

Sustainable Development Framework and Action Plan

Our Vision

Our vision is to be a lead organisation in sustainable health care with all our staff empowered to put sustainable healthcare at the heart of their practice. We will work with our partners and the communities we serve to put in place work practices, procurement systems and preventative interventions to minimise our environmental impact, protect the natural environment and enhance social value so that we are a sustainable service promoting good health and enhancing quality of life.

Goals / strategic objectives

1. NHS Lothian will have zero carbon emissions by 2045
2. NHS Lothian will contribute to enhancing our natural environment
3. NHS Lothian will promote climate resilience and ensure that its services are adapted to climate change
4. NHS Lothian will ensure that sustainable development is embedded in all its activities including governance and decision making, clinical practice, partnership working and advocacy
5. NHS Lothian will put sustainability at the core of its strategies for promoting health and well-being among staff, patients and the wider community

Introduction

We are proud of the contribution that the NHS makes to health, as a provider, developer and researcher of universal health services and treatments, as a major employer and contributor to national and local economies and as an institute responding to social and economic change and promoting public health.

In the face of climate change, the biggest threat to global health of the 21st century, we need to reassess and adapt to the challenge as an organisation and as individuals within the organisation.

This means understanding the impacts of climate change on health and illness, recognising that the NHS needs to be sustainable for future generations and understanding the interdependence and opportunity of sustainability goals such as those set out by the United Nations (UN).



The social, financial and environmental resources of the NHS are limited and need to be used and managed sustainably. Environmental sustainability, good financial management and better, more equal health need to be driven forward hand in hand. Sustainability means that we consider these elements together and prioritise action where positive change in one can benefit others. For example, a significant success in the last year has been switching to more sustainable anaesthetic gases which has not only reduced our carbon footprint, but also reduced costs. That is why our approach to sustainable development is based on:



Overview of this plan

In this short document we present an action framework to set out our ambitions, promote discussion, engagement and action.

We have taken a significant step forward in broadening the scope of NHS Lothian's approach to sustainability. Rapid change needs to be a feature of our work, as we respond to the scale of the global challenge and to the commitment and demands of our staff, patients, partners and communities. As we progress, we hope this plan will develop rapidly, paving the way for still greater ambitions.

This document will be supported with additional resources which can provide more information on the issues and subject areas covered in the summary along with a more detailed interactive plan of actions.

Our Sustainable Development Action Framework forms the basis for this document and contains 4 main elements:

- In People, Partners and Organisation we outline the organisational change needed to put sustainability at the core of our organisation and to enlist the commitment, motivation and expertise of our staff, patients and partners, as well as the communities we serve.
- Sustainable Models of Care is where we start to look at the process of service redesign for sustainability. We present examples of how staff are making change happen now, across the organisation and across different aspects of our environmental impact.
- The Focus Area section categorises the main sources of our emissions in 6 areas – Greenspace and Biodiversity, Travel and Transport, Carbon Emissions, the Built Environment, Sustainable Use of Assets and our wider impacts on the environment – and proposes actions, goals and indicators for each.
- Monitoring Progress and Evaluating Impact is central to plotting our progress on the sustainability journey and this section of the plan outlines actions for improving the data sources and systems.

NHS Lothian Sustainable Development Action Framework

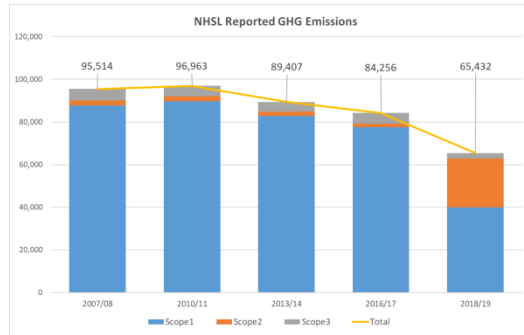


NHS Lothian's story so far and the challenge ahead

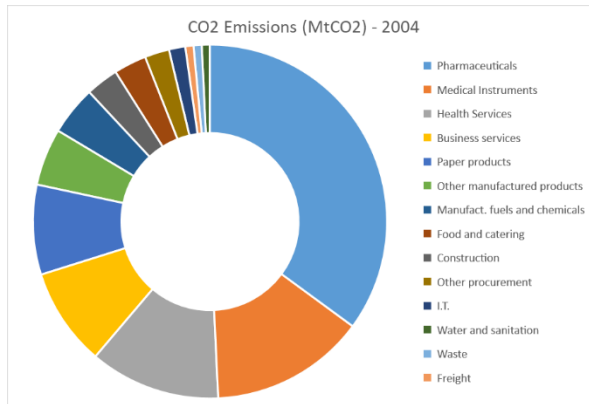
In managing and reducing our emissions we have reduced our impact on the environment, managed resources more effectively, contributed to actions on climate change and shown leadership as a major public sector organisation responsible for health.

NHS Lothian has been reporting on its annual Greenhouse Gas emissions since 2007/2008 following the internationally recognised approach for documenting the Carbon Footprint of an organisation, the Greenhouse Gas Protocol (GHG Protocol 12) as part of its Carbon Management Plan.

This chart shows that for the Green House Gases we have been monitoring and reporting on, there has been substantial progress. However, the emissions in scope relate only to our buildings and transport and represent less than 30% of the NHS Carbon Footprint and an even smaller proportion of our total resource utilisation.



We need to recognise the wider contribution services have on the environment and need to broaden our scope of measurement. For the first time, the 2018/19 report included emissions from Anaesthetic Gases, but this chart shows how much broader our scope needs to be.



This figure shows NHS Scotland emissions for 2004.

- NHS Scotland carbon footprint is estimated to 3.6% of Scotland’s total carbon footprint and 23% of Scotland’s public sector
- The travel and building energy sectors each contribute a quarter to the overall footprint, while procurement accounts for the other half (52%)
- Pharmaceuticals and medical equipment together comprise half of all procurement emissions for NHS Scotland

Over 70% of NHS Scotland emissions are from indirect sources, the products and services used, rather than being produced directly. The addition of a wider range of emissions sources in our reporting increases the challenge but is essential if we are to embed sustainability across the whole organisation and harness the enthusiasm and determination of the widest range of our staff.

The Scottish Government has set ambitious targets to reduce emissions by 75% by 2030 and net-zero by 2045 – the toughest statutory targets of any country in the world. To support this ambition we need to think and act across the whole of our organisation.

The Scottish Government has committed to take action now and has introduced the Climate Change Act 2019 which commits Scotland to net-zero emissions target by 2045, with interim targets of:

1. 2020 is at least 56% lower than the 1990 baseline
2. 2030 is at least 75% lower than the baseline
3. 2040 is at least 90% lower than the baseline

Scottish Government recognises that the public sector - as a provider of services, a major employer and procurer of goods and services - has an important role to play in decarbonising Scotland. Scotland's public bodies therefore must lead by example in combating climate change and making a valuable contribution towards achieving the emissions reduction targets. As one of the largest public bodies in Scotland, NHS Lothian is committing itself to meeting this target.

