



NHS Dumfries and Galloway

**Annual Climate Emergency and
Sustainability Report 2022/23**

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Introduction

This is NHS Dumfries and Galloway's second Annual Climate Emergency and Sustainability Report. The report will also satisfy the requirements for Biodiversity Reporting of the Wildlife and Natural Environment (Scotland) Act 2011.

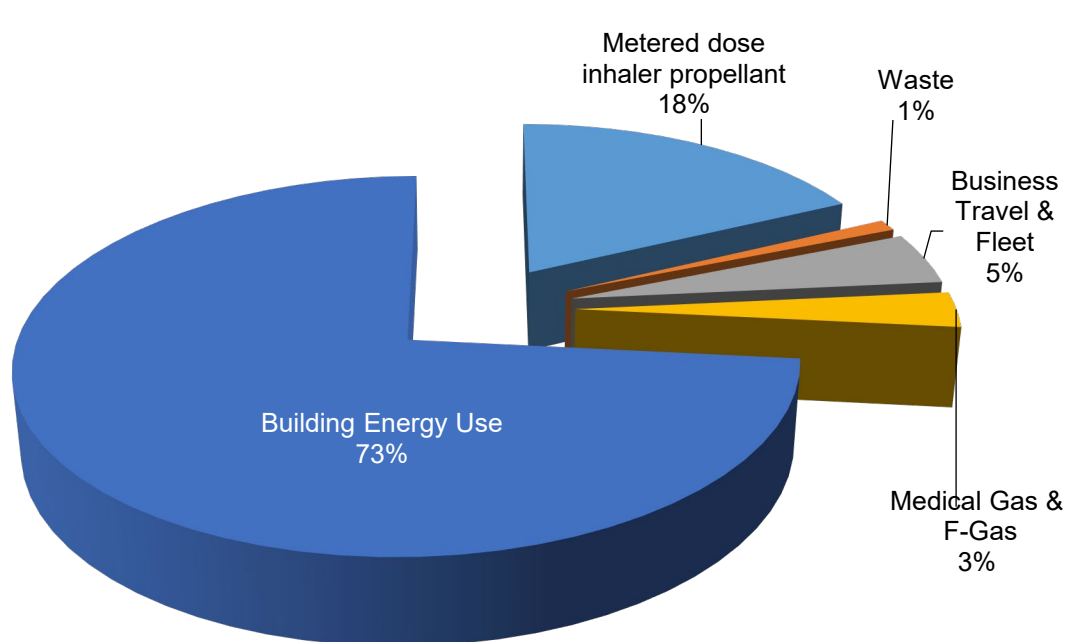
The planet is facing a triple crisis of climate change, biodiversity loss and pollution as a result of human activities breaking the planet's environmental limits.

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 circa 146,500 people who live in the Dumfries and Galloway region and employ around 4,500 people.

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

Chart 1: 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 (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 and 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:

Table 1: CES Programme Board membership 2022-23

Representing	Membership	Role
Non-Executive Team	Chair	Non-Executive and Board Champion for climate emergency and sustainability
Executive Team	Vice Chair	Director of Finance and Executive Champion for climate emergency and sustainability
Executive Team	Member	Chief Executive Officer
Strategic Planning and Transformation	Member	Director of Strategic Planning and Transformation
Procurement	Member	Procurement Manager
Transport and Travel	Member	Active Travel Officer
Prescribing	Member	Cluster Lead Pharmacist – Respiratory and Sustainability
Prescribing	Member	Director of Pharmacy
Buildings/Energy/Infrastructure/Waste/Procurement/Recycling	Member	General Manager, Facilities and Clinical Support Services
Buildings/Energy/Infrastructure/Waste/Procurement/Recycling	Member	Estates Manager – Contract and Compliance
Buildings/Energy/Infrastructure/Waste/Procurement/Recycling	Member	Energy, Environment and Sustainable Development Programme Manager
Buildings/Energy/Infrastructure/Waste/Procurement/Recycling	Member	Area Support Services Manager, Hotel Services
Buildings/Energy/Infrastructure/Waste/Procurement/Recycling	Member	Head of Catering services
Clinical/Green Theatre/Prescribing	Member	Clinical Lead Role
Clinical/Green Theatre/Prescribing	Member	Clinical Teaching Fellow, ScotGEM Programme
Clinical/Green Theatre/Prescribing	Member	Chair of Area Clinical Forum
Clinical/Green Theatre/Prescribing	Member	Specialty Doctor (Anaesthetics)/Green Theatre Lead
Communications	Member	Communication and Engagement Manager
Endowments Charity (as required)	Member	Charity Operational Manager
Equality (as required)	Member	Equality and Diversity Lead

