Climate Change & Sustainability Strategy 2021 – 2032

Executive Summary

There is an overwhelming need to act sustainably in the face of the current climate and biodiversity emergency. The NHS along with all public sectors, private organisations, and society in general, must accelerate its efforts to cut greenhouse gas emissions and become environmentally sustainable. The threats to human health from climate change, not only in Scotland, but around the world, are now classed as the *biggest global health threat of the 21st century.*

The actions we take now, can also be linked directly to health improvement. Improvements in air quality can help prevent and reduce pulmonary diseases, heart attacks and strokes. Creating a higher quality of home through insulation measures making people warmer, has cost savings on admissions to hospitals, mental health services, and provides better health outcomes.

There is a paradoxical relationship between health care and the environment. The delivery of care within facilities and the services it provides generates an environmental footprint. This takes the form of greenhouse gas emissions into the atmosphere, medicines into water ways, clinical waste generation, and food from unsustainable sources. Medical waste is burned producing dioxins which are linked to cancers, birth defects, neurological damage, and reproductive toxicity. This possess the philosophical question of what is health care for?

The likelihood of experiencing cancer is now every 1 in 2 people and rising. We must look upstream to fully understand the causation. Every child born today has over 230 different toxins in average in their bodies along with micro plastics in their blood streams. Many of these chemicals lead to a high number of diseases we are treating every day. Chemical exposure in the womb can flip on or off hormones and affect the development of the systems of the body at that moment.

Eliminating pharmaceutical waste from our water systems will help prevent harm to the ecosystems around us and help limit growth of anti-microbial resistant bacteria, one of the most serious threats to our ability to treat patients. Tackling Climate Change will bring health improvements along with it at the same time, realising that this will be the *greatest health opportunity of the 21st century.*

We are an anchor organisation in Ayrshire which feeds into the Ayrshire Growth Deal and the Community Wealth Building Charter, with the ambition to establish an Ayrshire Anchor Institution Network. The National Health Service must be a leader in efforts to tackle the climate and biodiversity emergency and the environmental crisis which we face.

This strategy document sets out our ambition and overall key indicators which will drive sustainable development across the organisation and will create formal plans to achieve these goals. Our understanding of environmental sustainability is rapidly changing as we become aware of the negative impact of our current way of doing things and the urgency required to respond to the current opportunities. This document sets out what we want to achieve and how we will all work together in creating a new Caring for Ayrshire vision providing health care that causes no harm.

Our Ambition

To create a service which is environmentally, socially, and financially sustainable, balancing the 4 pillars across all the services we provide. We must become a service which improves the life opportunities, chances, and wellbeing of every citizen in our community, and fully commit to joined-up ways of working, creating resilience and striving beyond net-

zero emissions, achieving our equitable share of global emissions. To do this we must:

1. Reduce our emissions in line with current targets, reaching net zero by no later than 2040, and buildings emissions by 2038.
2. Maximise our contribution to reducing emissions from our services and procurement of goods and drugs, which the NHS does not oversee directly, to net zero by 2045.
3. Mitigate and adapt the organisation to the effects of climate change on the services it provides.
4. Establish a sustainable way to provide care in the community basing our service delivery on the 4 pillars, focusing on social equality, local communities, environmental and climate impacts, creating a sustainable financial economy. Ensuring we use our finite resources in a considered manner, reducing our impact on the planet for future generations.
5. Establish a circular economy for the resources we use stopping the burning of PPE and medical waste. Designing out waste streams and pollution and focus on the regeneration of natural systems.
6. Increase our contribution to Green Space, tackling the ecological emergency, striving to achieve the Aichi Target goals, and increasing biodiversity throughout our estate.
7. As an organisation ensure that we are directly linking our actions to achieve the UN's Sustainable Development Goals working with our local communities and citizens.

The UN Goals are directly linked to our National Performance Framework which the government signed up to in 2015. We are committed to the principles of sustainable development which will meet our community's needs for health care in a way which sustains our natural environment and meets social equality and equity.