Programme for Government: Climate Change,

NHS CEOs in Scotland have endorsed 6 ‘must dos’ from the Scottish Sustainability Strategy:

1. NHS Scotland will be a ‘net zero’ greenhouse gas emissions organisation by 2045 at the latest
2. All NHS Scotland new buildings and major refurbishments will be designed to have net-zero greenhouse emissions from April 2020
3. Each NHS Board should undertake a Climate Risk assessment covering all operational areas and produce a Climate Change Risk Assessment to ensure resilience of service under changing climate conditions
4. NHS Scotland transport GHG emissions from its owned fleet (small/medium vehicles) will be net-zero by 2032
5. The NHS supply chain will be reviewed to determine the extent of associated greenhouse gas emissions and environmental impacts
6. Each NHS Scotland Board should establish a Climate Change/ Sustainable Governance group to oversee their transition to a net-zero emissions service

People, Partners & Organisation





Adaptation to Climate Change

Adaptation to climate change is becoming increasingly important for the NHS as extreme weather conditions become more frequent and severe, posing a risk to public health and to the resilience of our services. Adapting to our changing climate and mitigating the negative effects as well as raising awareness among our staff, patients and partners will be a major priority. Producing an NHS Lothian Climate Change Risk Assessment and Mitigation Plan is a statutory requirement.

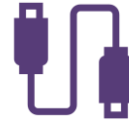
Aim: To work with our partners to make sure that NHS Lothian is prepared to deal with the effects of climate change by ensuring that we have invested in appropriate adaptation and mitigation measures.

Our Actions

- Appoint an Adaptation Lead and ensure that climate change mitigation is embedded in strategic reporting mechanisms
- Undertake a Climate Risk Assessment covering all operational areas and produce a Climate Change Risk Assessment and Adaptation Plan to ensure resilience of service under climate conditions
- Work with partners to plan for climate change adaptation and mitigation through membership of Edinburgh Adapts and ensure that the needs of vulnerable communities are addressed
- Invest in climate change adaptation and mitigations technologies
- Enhance the resilience of the NHS estate by maximising green space and biodiversity

Monitoring Progress

- Monitor and report on progress on the NHS Lothian Climate Change Risk Assessment and Mitigation Plan



e:Health

The e:Health transformations needed to support sustainable development were well under way before COVID 19 but have increased exponentially during the crisis. Technology to support home working, support remote consultations and reducing travel to a minimum have all become part of 'new normal' working practices throughout Lothian. These changes will be consolidated as sustainability becomes embedded as a key driver of our e:Health strategy.

Aim: Embed sustainability as a key driver for NHSL e:Health Strategy.

Our Actions

- Continue to roll out collaborative technologies such as Teams and Office 365, reducing travel needs and increasing collaborative and home working
- Continue the ongoing programme of making sustainable changes such as replacing desktops with virtual desktops and introducing Voiceover IP and monitoring the destination of surplus hardware to either 'certified destroyed' or reuse
- Continue to roll out, support and monitor the use of 'Near me'. Monitor the use of existing services such as Tele Presence and Video Solutions to inform future investment and upgrading
- Investigate the utility of e:Health solutions and tools in managing the built environment sustainably

Monitoring Progress

- Sustainability identified as key driver in NHS Lothian e:Health Strategy
- During COVID19 Teams has been enabled for all NHS Lothian and 8,000+ staff are now using it. Use will be monitored and impact on business travel calculated



Inequalities, Partners and Communities

The advantages of tackling climate change and inequalities in tandem – the co-benefits - are well recognised. Addressing health inequalities has long been a priority for NHS Lothian and was fundamental to establishing the Health and Social Care Partnerships and our work through Community Planning Partnerships (CPPs). It is through these mechanisms, which bring together local statutory and voluntary organisations and include active engagement with local communities (particularly those most in need), that NHS Lothian is seeking to mobilise joint action to address the climate change emergency.

A move to longer term prevention and early intervention is central to an integrated approach. Increasingly this will involve service users in setting priorities and co-designing services.

Food and fuel are fundamental for health and sustainability. The food we provide and way we heat buildings will be more sustainable. In addition, we will continue to work with partners (as employers, service providers and advocates) to ensure growing levels of food and fuel poverty are addressed through direct entitlements rather than charitable models of aid. Examples of existing joint work include:

- Shared approaches to energy use such as the planned WGH district heating system.
- Moves towards shared local offices for NHS, Council and Voluntary Sector services.
- Support for the Edinburgh Climate Change Commission.
- Joint support for the Community Led Health movement which over many years has enabled local communities to tackle health inequalities and climate change together through such initiatives as community food projects, community gardens and 'Grow Your Own' initiatives.

NHS Lothian also has a role to play in raising awareness of the advantages of an integrated approach across NHS Scotland, as well as ensuring that its own practices are characterised by best practice in patient involvement, employment and support for the local sustainable economy.

Aim: To build on work with our partners and communities to develop a coordinated approach that recognises the advantages of addressing sustainability and inequalities through early intervention and prevention.

Our Actions

- Promote joint initiatives to reduce emissions such as District Heating Systems and shared premises
- Establish and report patient feedback mechanisms and develop for ensuring patient views are recognised in service planning and redesign
- As part of the Community Planning system Sustainable Development Plans will be developed, implemented and monitored
- Good practice community engagement, patient involvement, policy and service delivery will be developed and disseminated through our communications activity, good practice events and case study analysis
- Support Edinburgh Climate Change Commission and learn from its work
- Develop NHS Lothian as an 'Anchor' organisation in the local sustainable economy, as an employer and purchaser of goods and services, and in relation to our greenspace, built assets and other infrastructure
- Work with our partners to contribute to the local food economy by developing public sector procurement of locally produced food
- Work with our partners to ensure that food and fuel poverty are addressed through direct entitlements rather than charitable aid
- Enhance understanding of the co-benefits of addressing sustainability and health inequalities through prevention and early intervention
- Continued support for the Community Led Health movement including development resources to support innovation in community engagement and health inequalities and sustainability

Monitoring Progress

- Put CPP Sustainable Development plans in place
- Good practice examples to be collated and disseminated
- NHS Lothian develops its strategy as an 'Anchor' organisation
- NHS Lothian continues to be a key contributor to national policy and practice
- Continued support for the Community Led Health movement extended to include innovation on sustainable development and health inequalities



Our People

NHS Lothian staff across the organisation have been changing clinical practice and lobbying for organisational change to make the service more environmentally sustainable. Endorsing and resourcing their commitment is at the centre of our drive for transformational change. Raising awareness, providing clear information about what staff members can do, enabling clinical networks and recognising and celebrating good practice will continue to be at the heart of our approach. Staff involvement in developing the Framework and Action Plan has been a priority. NHSL has benefited from staff bringing their concern for the planet to work and we will encourage them to continue to take action at home and in the wider community, becoming champions for sustainability as well as health.

NHS Lothian also has significant programme of developing the role of volunteers who could also contribute to the sustainability of our organisation.

Aim: To support and empower staff and volunteers to change ways of working to improve sustainability and become champions for sustainable development in the wider community.