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

The CES Programme Board are in the process of finalising a clinical lead for environmental sustainability.

Greenhouse Gas Emissions

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.

Table 2: Greenhouse gas produced annually by NHS Dumfries and Galloway

Source	Description	Amount of greenhouse gas (tonnes of CO2 equivalent)				Percentage change since 2019/20
		2019/20	2020/21	2021/22	2022/23	
Building Energy Use	Greenhouse gases produced in providing electricity and energy heat for NHS buildings	12,753	12,898	12,256	12,402	-2.75
Non-medical F-gas use	Greenhouse gases used for things like refrigeration and air conditioning	18.7	19.8	15.1	18.0	-3.7
Medical gases	Greenhouse gases used in anaesthetics - nitrous oxide (N2O), Entonox (which contains nitrous oxide), desflurane, sevoflurane and isoflurane	797.3	521.7	591.1	487.1	-38.9
Metered dose inhaler propellant*	Greenhouse gases used as a propellant in inhalers used to treat asthma and chronic obstructive pulmonary disorder (COPD)	2,885	2,961	3,065	3,023.8	+4.81
NHS fleet use	Greenhouse gases produced by NHS vehicles	320.6	274.6	317.4	278.9	-13.0
Waste	The greenhouse gases produced by the disposal and treatment of waste produced by the NHS	235.3	199.6	175.6	167.9	-28.6
Water	The greenhouse gas produced from the use of water and the treatment of waste water	61.9	62.4	55.5	55.4	-10.5
Business travel	Greenhouse gases produced by staff travel for work purposes, not using NHS vehicles.	713.7	458.0	485.4	472.8	-33.8
Sub-Total		17,786	17,395	16,961	16,906	-4.95
Carbon sequestration	The amount of carbon dioxide captured per by woodland, trees, grassland and shrubs growing on NHS grounds.	Unknown	Unknown	Unknown	Unknown	

Source	Description	Amount of greenhouse gas (tonnes of CO2 equivalent)				Percentage change since 2019/20
		2019/20	2020/21	2021/22	2022/23	
Greenhouse gas emissions minus carbon sequestration		Unknown	Unknown	Unknown	Unknown	

* Metered dose inhalers are Primary Care only for 2019-20. Secondary Care is included in 2021-22 and 2022-23.

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 Dumfries and Galloway scored 39% overall. Our three highest scoring areas were Active Travel, Capital Projects and Welfare. Our three areas with the most room for improvement were Climate Change Adaptation, Procurement and Nature and Biodiversity. No assessment was carried out in 2022/23 as the NSAT has moved to a biennial frequency.

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/

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.

Table 3: 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

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 2022-23, NHS Dumfries and Galloway used 67,314,311 kWh of energy. This was an increase of 1.2% on the previous financial year. This was mainly due to activity.

In 2022-23, NHS Dumfries and Galloway generated 2,576,448 kWh of energy from renewable technologies.

In 2022-23, 12,517 tonnes of CO₂ equivalent were produced by NHS Dumfries and Galloway use of energy for buildings. This was an increase of 2.1% on the year before and a 3.6% reduction on 2019-20.

This was achieved, in part by using the following projects.