Leadership

Creating a safe space where people can work in a dual operating system with psychological safety. A supported staff who can make changes backed by their leaders and senior teams to provide their resources, knowledge, and experience to support sustainable improvements. The board and senior staff will be responsible for embedding sustainability across the organisation. The launch of this strategy and subsequent programmes of work, combined with the monitoring and reporting on progress will be crucial in transforming the way our organisation delivers its services and care in the community.

The organisation must support the decision-making processes and prioritise sustainable development in the way we operate services, restructuring our organisation, and the way we procure our goods and services. All governance decisions will ensure sustainable development is considered in terms of environmental protection, economic viability, and social equality. Sustainability will need to be integrated into our policies, corporate strategies, visions, and reporting processes.

Framework for change

The strategy is broken down into 4 main sections. Our People, Sustainable Care Models, Our NHS, and Our planet. With 16 topics making up the body of the framework. This document provides us with clear objectives to achieve and will drive action plans to get these done. The strategy uses national and local objectives into one framework which will be the collective responsibility of everyone within the organisation.

What is Sustainable Development?

Put quite simply it is about ensuring all people can enjoy a good quality of life now, and into the future. It means achieving a strong and just society, a thriving economy, and a healthy environment. All three are co-dependant on one another. This aspiration is linked directly with our Caring for Ayrshire vision and our core values in Ayrshire and Arran to provide the right care at the right time in the right place.

How can we make a difference?

Climate Change is the defining issue of our time, featuring in the news almost daily are events which are reshaping our world. The world's climate is rapidly warming due to human activity, which is leading to sea level rises and acidification, wildfires across continents, more extreme weather events, and more rain as the ice caps melt. To meet the UN Paris agreement to limit global temperature rise to below 2 degrees we must act now. This decade will be the most important for us to make inroads into our carbon reduction and we must reduce our current emissions by 50% by 2030.

Policy Background

There are several international, national, and local polices which are relevant here.

1. UN Sustainable Development Goals 2030
2. The UN Paris Agreement 2015
3. National Performance Framework
4. Climate Change Scotland Act 2019
5. Climate Change Plan 2018-2032
6. Public Bodies Climate Change Duties
7. Climate Ready Scotland 2019-2024
8. NHS Scotland Sustainability Policy 2021
9. NHS Scotland Sustainability and Climate Emergency Strategy 2021
10. SHTN 02:01 – Sustainable Design and Construction Guide 2021
11. Scottish Public Sector Net Zero Building Design Guidance 2021
12. Sustainable Procurement Duty
13. Climate Change Risk Assessment Tool
14. Cleaner air for Scotland
15. Energy Efficient Scotland Route Map

Management of Sustainability

The NHS Ayrshire and Arran has a sustainability management group which is tasked with providing updates on meeting the key indicators contained within the appendix, reporting on progress, and meeting all the legal compliance for environmental law. A sustainability champion has been appointed at Director level to promote actions and drive discussion at a senior level, disseminating the objectives across the organisation. A non-exec board lead will also be appointed to lead on sustainability, with the future goal of Sustainability featuring as a board item on the agenda. The NHS Ayrshire and Arran will also participate in the NHS Scotland Sustainable Leadership Network, and in regional working groups designed to share best practice in various areas.

Sharing of ideas

The people who work within the board have the best ideas on how to make things more sustainable and these actions can be reported to the Sustainability Management Group via email for example. This will provide a conduit between actions happening in the organisation and linking them into the strategy and achieving our goals.

Measuring Success

The NHS Scotland has developed an annual tool to assess progress in Sustainability. This is called the National Sustainability Assessment Tool (NSAT). Scores are submitted annually with progress, and evidence to support work in certain areas of the tool. The scores are collated and reported outwards to CEO's each year.

Reporting

Each board already reports against a number of regulatory frameworks and compliance targets set in law measuring progress on our greenhouse gas emissions and our actions in increasing our biodiversity. Each board will have to produce an annual sustainability report which will show how we are meeting the UN Sustainability Goals and what progress we are making. The report will be approved by the Chief Executive showing progress in the goals in the strategy and copies shared with staff, board members, and the Scottish Governments health and social care directorate.

