

# **Annual Climate Emergency and Sustainability report 2022/23 – NHS The State Hospitals Board for Scotland**

<b>Contents</b>	<b>Page</b>
1. About	2
2. Introduction	2
3. Leadership and governance	2
4. Greenhouse gas emissions	4
5. Climate change adaption	5
6. Building energy	5
7. Sustainable care	7
8. Anaesthesia and surgery	7
9. Respiratory medicine	7
10. Travel and transport	8
11. Greenspace and biodiversity	10
12. Sustainable procurement, circular economy and waste	11
13. Environmental stewardship	14
14. Sustainable construction	14
15. Sustainable communities	14
16. Conclusion	15

## 1. About

The template focuses on the environmental performance of the organisation.

However, health boards such as NHS National Services Scotland, NHS Education for Scotland, Healthcare Improvement Scotland, Public Health Scotland and the Golden Jubilee should also highlight how they are supporting the rest of the health and care system to improve their environmental and social sustainability.

## 2. Introduction

This is The State Hospitals Board for Scotland's annual Climate Emergency and Sustainability Report.

The State Hospitals Board is very much an integral part of NHS Scotland and one of eight National Boards providing specialist services. It has a unique function in Scotland of providing high quality forensic mental health assessment, care, treatment and rehabilitation for male patients who require a high secure environment. The Hospital has 140 beds and admits patients from Scotland and Northern Ireland. It is based in South Lanarkshire and employs around 650 people.

The State Hospital operates from 15 buildings and manages land and buildings covering an area of 63 hectares.

## 3. Leadership and governance

- The Board Sustainably Champion is Cathy Fallon, Non-Executive Director.
- The Executive lead is David Walker, Director of Security, Estates and Resilience.
- Within organisational governance, the Climate Change and Sustainability Group has the lead responsibility and is accountable to the Security, Resilience, Health and Safety Oversight Group through the Director of Security, Estates and Resilience. Its purpose is to ensure that the principles of sustainability are embedded in The State Hospital's strategic programme. The Group will ensure an integrated approach to sustainable development, harmonising environmental, social and economic issues. The Group provides assurance to the Security, Resilience, Health and Safety Oversight Group that robust arrangements are in place for monitoring and review of the effectiveness of management arrangements within the Board.
- Corporate and Operational Management Teams are responsible for operational delivery of services. The Climate Change and Sustainability Group focus on issues of strategic or corporate significance, with reports by exception from CMT as required.

The Group are currently working on the update of The State Hospitals Corporate Strategy, organisational values, mission statement, vision and principles that explicitly reflect our commitment to all aspects of sustainability.

In addition to the leadership and governance arrangements outlined above The State Hospital commissioned an independent audit in regard to Environmental, Social and Governance

Review by external auditors RSM. The purpose of the audit was to benchmark our progress against the Policy for NHS Scotland on the Global Climate Emergency and Sustainable Development - DL (2021) 38.

The findings of the audit against TSH's progress towards the 68 DL 38 requirements, the audit identified that given the resource and financial restrictions faced in terms of sustainable development, TSH is in a position to fulfil the requirements by 2040. We evidenced that TSH has already reduced its emissions by 81% since 1990, established a strong governance structure and is meeting its various reporting requirements set out by NHS Scotland.

Recognised positive progress was identified against the requirements of DL 38 but, through benchmarking across the RSM client base, opportunities were identified to implement sustainable structures to drive continuous improvement and oversight. The State Hospital and the Climate and Sustainability Oversight Group have taken on board the recommendations made and will look to deliver, where possible. In particular, the allocation of a dedicated Sustainability Co-ordinator and the development of a sustainable action plan which could incorporate the recommendations from the Net Zero Route map and set out SMART sustainable targets that are accompanied by corresponding timelines, interim targets, KPIs and financing options.

## 4. Greenhouse gas emissions

The State Hospitals Board for Scotland aims to become a net-zero organisation by 2040 for the sources of greenhouse gas emissions set out in the table below. The table sets out the amount of greenhouse gas produced annually by The State Hospital.