Our Actions

- Conduct a consultation programme across NHS Lothian to ensure staff views are incorporated into the Sustainable Development Framework and Action Plan
- Ensure relevant organisations and networks are consulted and supported to lead with sustainability e.g. Trade Unions, Professional Associations, Health Promoting Health Service, Health and Wellbeing Groups, NHS Lothian LGBT+, BAME, Young People and Disability networks
- Develop and resource an ongoing communications programme to support the NHS Lothian Sustainable Development Framework and Action Plan
- Develop and support sustainability networking across NHS Lothian
- Seek to maximise the contribution of volunteers to sustainability through both NHS Lothian's volunteer cohort and through those provided by our Third Sector partners

Monitoring Progress

- Consultation programme to include events held at major sites across NHS Lothian and online opportunities to engage
- Identify a dedicated communications lead to work intensively on sustainability to build on early successes and generate commitment and buy-in from our staff, partners and public
- Assess the benefits and resource implications of different Sustainability Networking models



Quality Improvement

Continuous quality improvement is a mainstay of service development throughout the NHS. The Quality Directorate will be at the forefront of supporting staff to identify and implement changes to improve sustainability and will take a lead with rolling out successful projects. In addition, they have a key role in co-ordinating the input of Finance, Organisational Development and Public Health in developing analysis and documentation of environmental value.

Aim: To support staff and promote organisational development to improve sustainability of NHS Lothian services as part of a continuous improvement process.

Our Actions

- Quality Directorate coaches will be available to all staff wishing to develop and monitor sustainability projects
- Guidance for staff on carbon costing will be developed and integrated into the Quality Academy teaching
- Learning and good practice will be shared through case studies, Clinical Fora, Quality Networks

Monitoring Progress

- All staff have access to Quality Directorate support
- Support materials developed and used
- Increase in the number of projects written up as case studies, disseminated and replicated



Governance and Decision Making

Effective and knowledgeable leadership is at the core of good governance and decision-making for sustainable development. NHS Lothian's Board and Senior Management Teams are taking a hands-on approach to leadership in this area, not only overseeing the integration of sustainability into strategy and policy, but also taking part in staff consultations and empowering teams across the organisation to transform the way they work. The imminent launch of the NHS Lothian Sustainable Development Framework and Action Plan, and the monitoring processes associated with it, will be crucial in making sure the organisation transforms the way it delivers its services.

Aim: To ensure that NHS Lothian's decision-making and governance processes fully support and prioritise sustainable development by making sure sustainable development goals are fully integrated across NHS Lothian strategy and policy and reporting processes.

Our Actions

- Develop detailed reporting and accountability procedure to support the NHS Lothian Sustainable Development Framework and Action Plan
- Conduct a comprehensive consultation process with staff, partners and stakeholders to support the further development and implementation of the NHS Lothian Sustainable Development Framework and Action Plan
- Develop and implement a capacity building for sustainable leadership programme for NHS Lothian Board Members and Senior Management Teams
- Develop a comprehensive communications programme to support engagement with the framework and the development of our strategy
- Ensure that the Integrated Impact Assessment used across NHS Lothian and with our partners includes sustainable development
- Ensure that policies presented for review take account of the Board's sustainability commitments outlined in the Framework and Action Plan
- Review key business processes and planning to ensure that sustainability considerations are transparent and prioritised

Monitoring Progress

- NHS Lothian Sustainable Development Framework and Action Plan launched
- Reporting and accountability procedures put in place
- Leadership Programme developed
- Active Communications Strategy and campaigns
- Review of business processes and planning undertaken:
 - Annual Operational Plan
 - Remobilisation and Recovery Plan
 - Key NHS Lothian Policies
 - Property and Asset Management Strategy
 - Capital Investment Plans
 - Quality Improvement Strategy
 - Financial plan



Performance Management

Making rapid progress with integrating sustainable development into key parts of NHS Lothian's performance management and resource analysis systems is vital. The scale of the challenge of remobilising services in the context of Covid 19 means that there is a significant opportunity to ensure that sustainability is a foundation for the redesign of services and to make progress in managing performance through the lens of environmental sustainability, good financial management and better, more equal health outcomes.

A transparent methodology for measuring environmental, financial and social sustainability will be developed and implemented ensuring that corporately we are able to set goals and report on progress in these key areas.

There is an important opportunity to support the motivation and engagement of staff through the staff appraisal system ensuring all staff are aware and accountable for actions to support sustainability in their sphere of work.

Aim: To ensure that NHS Lothian's performance management and resource analysis systems support delivery of sustainable development commitments.

Our Actions

- Ensure that environmental as well as social and financial sustainability is embedded in performance management and review structures
- Develop a methodology for assessing the social, financial and environmental impact of new initiatives and models of care
- Ensure that the key principles of sustainability are explicit in plans for remobilisation and recovery
- Integrate Sustainable Development into our staff appraisal systems

Monitoring Progress

- NHS Lothian to put in place a Sustainability Investment Strategy with which promotes environmental, social and financial sustainability in key areas and across the system
- Reporting using this methodology is put in place
- Sustainable Development integrated into staff appraisal systems

Sustainable Models of Care





Sustainable Models of Care

Transforming how we plan and deliver services to make our models of care progressively more sustainable is at the heart of this strategy. It is where everything comes together to make rapid, real and lasting change on the ground happen. Proactive action by staff and clinicians, coordination with partners and engagement and co-production with patients and communities are key components of this process.

Early action has come from clinicians and staff in high carbon areas – so called ‘hot spots’. Increasingly sustainability – environmental, financial and social – will be built into the way the organisation designs, plans and delivers all its services.

In this section you will find examples of staff led initiatives which have delivered rapid progress in recent months.

We tell the story of the significant reduction in emissions from anaesthetic gases over the last year. As we emerge from the Covid 19 crisis lessons for sustainability will be taken forward, particularly in high carbon areas such as critical care and respiratory care. The story of the recent Outpatient Re-Design work is also included, showing how environmental, economic and social considerations can come together to design a service more accessible to local communities as well as more sustainable.

The most sustainable model of care is one where fewer people need health care. Reorienting the service towards prevention, early intervention and reducing inequalities in health is therefore an urgent priority. When care is needed then enhancing services in the community is the most environmentally sustainable approach. A move towards prevention and primary care models is also the more financially and socially sustainable approach enabling communities to be involved in service design to ensure they meet local need.



Theatres and Anaesthetics

Theatres and Anaesthetics is a carbon hotspot with high energy consumption, anaesthetic gases carbon impact, high consumption of products and high volumes of waste. Single use items are increasingly prevalent while re-useable surgical instruments have a life time carbon impact through requirements for sterilisation and transportation.

Anaesthetic gases are expelled into the atmosphere and contribute 5% of the carbon footprint for all acute NHS organisations. There is a huge variation of global warming potential of different gases: desflurane is 2540 times that of CO₂ and nitrous oxide 298 times that of CO₂, for example.

We can also reduce our emissions by managing energy demand and considering ways to make safe air handling and ventilation in theatres more intelligent and energy efficient.

Peri-operative waste accounts for a third of all NHS waste with each operating theatre producing 2300kg of anaesthetics waste and 230Kg of sharps waste per annum. The opportunities for carbon reduction are therefore significant and urgent.

In late 2019, in response to staff motivation and growing awareness of the need for action the Directorate of Theatres and Anaesthetics established a multidisciplinary Environmental Sustainability Group which will align with the Quality Improvement Teams and report directly to the Senior Management Team. The group brings together clinicians from across NHS Lothian sites and will work towards coordinated practice and a common baseline, building on the rapid progress made in reducing our emissions from anaesthetic gases. Four main groups of action projects have been identified by the group – Electrical, Anaesthetic Gases, Single Use Items and Waste Management.