Conclusion

People trust in healthcare and we are the most trusted messengers in society. Addressing the issues of today, reforming healthcare to be more sustainable, tackling climate change and framing this as an issue for our families and communities, then we can address these changes. There is a great momentum building around the world, and change is needed to drive us forward in a sustainable way, supporting our community and improving the health of our people. We must be the defenders of equal rights, equality, clean air, healthy food, and clean water. This is what it takes to make people healthy.

Caring for Ayrshire

Caring for Ayrshire – Model of Care diagram provides an overview of the service reprovision work that is ongoing within the board. There are strong links between our Caring for Ayrshire Vision and how we must transform to become a sustainable health care system. Both visions are outlined below.

Our Vision

Caring for Ayrshire

Sustainability

Creating the right care at the right time, as close to home where practical. Working collaberatively with our community, patients, and partners making person centered and holistic decisions. Placing health and wellbeing at the centre of the workforce along with psychological safety, building on integrated working and welcoming diversity. A commitment to liberating innovation of new ideas and ways of working through a dual operating system. Every voice must count towards this vision making us an exemplary employer in the West of Scotland.

To place sustainable health care at the heart of everything we do. Working with our partners and communities to protect and improve the local environment, reduce our impacts on the planet through procurement systems and interventions to limit and minimise our impact on people and place. Improving health outcomes of our citizens ensuring we create equitable green recovery, promote the natural environment, good health, social values, and improve quality of life for all.

Overarching Commitments

https://www.scottishglobalhealth.org/wp-content/uploads/2021/07/SDG_NHS_Cards_DIGITAL-2nd-2.pdf

All Sustainable Development Goals influence – and are influenced by **health**. Achieving health in the SDGs so that no one is left behind is central.

This requires a whole system approach, involving the whole of society, academia, working partnerships and the community.

The SDGs reflect a new understanding that today's health and development challenges are increasingly complex, integrated, and interlinked.

Four Pillars

Approach to reform – Balancing the four pillars sustainably

In this VUCA world (Volatility, Uncertainty, Complexity, and Ambiguity) with no steady state, ever changing, balancing the 4 pillars to create a sustainable health care system. Building on the cultural foundation of psychological safety, optimising our diversity, and enabling agility and creativity through local power to act. Sustainability is essential as we create our Caring for Ayrshire vision, creating the right care at the right time, delivering care at the right place, in an equitable, accessible way to all. Ensuring that our health and care system is organised and can function as a thriving 21st century organisation, in which our workforce can flourish and do their best work, and to which we can attract, support, develop and retain an excellent workforce.

Addressing sustainability in terms of social equality, local communities, environmental and climate impacts, creating a sustainable financial economy. Ensuring we use our finite resources in a considered manner, reducing our impact on the planet for future generations.

SERVICE – Invest in improvements in health education systems, access to our services, nutrition, knowledge, and skills. The balance of continual growth with improvements to health, achieving the promotion of wellbeing for everyone.

PEOPLE – Taking a wider view, encompassing communities, cultures, and organisations. Addressing our impact on others and the world. Maintaining and improving social quality and relationships. Sharing information and ideas of equality and rights. People sustainability incorporates the idea of "Sustainable Development" as defined by the UN. Society, economic and environment systems are mutually dependant.

FINANCE – Maintaining high and stable levels of economic growth is one of the key objectives of sustainable development. New economics captures natural capital (ecological systems) and social capital referring to an efficient use of resources and assets to promote sustainable economic growth. Financial progress should address the risks in causing harm to the ecological and human systems.

QUALITY - To improve human welfare through the protection of natural capital. Where our programs and activities meet the needs of the population without the risk of compromising future generations. Doing business without causing any harm, long or short term to the environment.

Strategy Overview

NHS Ayrshire and Arran has continued to make excellent progress developing and delivering across a large and complex sustainability agenda. Progress on sustainability is set out in annual reporting and assessment evidencing our ambition to deliver on the UN Sustainability goals 2030.