### Greenhouse gas emissions 2021/22 & 2022/23, tonnes CO2 equivalent

Source	2021/22 – emissions	2022/23 – emissions	Percentage change – 2021/22 to 2022/23	2022/23 – target emissions	Percentage difference between actual and target emissions – 2022/23
Building energy	1647.8	1547.62	-6.1%	No annual target set	No annual target set
Non-medical F-gas use	Not yet available	Not yet available	Not yet available	Not yet available	Not yet available
Medical gases	Not applicable – no anaesthetic gases in use	Not applicable – no anaesthetic gases in use	Not applicable – no anaesthetic gases in use	Not applicable – no anaesthetic gases in use	Not applicable – no anaesthetic gases in use
Metered dose inhaler propellant	3.5	No data available	All data not available to calculate	No annual target set	No annual target set
NHS fleet use	19.3	8.63	-55.3%	No annual target set	No annual target set
Waste	37.4	43.95	+17.5%	No annual target set	No annual target set
Water	3.6	2.67	-25.8%	No annual target set	No annual target set
Business travel	No data available	4.08	All data not available to calculate	No annual target set	No annual target set
<b>Total greenhouse gases emitted</b>	<b>1711.6</b>	<b>1606.95</b>	<b>-6.1%</b>	No annual target set	No annual target set
Carbon sequestration	No data available	No data available	No data available	No data available	No data available
Greenhouse gas emissions minus carbon sequestration	No data available	No data available	No data available	No data available	No data available

## 5. Climate change adaptation

The climate is changing due to the greenhouse gases already emitted into the atmosphere. While efforts to reduce the rate and scale of climate change continue, we must also adapt to new conditions we are facing.

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

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

The State Hospital have identified the extremes of weather as the main risks and includes higher average temperatures with extended periods of hot weather, heavy rainfall, and cold spells. The main impacts would affect transportation, site access, delivery of essential supplies and disruption to the electrical supply.

- *What actions has the health board taken to reduce those risks?*

The State Hospital are currently updating the associated adaption plan with assistance from NHS Assure. The adaption plan will specify equipment, buildings and processes that could be affected by the extremes of weather and increased weather events that the site could experience over the next 10 to 20 years. The State Hospital also have business continuity plans for an event involving loss of power, adverse weather etc., and also have internal resource to manage the power on-site for a protracted period of up to 7 days if required.

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

The State Hospital will prepare a list of actions following completion of the adaption plan and taken forward through the Sustainability Group. There is an expectation that this will be presented during the next year.

## 6. Building energy

We aim to use renewable heat sources for all the buildings owned by The State Hospitals Board for Scotland by 2038.

The State Hospital site has 15 buildings including patient accommodation, off ward therapy areas, offices, carers' facilities, security buildings and estates buildings.

In 2022/23, 1547.62 tonnes of CO2 equivalent were produced by The State Hospital use of energy for buildings. This was a decrease of 6.1 % since the year before.

In 2022/23, The State Hospital used 9,582,640 kWh of energy. This was an increase of 2% since the year before.

In 2022/23, The State Hospital generated 2,365,700 kWh of energy from renewable technologies.

### Building energy emissions, 2015/16, 2021/22 and 2022/23 – tCO<sub>2</sub>e

	2015/16 energy use	2021/22 energy use	2022/23 energy use	Percentage change 2015/16 to 2022/23
Building fossil fuel use	832.7	1066.3	1014.72	+21.9%
District heat networks and biomass	57.3	29.0	24.91	-56.5%
Grid electricity	1425.3	552.5	507.99	-64.4%
<b>Totals</b>	<b>2315.3</b>	<b>1647.8</b>	<b>1547.62</b>	<b>-33.2%</b>

### Building energy use, 2015/16, 2021/22 and 2022/23 – MWh

	2015/16 energy use	2021/22 energy use	2022/23, energy use	Percentage change 2015/16 to 2022/23
Building fossil fuel use	3,096	4,811	4,530	+46.3%
District heat networks and biomass	4,342	1,917	2,365	-45.5%
Grid electricity	2,848	2,659	2,686	-5.7%
Renewable electricity	0	0	0	0%
<b>Totals</b>	<b>10,288</b>	<b>9,388</b>	<b>9,582</b>	<b>-6.9%</b>

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

There was a greater focus to use the biomass boiler as the primary heat source for the site instead of LPG last year compared to 2021/22, however the use of biomass has decreased since 2015/16.