Actions

- Review the controls of our theatre air handling units and scope the potential for investment in systems to improve control and monitoring
- Continue with clinical quality improvement work to reduce the use of desflurane and nitrous oxide and evaluate the environmental and cost impact
- Change over to new low emission Anaesthetic Machines
- Develop common practice and baseline in Theatre Set Back across NHS Lothian
- Review high volume single use products and review environmental impact of alternatives for re-use or recycling
- Manage and monitor our clinical and domestic waste contracts to implement measurement of waste from theatres
- Ensure that the business case for the re-provision of our Central Decontamination Unit and the surgical instrument cycle as a whole is designed to minimise the impact on the environment through its use of energy and the design of the surgical instrument and supply service
- Improve waste avoidance, sustainable waste management and recycling in theatres and anaesthetics
- Manage and monitor our clinical waste management contract to ensure that metal recovery and re-useable sharps boxes are introduced as soon as possible
- Explore options for investment in technology to monitor or reclaim medical gases
- Continue to develop multidisciplinary training on environmental sustainability across Theatres and Anaesthetics and include sustainability in anaesthetic medical curricula and nurse respiratory training
- Develop training and awareness raising on environmental issues for support staff
- Support staff led initiatives to raise awareness or take actions to minimise impact on the environment

Monitoring

- Consumption, costs and carbon emissions from anaesthetic gases reported in our Annual Carbon Emissions Report
- Weight, costs and recycling of waste across the waste streams reported

Action Snapshot

Anaesthetic Gas Reduction within NHS Lothian.

Initial action focused on desflurane reduction and monthly usage dropped by 70% within 10-months.

DMAIC is a framework that describes the activities associated with volatile reduction. Each step required MDT engagement from pharmacy, medical physics and theatres teams to achieve positive outcomes.

Define: establish a working group at each site to define the problem and agree objectives.

Measure: relying on skilled pharmacy technicians collate granular data on volatile usage in each area. With medical physics find out how many desflurane vaporiser are in circulation.

Analyse: who are the biggest and lowest users and why, which stock lists can lose or reduce desflurane and which anaesthetic machines can lose a desflurane vaporisers and speak to these teams.

Improve: remove superfluous desflurane vaporisers and amend stock lists.

Control: Maintain practice with strong infographics and education. Continue to improve using a test of change model.

DMAIC has been used to progress nitrous oxide reduction starting at the Western General Hospital. Careful measurement and analysis has led to the decommissioning of a leaking redundant manifold and a reduction in provision for another. Reducing projected theatre nitrous oxide usage by 90%.



Primary Health Care

Primary care is fundamental to sustainable health care. It makes a significant contribution to our carbon emissions. Prescribing is by far the largest part of its carbon footprint with energy and water consumption, transport and travel and waste avoidance also being significant areas for action.

Primary care can also drive sustainable models of care across the whole of the health and social care system, through provision of care closer to communities which can alleviate the need for travel; through supporting the shift of the balance of care to prevention and early intervention; through its integration with communities to work to address inequalities in health.

The reach of primary care to the population is immense, with the majority of the population having contact with primary care every year providing the opportunity to engage with the public on the environment, health and well-being.

Lothian's Health and Social Care Partnerships have a local leadership role driving change for integrate systems with our local authority partners, voluntary organisations and local communities. As interest and determination from primary care to become more environmentally sustainable grows we need to build on this frontline commitment, engaging with existing networks such as Quality Clusters, Link Workers, Refhelp which are at the core of engagement with secondary care and patients and communities to effect change.

Actions

- Share good practice, resources e.g. the Royal College of General Practitioners' Green Impact Tool
- Support virtual consultations/clinics, identification of co-benefits and engagement with key stakeholders
- Promote 'Realistic Medicine', care closer to home, reduce duplication of laboratory tests and polypharmacy, Primary Care Directorate to complete desktop utilities (energy and water) efficiency scoping exercise with all general practices
- Implement data analytical support to provide reports on utilities consumption for all practices and premises supplied through NHS Lothian

- Progress the NDEE Energy Efficiency programme for NHS Lothian owned community premises
- Provide support for building networks and environmental sustainability including active travel, green prescribing and use of green spaces
- Engage primary care in the development of the circular economy, waste management and recycling
- Put evidence on environmental sustainability at the heart of the management of pharmaceuticals and prescribing
- Incorporate NICE /SIGN guidance on use of metered dose inhalers
- Put primary care at the centre of NHS Lothian's strategic plans for remobilisation, redesign and capital planning for environmental sustainability

Monitoring

- Strengthen data collection and analysis in order to measure the carbon footprint of patient pathways, demonstrating opportunities to reduce environmental impact at the same time as enhancing patient and health care system experience
- Green House Gas emissions from energy consumption in NHS Lothian owned community premises
- Water consumption
- Waste and recycling by waste stream and sector of primary care (dental, general practice, community pharmacy, optometry)
- Benchmarking GHG
- Develop methods and data to monitor the environmental impact of travel and transport in primary care
- Develop monitoring of prescribing to the triple bottom line, focussing on high impact pharmaceutical products

Action Snapshot

St Triduana's General Practice Goes Green

Inspired by the RCGP Green Impact for Health Toolkit, in 2019, St Triduana's developed an ambitious more sustainable primary care model project. The benefits would not only be a reduction in harm and waste, but set an example for their community – sharing with patients the urgent need to decarbonise our lives, alter our diets, be more active, and create greener, healthier neighbourhoods.

Projects are on-going, and they aim to demonstrate improvements in the following areas:

- An energy performance certificate helped to direct action to increase heating and lighting efficiency: estimated 35% savings on heating & lighting with introduction of LED lighting, insulation and double glazing
- Cycling Scotland Grant underway for bike racks, an upgraded shower room and installation of changing/drying room
- Trial of electric bikes for home visits
- With support from Changeworks, increased rates of recycling have been demonstrated
- Monitoring of clinical and confidential waste – to be reduced by half
- Recycling of clerical consumables: batteries, envelopes, printer cartridges
- Plastic water cooler replaced with mains fed water fountain - Predicted savings: £1000/year
- Audit of printed materials
- Review of stock ordering procedures to reduce waste
- Social prescribing champion working on green prescribing
- Promotion of physical exercise: weekly lunchtime pilates, community Parkrun, community gardening
- Improved polypharmacy reviews
- Patient focus: green project promoted on practice website & social media, collecting patient feedback with implementation of suggestions e.g. green notice board with ideas such as meat-free cooking, link worker fuel poverty initiatives



Pharmaceuticals

Pharmaceuticals account for around 25% of our carbon footprint and 16-18% of spend.

Meanwhile the amount of pharmaceutical waste we produce and the cost of disposal increases year on and year. Tackling this situation is urgent and will have multiple benefits, for our environment, our finances and our patients. At least 30% and in some areas as much as 50% of medicine waste is avoidable through improved prescribing, dispensing and patient support. Reducing medicine waste has a likely double carbon benefit, reducing upstream emissions (reduced manufacture and distribution costs) and downstream emissions (fewer medicines requiring disposal).

Pharmaceutical waste can be found in trace amounts in soil and groundwater throughout the world. This waste comes from a variety of sources, including hospitals. Levels of pharmaceuticals in the environment are likely to rise in years to come, as the global demand for pharmaceuticals grows.

We need to build environmental impact into our drug evaluation, formulary, prescribing management systems and clinical decision making processes.