It is vital that sustainability activity is part of everyone's role across the whole organisation allowing us to make even more progress and bring sustainability "out of the plantroom". Rapid change is required to meet our legal obligations around climate change, decarbonising our buildings and services.

The Caring for Ayrshire Vision is the vehicle for which we can drive sustainable changes within the organisation, daring to succeed, using the 4 pillars to balance not just financial accounting, but looking at the broader impacts to society, social equality and equity, environmental impacts addressing materials, carbon, and pollution, working towards the UN 2030 sustainable development goals.

This document sets out the strategic overview, high level objectives and actions required to support and shape our sustainability work programme. The strategies actions contained in the appendix will be subject to continuous review based upon changing global, national, and local requirements. Our progress towards delivery of the strategy will be measured and reported in line with agreed governance arrangements.

The strategy is broken down in 4 main sections, with a total of 16 overarching topics. The diagram shows the interlinking of these.
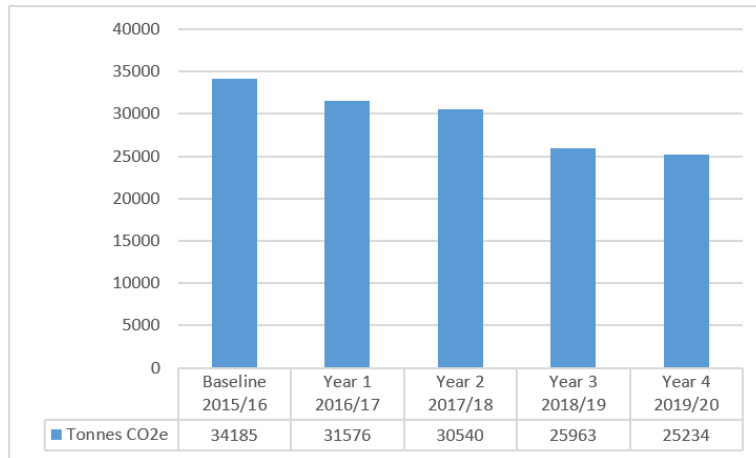
1. **Our People** This covers our policy and governance arrangements which will be needed to ensure sustainable sits at the core of the organisation in all its decisions and discussions when carrying out its core function. This will enable our staff, communities, and partners to engage with the agenda feeding in their ideas, commitment, and expertise.
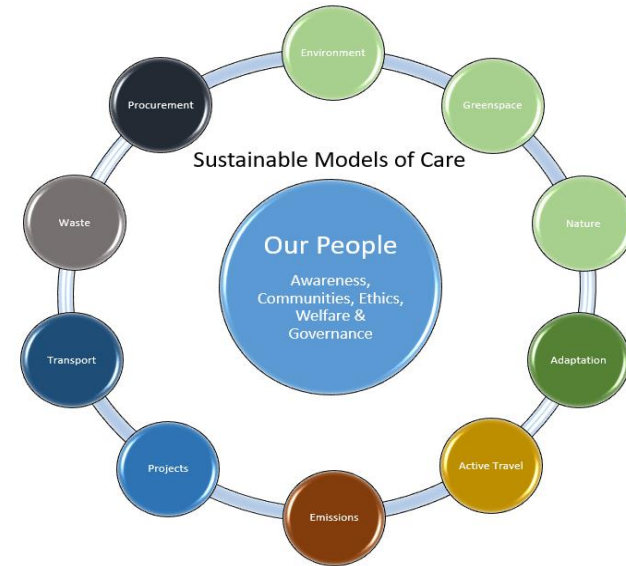
2. **Sustainable Models of Care** This is where we address the process of reform, building sustainability into our models of care. The right care, at the right time, in the right place. Great changes are happening already across the organisation which are reducing our environmental impact and improving care in the community.
3. **Our NHS** Encompasses our actions around active travel, greenspace, nature and biodiversity, transport, capital projects and IT. Active travel increases are linked to less air pollution through reducing car miles and improving health outcomes. Greenspace improvements also tie in with our biodiversity aspirations. Projects, looks at ensuring all our new heath care facilities and refurbishments are net zero emissions.
4. **Our Planet** – Addresses adaptation, environment, greenhouse gasses, procurement, and waste. Reducing our impact of our environmental footprint to improve the health outcomes for the citizens we serve.