- Boiler house upgrades at Oaktree, Annan Hospital & Annan HC including replacement gas boilers, pumps, controls, etc.
- Recently completed Nithbank residencies 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

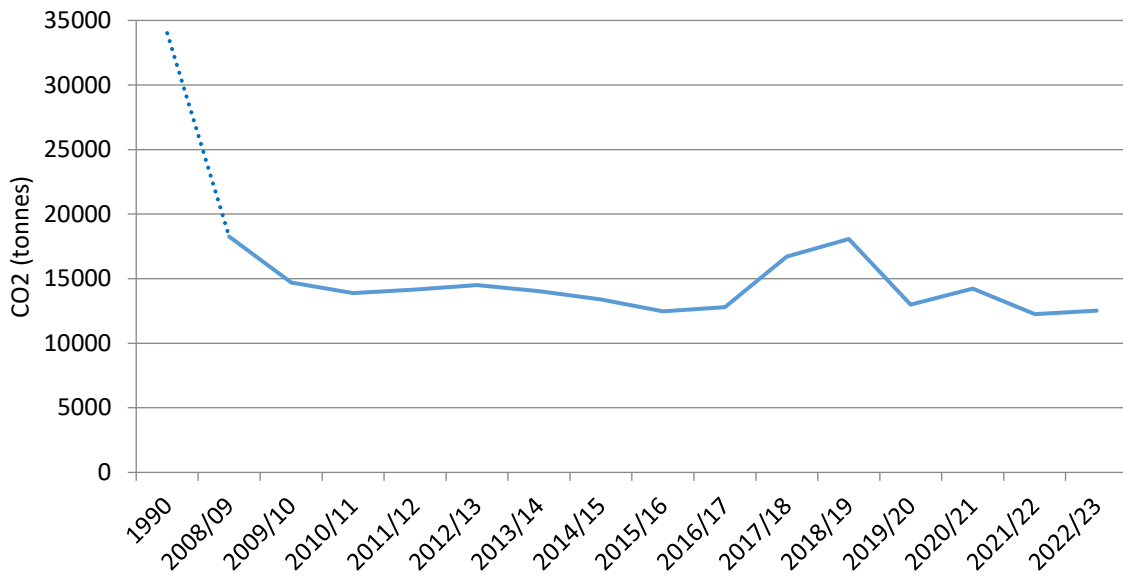
The main areas still to complete include DGRI, Midpark Hospital, Castle Douglas Hospital and Gardenhill medical Centre, all of which are being worked up. It has been agreed that any light fitting for repair will be swapped out for LED fittings in DGRI as part of the contract.

- Temperature reductions where possible.

- The continuation of a space utilisation project to better use our buildings and dispose of those which are not required.

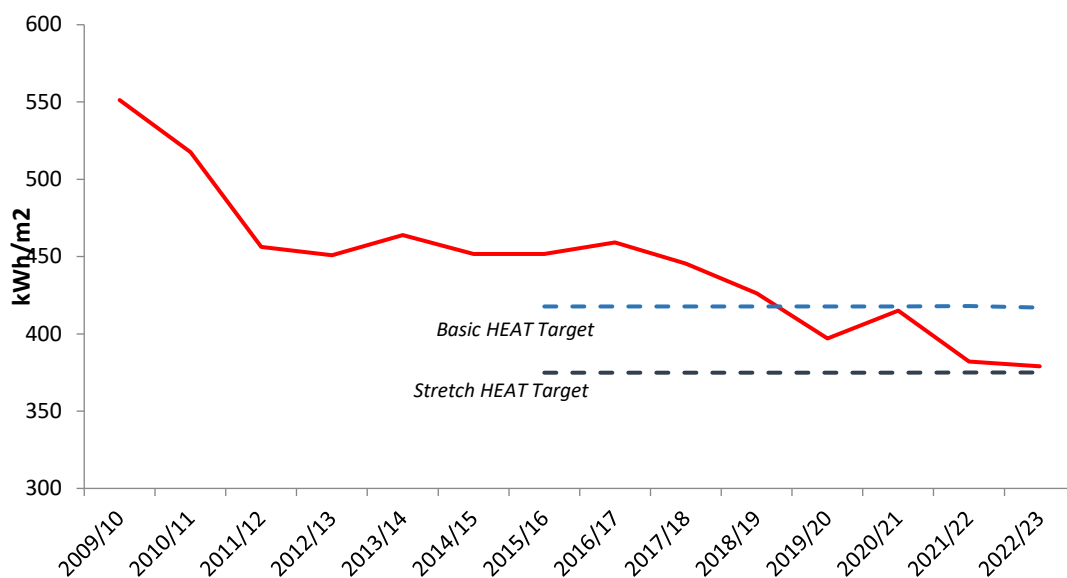
The chart below shows the Boards progress at reducing emissions. A reduction of 63.2% has been achieved against a 1990 baseline.