Inhalers and Respiratory Care

At present metered dose inhalers (MDIs), prescribed for asthma and Chronic Obstructive Pulmonary Disease (COPD), contribute 3.1% of the UK health service carbon footprint, almost double that of anaesthetic gases. The hydrofluorocarbons (HFCs) in MDIs are powerful greenhouse gases up to 3800 times that of CO₂. We need to urgently review prescribing practice to ensure that where possible patients are moved to non-propellant devices (NPDs) and those for whom MDIs remain essential are trained to use them efficiently. The potential for rapid change is great; prescribing of MDIs is far higher in the UK than other European countries. The Scottish Government/NHS Scotland Respiratory Prescribing Strategy 2018-2021 as well as NICE and potentially SIGN guidance will provide support and guidance for prescribers and patients to promote awareness and encourage change.

Over prescribing of MDIs is also a problem and contributes to high levels of waste. As well as working with prescribers and patients we need to encourage our partners in Scottish Government and Local Authorities to review policy on inhalers in schools to ensure that provisions are age appropriate and efficient. We need to encourage NHS Scotland to use its influence and procurement power to encourage drug companies to develop carbon minimal alternatives and extend 'use by dates' on MDIs and NPDs.

We need to work with prescribers, patients, regulators and drug companies to ensure that recycling and reclamation of remaining MDIs becomes the norm – at present only 0.5% of the millions of inhalers prescribed annually are recycled.

Global concerns about antimicrobial resistance have already recognised that addressing this issue underpins progress on the UN sustainability goals. The importance of antibiotic stewardship in health care is a crucial part of protecting the effectiveness of antibiotics for the future.

Actions

Procurement

- Investigate the potential to influence national procurement process
- Review current prescribing indicators to extend criteria to include environmental sustainability
- Request that the Area Drug and Therapeutics Committee (ADTC) consider sustainability as a quality issue for prescribing
- Share the environmental benefits of initiatives that reduce prescribing e.g. through Link Workers and Realistic Medicine
- Explore opportunities to switch to reusable alternatives for single use items e.g. medicine pots.

Review of medication to reduce waste:

- Reduce pharmaceutical waste by encouraging regular review of medication and support adherence
- Review and extend successful waste reduction pilots in care homes, primary care and secondary care Disposal
- Communicate rationale for plastic medicine pots and create a recycling stream for them which is easy to identify and use
- Explore the opportunities to reuse and recycle

- Learn from the iodine recycling initiative and explore opportunities to replicate this
- Educate patients on the safe disposal of drugs to avoid environmental contamination

Asthma inhalers

- Raise awareness of the environmental impact of MDIs
- Revise the Lothian Joint Formulary to explicitly recognise sustainability
- Explore the options for an inhaler recycling scheme
- Work with partners to review policy on inhalers in schools in order to make them age appropriate and move towards generic emergency inhaler packages rather than holding inhalers for individual children
- Use the learning from improved asthma/COPD prescribing practice to build sustainability and environmental impact into our drug evaluation, formulary, prescribing management systems and clinical decision making processes

Antimicrobial Stewardship

- Continue to develop our approach to Antimicrobial Stewardship in prescribing and strengthen this work in the context of wider sustainability goals

Monitoring

- Monitor the weight of pharmaceutical waste and feedback to the source teams responsible for the waste (community, primary and secondary care)
- Sustainability added to ADTC criteria
- Reviews of 3D Pilot and One Step Prescribing initiated
- Lothian Joint Formulary on MDIs revised to incorporate sustainability



Outpatient Redesign

The outpatients redesign programme has been working on a range of initiatives such as Patient Initiated Follow-up, Direct Test Pathways, Place of Care Criteria, Near Me Consulting, Symptom Based Pathways, Monitoring Clinics (community based) and Active Clinical Triage.

The Covid 19 pandemic accelerated the need to find new ways of working, particularly in relation to the roll out of telephone and video (Near Me) consultations. The need for social distancing and the growing demand for providing timely, safe and effective care will provide further impetus for redesign as the services recover and re-mobilise.

Carbon emissions per outpatient appointment have been estimated at between 40-78kg CO₂e compared to estimates of an in-patient bed day of 60 to 83 kg CO₂e¹.

Although each specialty has its own carbon foot-print across the pathway of care, across out-patients as a whole the main contributions to carbon and environmental impact are patient journeys, the use of energy intensive space and equipment within acute hospital settings and use of tests and supplies.

Conversely there is the opportunity for models of outpatient services to support a balance of care in the community and closer to home, to eliminate unnecessary use of products, tests and time, and to prevent hospital admissions which have a higher environmental impact.

Evidence to support these changes is broad and positive with triple bottom line evaluations reporting on social impacts for staff and patients, financial impacts to the NHS and to patients, efficiency and productivity as well as on environmental impacts.

Actions

- Support the development of business cases for investment in new outpatient models of care that include impact on the environment
- Review existing evidence base for specialty specific interventions, technologies and models of out-patient care which have high impact in terms of environmental and financial sustainability
- Continue to implement the changes promoted by the Outpatient Redesign Programme

Monitoring

- Out-patient space utilisation and refined estimates of GHG emissions
- Clinic appointments, telephone and Near Me consultations, laboratory tests, prescribing
- Use Near Me data set to estimate carbon impact of changes
- Tools for evaluation of staff and patient reported outcomes
- Develop outcome map for overall transformation process including outcomes for social and environmental sustainability

Action Snapshot

Environmental sustainability needs to be considered in any service redesign; any intervention that reduces demand for health care has the potential for a positive impact on the environment.

The out-patient oversight team, which oversees the current outpatient redesign programme, needs a framework for assessing the progress and impact of the redesign which takes account of the inherent complexity of the system and the impact on the sustainability of the service as well as on patients and staff. It was agreed that outcome mapping, a form of contribution analysis, would be useful to capture the changes taking place and measure their impact in terms of environmental, social and economic sustainability, the triple bottom line.

¹ based on NHS SDU report 2007 Co2e values - SDU and ERPHO Indicative carbon emissions per unit of health care activity (briefing 23)



Critical Care

The importance and challenges of provision of critical care are clear, especially as we launch this strategic framework in the context of Covid-19. By its very nature, intensive care is intensive in terms of resource utilisation and its environmental impact. It is also intensive in terms of its demands on staff, patients and families. The sensitive nature of critical care potentially makes the consideration of sustainability and environmental impact particularly challenging, but in that challenge there are important opportunities. The main focus areas to consider within Critical Care are:

- The consumption of energy through environmental systems and equipment.
- The choice of products and the move to zero waste through the need to reduce, reuse and recycle.
- Environmental management and the consideration of toxins which are found in the critical care environment, from materials, equipment, disinfectants and sterilants.
- Staff health and well-being and their contribution to sustainability at work and as members of the public.

We know that the waste generated from Critical Care Units is substantial, some research and audit showing that a typical unit of 10 beds can produce half a ton of waste each week. The procurement and selection of products needs to take account of environmental impact in all dimensions, balancing the impact environmental impact of sterilisation and decontamination of reusable items with the impact of single use items, for example.

The evidence base on the lifecycle environmental impact of products and their use in critical care is growing, and there are opportunities to contribute to this through the development of research and audit in our own units.