All external lighting in the car park and lamp posts within the grounds were changed to LED lighting.

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

The State Hospital are currently looking to obtain a budget to all the lighting in 5 buildings to be changed to LED. There is also a project to update the Building Management System during this year.

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

The State Hospital have received a completed Net Zero Route Map and are now working on the production of a long-term action plan to address the core challenges for the decarbonisation of the site.

## **7. Sustainable care**

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

## **8. Anaesthesia and surgery**

Greenhouse gases are used as anaesthetics and for pain relief. These gases are nitrous oxide (laughing gas), entonox (a mixture of oxygen and nitrous oxide) and the ‘volatile gases’ - desflurane, sevoflurane and isoflurane.

Through improvements to anaesthetic technique and the management of medical gas delivery systems, the NHS can reduce emissions from these sources.

The State Hospital does not have any emissions from these gases due to the nature of patient care that takes place within the Board. The Board has no operating theatres or treatment rooms where anaesthetics could be administered.

## **9. Respiratory medicine**

Greenhouse gases are used as a propellant in metered dose inhalers used to treat asthma and COPD. Most of the emissions from inhalers are from the use of reliever inhalers – Short Acting Beta Agonists (SABAs). By helping people to manage their condition more effectively, we can improve patient care and reduce emissions.

There are also more environmentally friendly inhalers such as dry powder inhalers which can be used where clinically appropriate.

The Scottish Government provide all territorial health boards with an assessment of emissions from medical gases and inhaler propellant annually. The State Hospital are not included in these figures for 2022/23 as no prescribing takes place within the health board for these purposes.



## 10. Travel and transport

Domestic transport (not including international aviation and shipping) produced 26% of Scotland's greenhouse gas emissions in 2021. Car travel is the type of travel which contributes the most to those emissions.

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

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

As a single site Board there is no requirement for travel across various sites. Currently the level of business travel within the Board has to be fully quantified. The difference pre and post Covid is significant in regards to travel. This is quantified by a 61% drop in travelling expenses in 2023 compared to 2019.

The introduction of flexible / home working arrangements for existing and new employees, and the ongoing management of these arrangements, has also seen a reduction on staff having to travel to and from work.

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

Active Travel has been incorporated as an agenda item for Climate Change and Sustainably Group meetings. Alongside this, the Health and Wellbeing Strategy Group also have oversight of active travel within the groups standing agenda. This Wellbeing group looks at specific staff benefits, and opportunities in regard to active travel. The hospital has introduced cycle to work schemes and is also looking at options for salary sacrifice schemes for cars and other modes of transport. The hospital has also looked at enhanced options for staff around lease vehicles especially electric options. Both groups are still at the scoping stage of options to improve travel arrangements for staff looking at potential for hub pick up points for staff working shifts.

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

No specific items to report for last year.

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

The State Hospital will continue to look at options to improve travel arrangements for staff. Most operational meetings are via Microsoft Teams to reduce the need for everyone to be on-site or to indeed travel to different locations or sites. We also encourage that our external partners use the teams format if meetings are required to take place. The hospital will continue to encourage this, and this practice along with flexible working options for staff, where possible, will allow us to continue to maintain a reduced need to travel.

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

The State Hospital will continue to look at options to improve active travel. Due to the remote location of the site, the Board will look to explore processes to make travel from various locations local or city locations more sustainable and reduce the need for staff,

visitors and volunteers to use their own cars. The option to increase public transport to the area is difficult as we have no control of the third parties involved, but we may look to try to work with them to explore an option to seek reduced rail or bus fares to Carluke and then provide transport to bring staff from the station to the hospital, as an example.

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

The location of the hospital makes it difficult to enhance public and community transport links, as these are dependent on third party interaction. The demand in the local vicinity is low therefore to promote better transport opportunities is limited. This will be reviewed, and where possible developed, by the Climate Change and Sustainability Group.

Decarbonisation of our fleet is also a priority for the hospital. We are working to remove all petrol and diesel fuelled cars from our fleet by 2025.