Chart 2: Annual emissions from NHS Dumfries and Galloway buildings



The chart below shows the Boards progress in improving energy efficiency. A reduction of 31.3% has been achieved since 2009-10. This is 10.6% better than the benchmarked national average.

Chart 3: 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

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

Table 4: 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 • Conduct Climate Change Risk Assessment to inform Climate Change Adaptation Plan and risk register • 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
Q4 2022-23
<ul style="list-style-type: none"> • Continue to explore local opportunities for energy generation
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. • Ministerial review to include CES • 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 plastics
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

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.

Table 5: Workplan – Sustainable Care

SUSTAINABLE CARE
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
Q4 2022-23
<ul style="list-style-type: none"> • Clarify successes, scope and alignment of local Green Prescribing Group • Clarify engagement in national Green Theatres work • Clarify status of work to progress medical gases requirements
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

SUSTAINABLE CARE

- | |
|---|
| <ul style="list-style-type: none">• 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 |
|--|

Anaesthesia and Surgery

Green Theatres

The national Green Theatres Programme is a key element of the [Scottish Government's Climate Emergency and Sustainability Strategy 2022 – 2026](#).

NHS Dumfries and Galloway is an active participant in this programme.

Theatres are high carbon and energy intensive areas that produce high volumes of waste. Reducing the environmental impact of theatres will make a positive difference toward Scotland's net zero targets.

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 by 86.2% 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.

Another action has been to reduce the use of Nitrous Oxide and Entonox. As can be seen from the table below, the use of piped Nitrous Oxide in theatres has more than halved in two years while the use of cylinder borne Nitrous Oxide has reduced by 75%.

Table 6: Anaesthetic gas use

Source	Anaesthetic gas use			
	2018/19 (baseline year) tCO2e	2021/22 - tCO2e	2022/23 - tCO2e	Percentage change since 2018/19
Volatile gases				
Desflurane	51.8	7.1	Being collated	
Isoflurane	0.6	1.5	Being collated	
Sevoflurane	22.9	18.5	Being collated	
Volatile gas total	75.3	27.1	Being collated	

Source	Anaesthetic gas use			
	2018/19 (baseline year) tCO2e	2021/22 - tCO2e	2022/23 - tCO2e	Percentage change since 2018/19
Nitrous oxide and Entonox				
Piped Nitrous oxide	231	157	98	-57.6
Portable Nitrous oxide	20	3	5	-75.0
Piped Entonox	423	361	343	-14.7
Portable Entonox	48	43	41	-10.4
Nitrous oxide and Entonox total	722	564	487	-21.9
Anaesthetic Gas total	797.3	591.1		-25.9

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 3,023.8 tonnes of CO₂ equivalent. A breakdown of these emissions are shown in the table below.

Table 7: Emissions from inhalers

	Inhaler Type (PIS)	Total Inhalers (PIS)	CO2 Equivalent (tCO2e) (PIS)
Primary Care	pMDI	165,957	2,827.91
Primary Care	R227	3,898	150.62
Secondary Care	pMDI	2,591	44.15
Secondary Care	R227	29	1.12
		Total	3,023.80