Actions

- Ensure that critical care facilities have access to waste segregation
- Provide assurance to staff of effective management of waste and recycling by providing to support segregation of waste within Critical Care as well as ensuring that environmental impact is considered in procurement for critical care
- Actively support the health and well-being of staff, patients and visitors through green initiatives such as the use of external spaces
- Develop research and evaluation of the environmental impact of single use and reusable items alongside costs and effectiveness to inform product selection

Monitoring

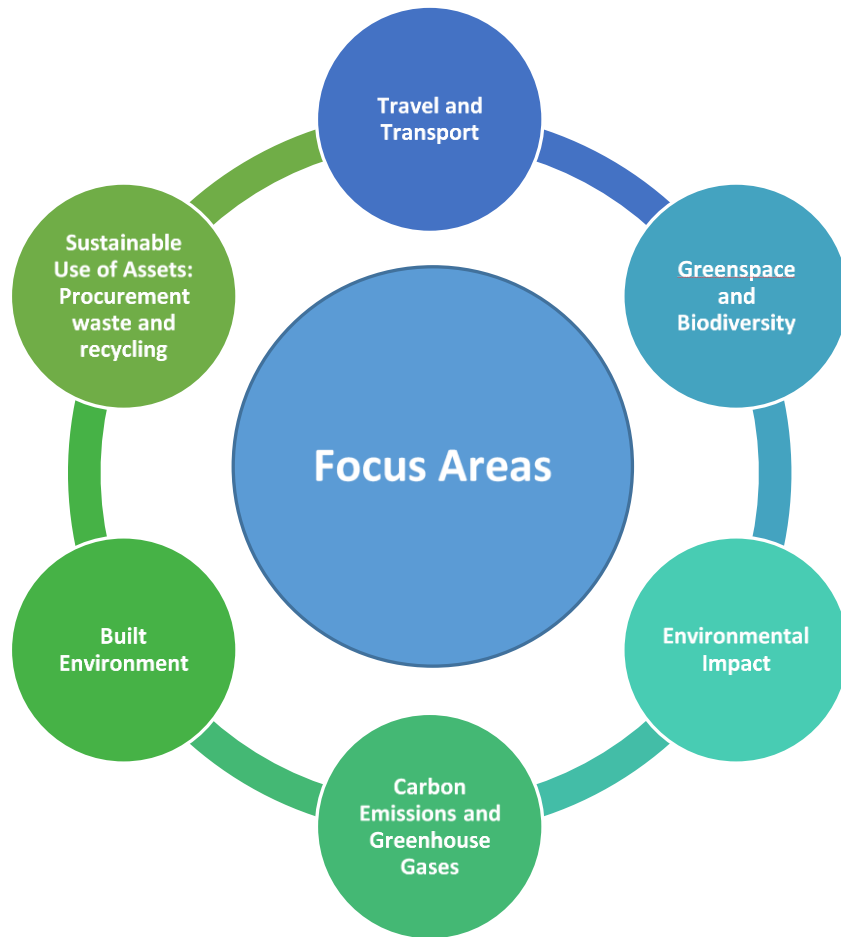
- Waste segregation in place and monitored
- Environmental impact incorporated into procurement criteria for Critical Care
- Green space and biodiversity initiatives such as ITU gardens evaluated
- Decisions on single use versus reusable items is informed by evidence of environmental impact

Action Snapshot

Critical Care at the Royal Infirmary of Edinburgh have been working to unlock the benefits of the hospital's underused courtyards. The team have secured access to an internal courtyard space and have been trialling its use by intensive care patients. They hope that the using of the garden will give patients and their families the opportunity to have therapeutic sensory experiences that only a natural environment can provide.

The feedback from patients, families and staff has been positive and the team is now developing plans to create a garden that benefits patients and the environment.

Focus Areas





Carbon/GHG Emissions



Addressing carbon emissions and greenhouse gases is fundamental to addressing climate change and delivering services in a sustainable manner.

Establishing targets and systems that provide continuous monitoring is paramount to shaping our actions and tracking our progress. NHS Lothian has calculated and reported emissions from traditional energy and fuel sources since 2008. We continue to improve the collection and utilisation of data to better understand the hotspots, opportunities, impacts and trends. We also recognise the need for understanding and engaging on the wider impact of our operations, through our partners and supply chain.

Aim: Contribute to the national net-zero targets through reducing our carbon emissions and other Green House Gases.

Our Planet

- Monitor and report on Scope 3 emissions from our supply chain, to influence and reduce associated emissions from indirect sources
- Work with key stakeholders, such as the City of Edinburgh, Midlothian, East Lothian and West Lothian Councils, to maximise the impact of our actions and resources
- Work with supply chain partners to embed shared a sustainability vision and goals

Our People

- Share information of emissions sources and progress to educate and engage staff in achieving our carbon targets
- Utilise the expertise and knowledge throughout our staff to develop and implement actions that reduce emissions

Our NHS

- Improve reporting methodologies to better monitor our emissions and provide insight to determine the success of actions and areas for development
- Embed transparent and system wide reporting

Monitoring Progress

- Annual GHG emissions reporting, available to all staff
- Establish interim targets aligned with national zero-carbon pathways to 2045
- Increase use of analytics to provide deeper understanding of consumption, emissions, trends and impacts of actions

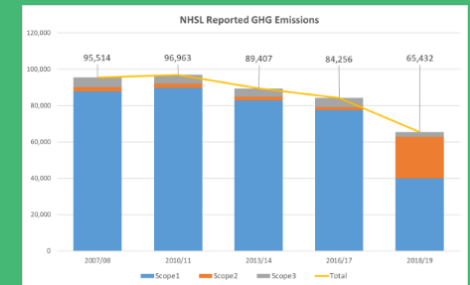
Action Snapshot

Public Sector Climate Change Reporting (PSCCR)

NHS Lothian has been calculating and reporting annual Carbon Emissions Reports since 2007/2008, as part of our first Carbon Management Plan (CMP).

The Scottish Government is expected to adopt an ambitious new target to reduce emissions by 75% by 2030 and net-zero by 2045, compared to 1990 levels – the toughest statutory target of any country in the world.

To date NHS Lothian have reduced building emissions by 61% and remains on track to achieve the proposed interim carbon emissions target of 70% by 2030.



Carbon Trust Standard (CTS)

NHS Lothian have a strong track record of successful energy and carbon management, evidenced by achievement of the Carbon Trust Standard (CTS). An externally verified and internationally recognised standards scheme for achieving real reductions in year-on-year carbon savings. NHS Lothian is the only NHS Board in Scotland to hold this accreditation, and have maintained this for 8 years.





Built Environment



Our Built Environment is critical to delivering our health care services. The buildings we use are varied, intensive and require the highest level of servicing to maintain safe and resilient environments for our staff and patients. It's essential we design and operate our assets efficiently to maximise resources and minimise environmental impact.

Improving our estate and embedding best practise in new builds and refurbishment will help to reduce emissions and improve our internal environments.

Aim: Reduce energy demand and emissions from existing buildings and embed sustainable design in our capital projects.

Our Planet

- Develop an energy efficiency strategy across our estate to identify, prioritise and implement measures to reduce demand for energy
- Increase the percentage of energy consumption generated from low carbon sources on our estate
- Review our capital planning and governance processes and application of Scottish Capital Investment Manual (SCIM) to ensure there is a stronger and transparent emphasis on sustainability in strategic assessments and continued through the business case development process
- Embedded Sustainable Design principles in all new and refurbishment projects.

