding of our journey to net zero

Conclusion

This document sets out the progress and achievements so far on the Board's journey to Net Carbon Zero as well as outlining future work plans and ambitions within in this sphere. This will be actively driven and managed through the Board's Climate Emergency and Sustainability Programme Board.