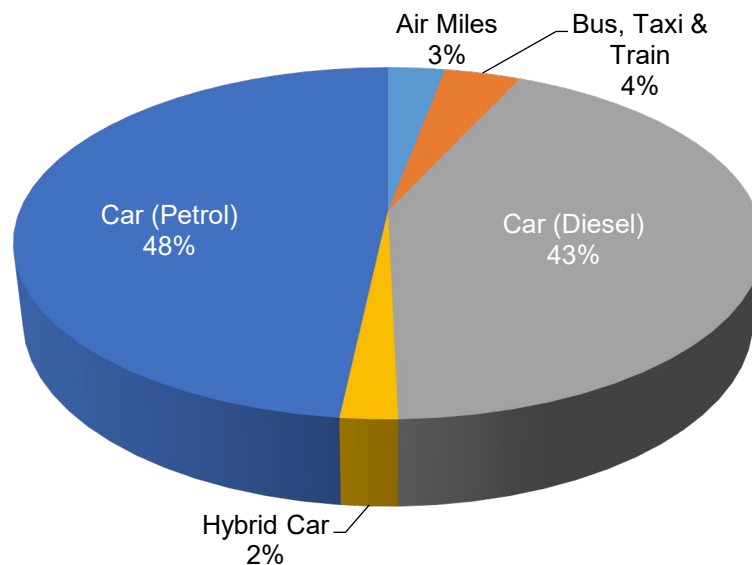
Travel and Transport

Domestic transport (not including international aviation and shipping) produced 24% of Scotland's greenhouse gas emissions in 2020. Car travel contributes the most to those emissions.

NHS Dumfries and Galloway was associated with 472.8 tonnes of CO2 through business travel in 2022-23. This is 33% lower than pre-pandemic levels and probably reflects a change in behaviour with regards to utilising Teams meetings.

Emissions due to business travel, not surprisingly, are mainly down to car journeys as can be seen below.

Chart 4: Emissions due to business travel



Over 1,700,000 business miles were travelled in 2022-23.

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

NHS Dumfries and Galloway have the following Electric Vehicle (EV) points installed and operational:

- Mountainhall Treatment Centre – 42 charging points
- Midpark Hospital - 4 charging points
- Annan Hospital -10 charging points
- Gardenhill Medical Centre - 6 charging points
- Langholm Health Centre - 2 charging points
- Lockerbie Health Centre - 2 charging points
- Lochmaben Hospital - 2 charging points
- The Willows - 8 charging points
- Galloway Community Hospital - 10 charging points
- DGRI – 40 charging points

The following points will be installed by March 2024:

- Charlotte Street Primary Care Centre – 2 charging points
- Castle Douglas Hospital – 2 charging points
- Newton Stewart Health Centre – 2 charging points
- Oaktree Family Centre Stranraer – 2 charging points

The Workplace Engagement Active Travel Project, run by Sustrans in partnership with Health and Social Care, continued to enable staff to walk, wheel and cycle, to work and for work, Promotion of active travel was maintained, running information stalls at the main sites of DGRI and MTC. This included promoting and sharing information on walking, wheeling, cycling and public transport use.

Engagement through the website [activetraveldumfries WordPress site](#) throughout the year has been good.

Over 2000 Health and Social Care staff and students were supported through competence events including bike maintenance workshops, bike security marking, cycle confidence session, personalised travel planning, ebike inductions to use the NHS pool fleet and personal bike and ebike loans. This included a collaboration between the project and the Education department to support ScotGEM medical students with access to bikes during their Dumfries and Galloway placements.

Public Health committed to match funding the Workplace Engagement Active Travel Project, run by Sustrans, for a further year (April 2022 – March 2023). The main aims are:

- To deliver a programme of communications, events, and activities to engage with staff to promote and support walking, cycling, wheeling and multi-mode journeys at engaged NHS sites.
- Deliver higher level engagement, policy development and infrastructure to build active and sustainable travel considerations into supported NHS sites

We are working to remove all petrol and diesel fuelled cars from our fleet by the end of 2025 subject to contracted lease period.

Table 8: The following table sets out how many renewable powered and fossil fuel vehicles were in the NHS Dumfries and Galloway fleet at the end of March 2022.