Our People

- Optimise our existing buildings to reduce consumption and improve the internal environment for patients and staff
- Implement the findings from the Infrastructure Commission for Scotland, and maximise the benefits of investment for NHS Lothian and the community
- Share information on energy consumption to educate and engage staff about reducing energy consumption
- Reduce the impact of our buildings that contribute to environmental issues of air quality

Our NHS

- Maximise the efficient operation to reduce waste and costs of operating our estate
- Review and embed strategic governance and commitments of sustainability within capital planning processes, such as SCIM and BLM.
- Consider Digital Estate technology opportunities that support effective management tools and decision making to maximise carbon reduction investment

Monitoring Progress

- GHG emissions, utilities consumption and cost trend analysis
- Percentage of energy from renewable sources
- Building benchmarking and performance review, including post-occupancy review of capital projects

Action Snapshot

- St John's Hospital - Energy Centre - completed in July 2019, NHS Lothian undertook replacement of the aged boiler plant and inclusion of a new Combined Heat & Power Unit. After 9 months of operation, savings have been achieved in excess of £900k and 2,204TCO₂. The project took place while the site maintained services and is exceeding expected performance. Further similar projects are being considered including WGH.



- Western General Hospital (WGH) – Energy Infrastructure. A key site, responsible for 25% of NHS Lothian's energy demand. A project has commenced to replace the site energy infrastructure with a focus of developing a carbon pathway to 2045, build on existing initiatives, continue to decarbonise (demand reduction, energy efficiency, LZCT), continue to reduce operational costs and increase the estates resilience to climate change and improve energy security.

Phase 1 has begun the journey of replacing the existing steam system with new underground district heating pipework.



Environmental Impact



Carbon emissions and greenhouse gases are a fundamental aspect of environmental sustainability, but there are other aspects of the health care environmental footprint that need to be managed and reduced. Key features include; water supply, waste water, flooding, air quality, noise and specialist waste. These have a major and direct impact on health.

These include air pollutants such as nitrogen oxides and sulphur dioxide, other forms of pollution – particulate matter, radioactive waste and use of scarce but basic resources such as water. Concern about the pollution generated by health care is growing amongst staff and public, particularly in relation to the accumulation of pharmaceutical waste and plastics in water, sewage systems and the soil.

All public sector organisations including the NHS need to comply with environmental legislation but there are opportunities to go beyond compliance and assurance. We need to review and monitor a fuller environmental impact of our operations in line with a broader vision of One Planet Prosperity (SEPA).

Aim: We will develop our quality management systems to improve our environmental impact assessment and environmental performance.

Our Actions

- We will pilot the new Environmental Management System (EMS) Tool procured for NHS Scotland and based on ISO 14001:2015
- We will use the tool to broaden the scope of our approach to environmental management and through regular audits and reports will raise awareness of the opportunities and challenges for reducing environmental harm
- We will support the roll out and use of the tool across the organisation to ensure that it is accessible to staff who do not have in-depth knowledge of environmental sustainability or environmental management systems
- We will learn from and collaborate with partner organisations to shape the regulatory frameworks that can protect the environment, support sustainable health care and promote health and well-being
- Develop KPI's and targets as part of the EMS

Monitoring Progress

- Roll-out of Environmental Management System (EMS)
- Auditing of EMS compliance and progress against relevant targets

Action Snapshot

Flood Prevention Scheme

In natural environments, rain falls on permeable surfaces and soaks into the ground; a process called through infiltration.

In urban areas where many surfaces are sealed by buildings and paving, natural infiltration is limited. Instead, drainage networks consisting of pipes and culverts divert surface water to local watercourses and in some cases this results in downstream flooding and deterioration in river water quality caused when foul sewers are overwhelmed by surface water leading to a release of dirty water into rivers. Surface waste water can also include chemicals and materials harmful to the environment, such as fuel-spills and construction debris.

Sustainable drainage systems aim to alleviate these problems by storing or re-using surface water at source, by decreasing flow rates to watercourses and by improving water quality.

NHS Lothian has invested in a flood prevention scheme at the Western General Hospital with the aim to alleviate a recurring issue of damage and disruption caused to hospital buildings and local residents.



Due to problems, both up-stream and down-stream of the hospital, the existing surface water drainage system could not cope with period of excess rain. The project, undertaken by estates, was the installation of an underground water attenuation system. This involved the excavation of the existing Cark Park adjacent to Ward 1 to provide 725 cubic metres of surface water storage and reconfigured upstream drainage to the rear of Ward 1 and Maggie's Centre that provides capacity for large volumes of water run-off during periods of heavy rain. It also included the creation of a new regulated outfall to the open culvert running along the South boundary of the campus. This additional storage capacity reduces the impact of localised flooding but also provides further environmental benefits through filtration of the waste water at source.

Greenspace and Biodiversity – CO₂

The growing threat to public health from current climate and ecological crisis increases the need for action. NHS Lothian’s estate provides diverse greenspace resources for both people and wildlife and these natural environments form the foundation of a healthy environment. The NHS estate contributes to biodiversity at multiple levels from bat roots in older buildings to purpose built gardens and greenspace.

Collectively, the outdoor estate is a valuable and under used asset. If planned and managed well, they can make a significant contribution to the physical and mental health and wellbeing of our staff, patients, visitors and local communities and is a key part of the NHS response to the climate emergency and to meeting Scotland’s biodiversity commitments.

Aim: We fully realise the potential of the NHS outdoor estate as an environmental and health asset.

Our Planet

- Conduct a greenspace and biodiversity audit of the NHS Lothian estate with recommendations to protect, enhance and expand our environmental assets
- Prepare a greenspace management plan for each NHS site to improve biodiversity, climate resilience and encourage greater use
- Ensure good quality greenspace design is incorporated into new build hospitals and refurbishment programmes

Our People

- Encourage and support greater use of the NHS estate by patients, staff and visitors
- Develop connections between the NHS estate, community greenspaces and wider green networks
- Engage with NHS Lothian staff to raise awareness of the benefits and opportunities of increasing greenspace and biodiversity

Our NHS

- Incorporate the Edinburgh and Lothians’ Greenspace and Health Strategic Framework into governance
- Encourage and support partnership working on a ‘natural health service’ approach to wider greenspace development and management

Monitoring Progress

- Delivery of Greenspace and Health Strategic Framework priorities
- Benchmark from biodiversity audit
- Biodiversity Net Gain across NHS Lothian estate
- Number of projects delivering biodiversity improvements

Action Snapshot

- Mapping the NHS estate – The extent of NHS Lothian’s outdoor estate has recently been estimated. This will allow us to calculate the contribution our estate makes to our climate change mitigation and assess its value for both health and biodiversity.

- NHS Community Gardens – Community gardens at the Royal Edinburgh, Midlothian Community and Belhaven Hospitals provide vital resources for patients, staff and biodiversity. With the support of the Edinburgh and Lothian Health Foundation we are investing in the future of these spaces.



- Greenspace management – A greenspace management plan is underway for the Royal Edinburgh Hospital with the aim of securing a green flag award to recognise the high quality environment it provides patients, staff and the community.



Sustainable Use of Resources



The goods we use constitute the largest proportion of our carbon footprint and reducing unnecessary use of resources across NHS Lothian will have a major impact. This is evident on a daily basis to our staff, patients and visitors. The level of concern amongst staff and level of motivation for change is high.

Procurement and waste management are therefore priority areas for action. NHS Lothian generates large volumes of waste and is committed to managing waste in a way that promotes sustainable development. By applying the waste hierarchy, rethinking traditional waste models and working closely with our staff and supply chain, we can move towards a circular economy approach.