The following table sets out how many renewable powered and fossil fuel vehicles were in The State Hospitals Board for Scotland fleet at the end of March 2022 and March 2023:

	March 2022		March 2023		Difference in % Zero Emissions Vehicles
	Total vehicles	% Zero Emissions Vehicles	Total vehicles	% Zero Emissions Vehicles	
Cars	1	1	0	0	
Light commercial vehicles	7	2	7	2	No difference
Heavy vehicles	2	0	2	0	No difference

The following table sets out how many bicycles and eBikes were in The State Hospitals Board for Scotland's fleet at the end of March 2022 and March 2023:

	March 2022	March 2023	Percentage change
Bicycles	0	0	No difference
eBikes	0	0	No difference

## 11. Greenspace and biodiversity

### Biodiversity

Biodiversity, or the wide variety of living organisms within an environment, has declined at a rapid rate in the last 50 years. Evidence demonstrates that these trends are attributed to human activities, such as land use change, habitat degradation and fragmentation, pollution,

and the impacts of climate change. The State of Nature report published in 2023 has highlighted the decline of nature across Scotland, with 11% of species now classed as threatened with extinction.

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

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

The State Hospital have not taken any specific actions with regards identifying, protecting and enhancing biodiversity across the organisation.

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

The State Hospital have not taken any specific actions with regards an estate mapping programme.

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

The State Hospital have not taken any specific actions with regards mainstream biodiversity across the organisation.

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

The State Hospital have not utilised any nature-based solutions, however, the site has approximately 32 hectares of unused land that is made up of mainly grassland and existing trees.

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

The State Hospital have not taken any specific actions with regards raising awareness, engagement and understanding of biodiversity and nature.

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

The State Hospital have not undertaken any surveys, monitoring or assessment of biodiversity. This will form part of the work for this year, as all public bodies in Scotland are required to further the conversation of biodiversity when carrying out our responsibilities.

### **Greenspace**

The design and management of the NHS Scotland green estate for human and planetary health, offers an opportunity to deliver a range of mutually beneficial outcomes. These include action on climate change (both mitigation and adaptation), biodiversity, health and wellbeing for patients and staff, community resilience building and active travel.

The State Hospital have no current projects that have been implemented in relation to key greenspace within the site.

Currently all greenspace is managed and maintained to a standard that meets the Security requirements of the site.

## **12. 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 2023, Global Earth Overshoot Day was the 2<sup>nd</sup> of August.

For the UK, the picture is more worrying. In 2023, the UK's Earth Overshoot Day was the 19<sup>th</sup> of May. The current level of consumption of materials is not sustainable and is the root cause of the triple planetary crises of climate change, biodiversity loss and pollution.

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

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

All regulated tenders have a Procurement Strategy document which includes a sustainability assessment using the Scottish Government Sustainability test. For non-regulated Quick Quotes we also assess sustainability as part of the Invitation to Quote process.

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

Continue to establish a process to ensure that whole life costing and life cycle impact mapping are a core part of all our Board's procurement.

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

The State Hospitals Board for Scotland are not one of the health boards that have been included in the high-level waste route maps that are being developed in tandem with the Net Zero Rout Map. The State Hospital will require to apply the learnings from this process when they are made available.

The table below sets out information on the waste we produce and its destination for the last three years:

Type	2020/21 (tonnes)	2021/22 (tonnes)	2022/23 (tonnes)	Percentage change
Waste to landfill	96	79	90	+13.9%
Waste to incineration	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Recycled waste	33	26	28	+7.7%
Food waste	Not Recorded	Not Recorded	Not Recorded	Not Recorded
Clinical waste	3	5	7	+40%

Once The State Hospital receive the learnings from the process, we will set targets to reduce the amount of waste we produce and be in a position to populate the tables below. This will focus on six priority waste streams (residual, cardboard, dry mixed recycling, food waste, confidential waste paper, plastics and high grade non-infectious plastics from healthcare) and be in a position to fully populate the tables below.

In 2012/2013 the recorded domestic waste sent to landfill was 191 tonnes.