	Electric vehicles	Fossil fuel vehicles	Total vehicles	Electric vehicles
Cars	1	91	92	1%
Light Commercial Vehicles	2	33	35	6%
Heavy vehicles	0	1	1	0%

Table 9: The following table sets out how many bicycles and eBikes were in NHS Dumfries and Galloway's fleet at the end of March 2022.

	Number
Bicycles	21
eBikes	19

Table 10: 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
Q4 2022-23
<ul style="list-style-type: none"> • Clarify extent of Active Travel, public transport and care use for staff and patients to ensure robust baseline • Clarify position in relation to fleet
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
2025-26
<ul style="list-style-type: none"> • Undertake an internal audit into fleet requirements • Continue work to reach 2030 and 2032 targets

Greenspace and Biodiversity

Greenspace can have benefits for the health and wellbeing of staff, patients and communities. NHS Scotland bodies must manage their NHS greenspace to increase its provision and improve access, quality and regular use by staff, patients and the local community.

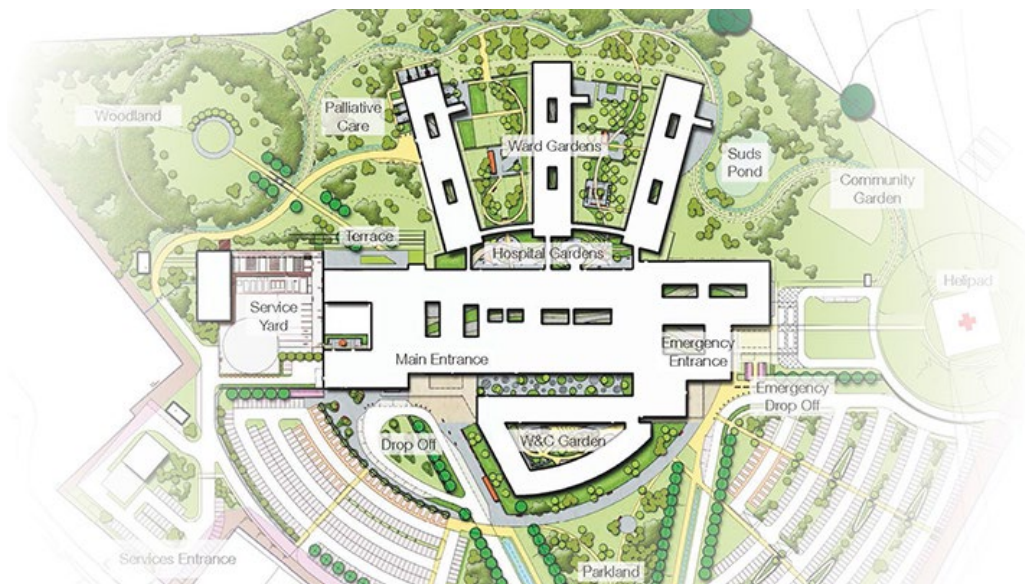
NHS Dumfries and Galloway will assess the extent and quality of the greenspace we own, the contribution its estate makes to biodiversity and undertake action to improve the contribution its estate makes to biodiversity.

The new Dumfries and Galloway Royal Infirmary which opened in December 2017 was conceived as a 'garden hospital', with a design focused on light and landscape made possible by its rural setting. The low-rise design with pitched roofs breaks up the mass of the building, allowing it to sit harmoniously within its surroundings.

Green spaces and natural light

- There are 17 courtyards and gardens which function as places of rest and healing as well as provide views from inside.
- The Women and Children's unit features an internal courtyard and dedicated children's garden which is linked to the main building but is served by its own separate entrance
- Wards are surrounded by garden spaces
- Facades reminiscent of Glasgow 'blonde' stone and Galloway granite
- There is an emphasis on natural daylight, green spaces and outdoor access.
- The main entrance atrium is a welcoming civic space, lit from above by a long row of skylights, along with a large bay window providing sweeping views across the surrounding countryside.
- Light courts throughout the inpatient pavilions allow for clear views across wards for both patients and staff, opening up interiors and filling spaces with natural daylight, avoiding a sense of isolation for patients.
- Work progressing to involve community groups in development and ongoing maintenance of green spaces.