Climate Change Deliverables

Exemplary work has taken place in recent years within the board where we have seen a ***reduction of 35%*** in our carbon emissions since 2015/16. Working to reduce our carbon emissions from heating, power, transport, business travel, anaesthetic gasses, and waste. We have also made a 23% reduction in our water consumption, through a targeted monitoring approach, reduction of wastewater, and increased management awareness.

	Baseline 2015/16	Year 1 2016/17	Year 2 2017/18	Year 3 2018/19	Year 4 2019/20
Tonnes CO2e	34185	31576	30540	25963	25234

Carbon Emissions

As we can see from the graph the challenge over the next 10 years to meet the 2030 target will be extremely difficult. In that time, we must reduce our current emissions by 50%. This means a year-on-year reduction of 5%. This will mean serious investment of our infrastructure, buildings, service redesign, and a change in the way we carry out our business. Decarbonising our heating will be the largest area of concern, moving away from the burning of fossil fuels into clean sources of renewable heating. Onsite power generation will also be required to help the electric vehicle transition of the fleet, and hydrogen fuel for our larger vehicles.

COVID-19 is having a profound impact on the world. There is an interrelationship between the pandemic and the environment which reinforces the need to reduce our impact and prepare ourselves for climate change opportunities. We introduced rapid changes to the way we provide services to minimise the risk of transmission and ensure access to treatment for those who need it. COVID-19 will impact the on the way we continue to deliver services and the emissions from that care. Conversely there will be an impact on increasing our emissions as the need for PPE increases, cleaning products, ventilators, single use plastic and changes in patterns of drug prescribing.