Good food is essential for patient and staff well-being and a key area for improvement in procurement and waste management. Increasing local, seasonal food and more sustainably sourced fish with less reliance on meat products will potentially pay health, environmental and financial dividends. Such a move needs to be backed by a sustainable catering strategy (which embodies and exceeds national nutritional guidelines), procurement that enables the sourcing of local and seasonal food and imaginative presentation to support healthy choices. Food waste is an important area and the NHS Scotland Food Waste Guidance and Food Waste Calculator, recently developed by Zero Waste Scotland, will inform progress in this key area.

NHS Lothian plans to scale up its support for MedAid, an Edinburgh Medical Student charity which directs discarded medical supplies to under-resourced hospitals and clinics abroad. Their approach not only facilitates the reuse of equipment but also reduces waste and can potentially provide valuable data to inform procurement decisions.

Aim: Reduce resource use and improve waste management through engaging staff and suppliers in movement towards a circular economy.

Our Planet

- Engage with National Procurement and Zero Waste Scotland to support changes which accelerate the move to a circular economy in health care
- Make the use of criteria and weightings for sustainability within the procurement process stronger and transparent
- Work with local partners to seek the best outcomes for supporting a sustainable community, including reducing food waste

Our People

- Ensure that information on procurement decisions and environmental impact of products across their lifecycle is available to staff
- Review procurement processes to ensure that frontline staff can be actively engaged to provide information on the use of products
- Implement multidisciplinary waste management groups on all major sites and across community settings
- Promote a culture of reuse and refurbishment of items promoting and reporting on our use of Warp-IT to implement a more circular economy
- Make it easier for patients, staff and visitors to make healthy and sustainable food choices e.g. concessions and vending solutions

Our NHS

- Apply a higher weighting for social value in procurement processes
- Work with supply chain to embed shared sustainability vision and goals
- Ensure that NHS Lothian Catering Strategy is sustainable and embodies or exceeds national nutritional guidelines. Work with the supply chain to ensure that suppliers can deliver these requirements
- Ensure that NHS Lothian has the information it needs on waste to provide transparent information to services on waste generated and recycling
- Use NHS Scotland Food Waste Guidance and Food Waste Calculator to reduce waste and ensure it is treated in the most sustainable way
- Strengthen contract management and reporting on performance of our waste management contracts to ensure that the full offer of services for innovation and environmental sustainability are delivered
- Invest in sustainable waste streams and recycling facilities upgrades
- Move from purchase/disposal model to circular economy procurement and 'whole life' purchasing

Monitoring Progress

- Reduction in procurement carbon footprint
- Reduced waste streams and volumes and increased recycling
- Environmental impact of waste management
- Report on the use of single use plastics and single use items
- Number of suppliers engaged with sustainability
- Evidence of movement towards a circular economy



Travel and Transport



Travel and transport of goods, services, staff, patients and visitors has a significant impact on local air quality, congestion and health. Delivering more remote working and consultations as part of a Sustainable Travel Plan and where travel is necessary, supporting staff, patients and visitors to use more active and sustainable travel methods will reduce the impact of these activities, leading to cost savings and health benefits.

Aim: To encourage remote working and consultations where possible and support sustainable and active travel in order to reduce the carbon and air quality impacts of our organisation and supply chain.

Our Planet

- Reduce the emissions from the fleet by making sure all new vehicles are low carbon and an adequate number of electric charging points are made available
- Reduce the impact of the 'grey' mileage by reviewing business travel and removing perverse incentives
- Reduce the impact of staff commuting and patient attendance by making services available locally and enabling remote working and remote consultations

Our People

- Implement Active Travel Strategy including Cycle Scotland accreditation
- Plan services in a way that minimises travel between sites
- Provide incentives for sustainable travel to work

Our NHS

- Work with local partners to develop an integrated transport system
- Invest in remote working and remote consultation technology and put in place management service development systems to support this
- Make minimising travel a criterion in procurement decision making

Monitoring Progress

- Environmental, social and financial benefits of remote working and consultations
- Reduction in 'grey' mileage
- Reduction in travel within the supply chain
- Improved air quality on sites

Action Snapshot

NHS Lothian has successfully introduced 37 fully Electric Vehicles (EV) in to service over the last 12 months and have plans to extend this further with a further 53 cars to be added to fleet in the coming months.



The EV fleet replaced older vehicles which operated using either petrol or diesel fuel. The transport department based at St John's Hospital in Livingston started operating electric vans on all lab van runs in September 2019 and this has been further extended to patient movement in early 2020. The lab van service have replaced 4 ICE vehicles with EVs and a further 3 will be added later in 2020 when older vehicles are replaced. East Lothian and Edinburgh Community Logistics have replaced previous EVs with newer version which enhanced the mileage per charge. Petrol cars have been replaced with EVs where this is appropriate for the service taking into consideration range & infrastructure to support the local operation. COVID 19 has seen a change in how vehicles are used and in some locations there have been requests for additional cars to support Covid-19 patients in the community. The cars allocated have been EVs.

Monitoring Progress and Evaluating Impact of this plan

Monitoring progress towards a sustainable NHS Lothian through the progress of this plan is essential. Appropriate measurements, indicators and defined outcomes need to be embedded at all organisational levels and threaded through the many corporate and service delivery processes and projects which form the basis of this plan.

At NHS Lothian Board level key metrics are required for governance and transparency to demonstrate that we are meeting both our legal requirements and our public accountability for resources and strategic planning.

At service level, staff and patients need feedback on the quality improvements they are seeking to make in implementing and maintaining specific changes.

Many of the changes that are made in the NHS are complex, designed to balance different, sometimes conflicting, priorities and take account of unintended consequences. Approaches and methodologies which can support the evaluation and mapping of multiple outcomes in our transformation of services will be key.

Our sustainability work and reporting to date shows that there are some areas where we have good metrics and data – on key aspects of our carbon footprint such as energy, carbon emissions from our own fleet and most recently medical gases. Other areas, such as waste and single use plastics in the supply chain have very poor or difficult to access data. There are areas which are core to the plan for which we have information – such as procurement, goods and supplies and pharmaceuticals – which are not analysed and reported through the lens of sustainability.

There are major gaps in the data, information and evidence and we need to make these clear and transparent.

Where there is data and information, we need to develop expertise in analysing this from the perspective of sustainability and become familiar with appropriate methods and tools.

There is a growing evidence base on environmental sustainability in health care, and we need to ensure that we have the capacity to use this evidence in our decision making and practice and contribute to the development of evidence through our existing and new research partnerships.

Actions

- Review best practice on metrics for sustainability
- Set out a matrix of key performance indicators and targets for sustainability for NHS Lothian, identifying significant gaps
- Invest in dedicated data analytical support to develop appropriate data sets and data linkage, data management, analysis and reporting tools for data sets in relation to this sustainable development framework
- Develop and roll out tools to support environmental sustainability in quality improvement projects
- Test the feasibility and value of outcome mapping to evaluate the environmental impact of transformation of out-patient services
- Review our organisational approach to evidence based practice and research in the context of environmental sustainability

Contact us:

sustainability@nhslothian.scot.nhs.uk email account

A Greener NHS Lothian Facebook group

<https://www.facebook.com/groups/634498887306205/about/>