Diagram 1: DGRI Greenspace



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

Table 11: 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

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.

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

Table 12: The table below provides information on the type of waste we produce

Type	2020/21 (tonnes)	2021/22 (tonnes)	2022/23 (tonnes)	Change from 2020/21
Waste to landfill	0	0	0	
Energy From Waste	781.8	825.5	668.9	-14.4%
Waste to incineration	0	0	0	
Recycled waste	391	411	314.4	-19.6%
Food waste	232	166	180.7	-22.1%
Clinical waste	653	527	518.6	-20.6%

The design of the service yard at DGRI was planned out so that we could maximise the potential for recycling. Three large compactors were installed to deal with paper/cardboard, plastic and general waste. In addition, a food waste tank was installed to capture macerated waste food from the building.

Photo 1: Compactor at DGRI loading waste from a wheelie bin



All cardboard packaging plastic packaging from deliveries to DGRI are recycled through the compactors. Other targeted areas are also recycled through the compactors. All other waste goes to a recycling plant which takes out any other recyclable material. Food waste is also recycled as this is taken to an anaerobic digester by our contractor.

None of our waste goes to landfill. The emission of CO₂ associated with waste has reduced by 29% over the last 4 years.

Our overall tonnage of waste produced has fallen by 19.1% since 2013-14 while recycling has increased to 24% from 2%.

Chart 5: NHS Dumfries and Galloway percentage of waste recycled

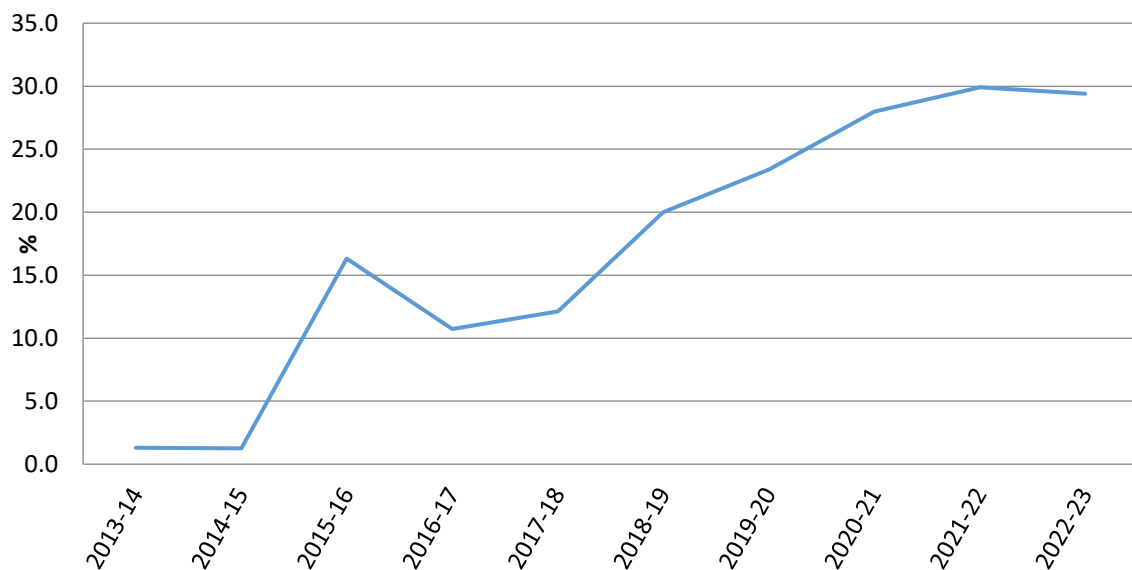


Chart 6: The chart below shows a breakdown of the waste types generated by NHS Dumfries and Galloway