In the grand scheme of things, the NHS within Scotland produces roughly 3.6% of Scotland's total carbon emissions, 23% of the total public sector emissions. There are other emissions which have a huge impact in Scotland's overall carbon emissions which are not presently covered within our reporting. These are the emissions from our pharmaceuticals, goods, and service provisions.
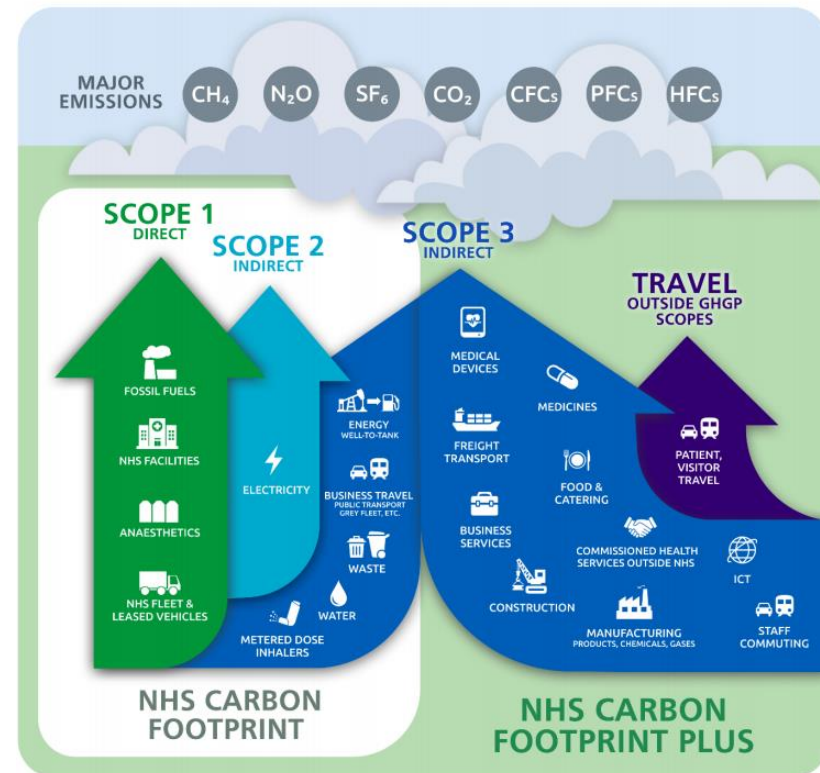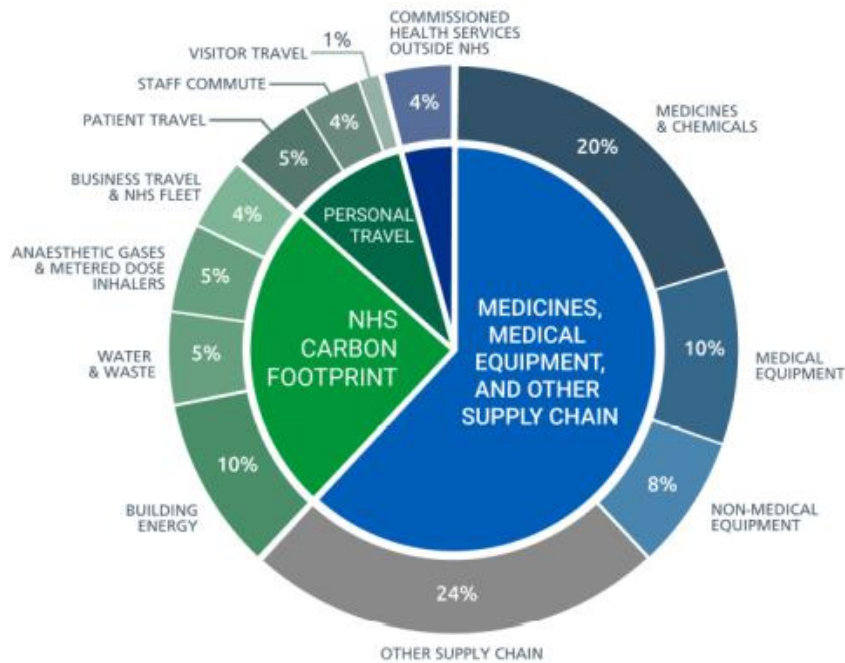
The pie chart shows the breakdown of carbon emissions from all NHS activities, as detailed in the NHS England Net Zero pathway strategy 2020. The emissions from medicines, equipment, and the supply chain are emissions sources that are out with the control of the NHS itself, however, make up around 66% of the NHS's total overall carbon footprint. This is made up of over 80,000 suppliers. As we have a major buying influence, we should be enacting on this, exerting our influence to ensure reductions are made in this area.

At present NHS Scotland does not have a methodology which has been ratified by the government to carry out the calculations from these emissions sources. However, work is ongoing to establish a strategy to start capturing this data. There is great scope to start creating a more circular economy, especially with our single use items and putting these materials back into use, rather than

treating them as a waste. We must ensure our suppliers are decarbonising their operations at the same time as we do. Made for re-use PPE should be requirement of procurement especially for COVID-19 and other infections disease related requirements.

It is estimated that over 70% of NHS Scotland's emissions are from indirect sources such as staff and visitor travel, the goods, products, and services used, rather than being produced directly.

The addition of wider range of emissions sources in our annual reporting increases the challenge but is essential if we are to embed sustainability across the whole of the organisation.

We must harness the enthusiasm and determination of those who work in the organisation, bringing along everyone on the journey.

The NHS Ayrshire and Arran is an anchor organisation in Ayrshire which feeds into the Ayrshire Growth Deal and the Community Wealth Building Charter. We have ambitions to develop the concept to establish an Ayrshire Anchor Institution Network. Through distributed working, our workforce can work flexibly across the region with a greater presence in local communities we can make a difference by encouraging local spending for social benefit, reducing carbon emissions and environmental impact, widening access to quality work, working closely with local partners to learn from others and share good ideas, and using our buildings and spaces to support communities
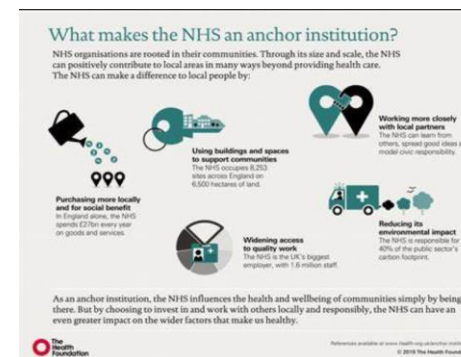
1. Our People

Our people have been driving organisational sustainable change for some time within the board. Changing clinical practice and taking this on board themselves to make the service more sustainable and drive environmental improvements. Endorsing this commitment and enabling the service to evolve and adapt is at the centre of transformational change.