<b>Reduce domestic waste by a minimum of 15%, and greater where possible compared to 2012/2013 – by 2025</b>	
Target – reduce domestic waste by	30 tonnes
Performance – domestic waste reduced by	73 tonnes
Outcome	ACHIEVED
Further reduction required	None

**Ensure that no more than 5%, and less where possible, of all domestic waste is sent to landfill – by 2025**

Target – reduce waste sent to landfill by	70 tonnes
Performance – waste sent to landfill reduced by	0 tonnes
Outcome	NOT ACHIEVED YET
Further reduction required	70 tonnes

**Reduce the food waste produced by 33% compared to 2015/16 – by 2025**

Target – reduce food waste by	Currently not recorded
Performance – food waste reduced by	Currently not recorded
Outcome	Currently not recorded
Further reduction required	Currently not recorded

**Ensure that 70% of all domestic waste is recycled or composted – by 2025**

Target – recycle of compost	83 (tonnes)
Performance – recycled or composted	28 tonnes
Outcome	NOT ACHIEVED YET
Further increase required	57 tonnes

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

We continued to promote the recycling of waste at source within each department / building.

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

The State Hospital will look to develop our own high-level waste route map which will prioritise activity to meet national target requirements.

### **13. Environmental stewardship**

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

This includes any activities which may adversely impact on land, air and water, either through the unsustainable use of resources or the generation of waste and pollution. Having an Environmental Management System (EMS) in place provides a framework that helps to achieve our environmental goals through consistent review, evaluation, and improvement of our environmental performance.

- *What steps did we take last year to develop and implement our EMS?*

The State Hospital continued to populate the EMS with relevant data to allow action plans to be produced.

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

The State Hospital undertook a scheme to update the Energy Performance Certificate for all buildings.

- *What steps will we take this year to further develop and implement our EMS?*

A continuation of populating the EMS with relevant data to allow action plans to be produced.

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

No specific plans have been devised for this year.

## **14. Sustainable construction**

Where there is a need for new healthcare facilities, we want both the buildings and grounds to be safe, nature-rich, sustainable, resilient and accessible. The State Hospitals Board for Scotland currently have no planned or ongoing building projects.

## **15. Sustainable communities**

The climate emergency undermines the foundations of good health and deepens inequalities for our most deprived communities.

The NHS touches every community in Scotland. We have a responsibility to use our abilities as a large employer, a major buyer, and one of the most recognised brands in the world – an ‘anchor’ organisation – to protect and support our communities’ health in every way that we can.

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

Scottish Government have commissioned all NHS Boards to produce an Anchors Strategic Plan as an initial 3-year strategy to demonstrate how The State Hospital plans to take action to contribute to community wealth.

The Anchors Strategic Plan includes data to provide a baseline in relation to workforce and local procurement.

Initial themes that The State Hospital have focused on as part of the Anchor Strategic Plan include:

- Progressive Procurement - TSH can direct investment into the local region through procurement practices. It may be possible to consider giving local suppliers greater weight in procurement processes, which in turn can create new employment locally.
- Employment - TSH is a relatively large local employer within an area of deprivation. Development of recruitment practices to encourage community members to consider employment in TSH would be useful to consider.
- Sustainable use of land and property - consideration given to the use of land and sustainable practices.

- *What are we doing to improve the resilience of our local community to climate change?*

There are no current areas of improvement that have been identified. The location and nature of the hospital makes it difficult to engage with the local community to improve resilience with regards to climate change.

## 16. Conclusion

The State Hospitals Board for Scotland is obliged to meet decarbonisation targets set by NHS Scotland Assure. The most critical targets are:

- 75% reduction in emissions by 2030
- decarbonised heat by 2038
- Net Zero by 2040

The State Hospital has already reduced emissions by 81% against the 1990 baseline year. Therefore, the health board is well-ahead of the 2030 target. However, without targeted decarbonisation measures the health board would not meet the other two key targets.

The bulk of carbon savings in 2030 are proposed to be delivered by deployment of on-site renewable generation, whereas in 2040 it is the decarbonisation of heat that drives the health board towards Net Zero.

Focus for this year will be to develop and implement a high-level waste route map, move forward with an active travel agenda, increase biodiversity/greenspace awareness and create a plan to achieve Net Zero by 2040.