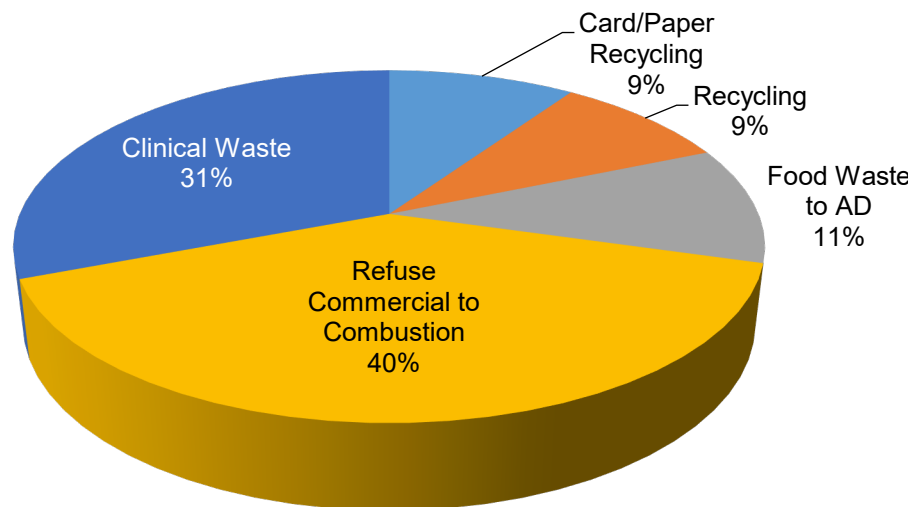
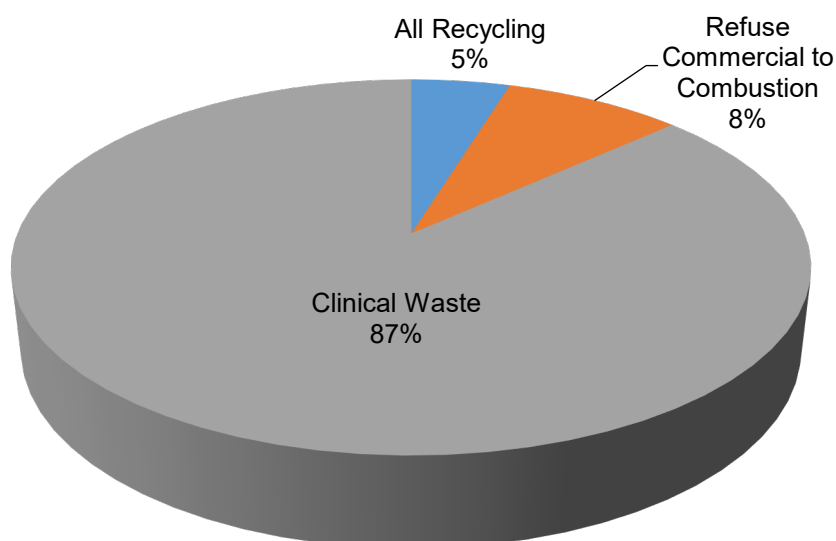


Chart 7: The CO₂ emissions associated with the above waste is shown in the chart below.



This shows that the area to concentrate on should be reducing clinical waste.

Table 13: 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) 	
Q4 2022-23	
<ul style="list-style-type: none"> • Review baseline position on waste elements (domestic, food and clinical) to ensure robust capture 	
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 • Ensure waste contracts align with 'Duty of Care' which includes audits and traceability. • 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) 	

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.

Table 14: 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
Q4 2022-23
<ul style="list-style-type: none"> • Develop, plan and begin work to embed EMS across the organisation • Embed environmental performance into all relevant governance reporting processes (eg. CES Programme Board, P&R Committee and the Board) • Develop Communications Plan for internal and external purposes for 2023/24; map stakeholders, develop key messages
2023-24
<ul style="list-style-type: none"> • Deliver Communications Plan • Continue work to cascade environmental management across the organisation • 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 and 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

Table 15: 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 use
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

Table 16: 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.

This report was prepared by the Board's Energy, Environment and Sustainable Development Programme Manager, Doug Yorke who sadly passed away unexpectedly in August 2023. It is though Doug's expertise in this area that the Board has made much of the progress it has.