Raising awareness of what actions staff can take forms part of this work. Enabling clinical networks and celebrating good practice is at the heart of this approach. Linking directly with the vision of Caring for Ayrshire.

Staff involvement is encouraged to help inform future action plans shaping the organisation based on experience gained. These people are champions in their respective areas and continue to promote sustainable healthcare practices throughout the organisation.

We will support staff to change the ways of working helping to improve sustainable practices in the workplace and become champions for development within the wider community in which we serve. Creating a safe environment where people can make changes in the workplace without fear of rebuttal.

Key Stakeholders

Governance

The board members, and senior managers throughout the organisation will have a key role in embedding sustainability across the organisation to transform the way we work. The launch of this strategy and subsequent programmes of work, combined with the monitoring and reporting on progress will be crucial in transforming the way our organisation delivers its services and care to its citizens.

The actions reflected in this section are designed to ensure that the NHS Ayrshire and Arran decision making processes fully support and prioritise sustainable development in the way we operate services, restructure our organisation, and procure our goods and services. All governance decisions will ensure sustainable development is considered in terms of environmental protection, economic viability, and social equality. Sustainability will be fully integrated into our policies, corporate strategies, visions, and reporting processes.

Ethical Issues

Sustainability is essentially based on good ethics. Virtue, rightness, consequence, and context are all ethically important when navigating sustainability. A sustainable society is one which lives within its natural and social system. Ethics has to do with the principles, standards, and rules of conduct, that make cooperation, justice, and freedom possible.

Welfare

The provision of sustainable welfare has in general terms been defined as satisfaction of human needs within the planetary limits at a local, national, and global level. Sustainable welfare addresses how we can have an integrated approach to problems of social justice and ecological sustainability. Sustainable welfare aims to reconcile social policy with environmental protection and integrate eco-social policy strategy that enables a good life for all without exceeding ecological limits.

Cross party organisational working is encouraged in this section, nurturing, and encouraging recruitment improving access to employment opportunities. Ensuring that we work with local universities and colleges engaging with the local youth and apprenticeship schemes. Encouraging and supporting our staff to develop new and improved ways of working.

Setting out our workforce strategy to address issues of wellbeing, health, and sustainability, embedding the staff governance standard exceeding the expectations required. Supporting our staff to carry out their work in a flexible manner. Creating a visible process to improve both physical and mental health.

Communities

Tackling health inequalities has always been a priority for the NHS Ayrshire and Arran and was the foundation of the formation of forming the Health and Social Care partnerships, and our work through the Community Planning Partnerships. It is through this joint working that we pull together engagement with local and voluntary groups in the community and active engagement with local communities.

Increasing public health has dual benefits, one reducing costs to the organisation and second having positive impacts on climate change. This can be achieved through long term public health prevention strategies and interventions which is central to an integrated approach. As the NHS Assure model develops this will involve service users setting priorities and input into designs for future services.

Fuel poverty is a serious issue and joined up working with communities, NHS, councils, and private partners can create low carbon energy district heat networks providing cheap renewable heat to homes, public buildings, and hospitals in our community.

We will continue to work with partners to ensure growing levels of food and fuel poverty are addressed through direct entitlements rather than charitable models of aid. Examples of this joint working are:
- Energy Agency – where we monitor health and wealth impacts of
  local citizens pre and post home insulation upgrades bringing people out of fuel poverty and improving their health outcomes.
- A shared approach to energy developing renewable district heating schemes

- Supporting no drug prescriptions including the work of the North Ayrshire Green Health Partnership
- Work collaboratively with all three Community Planning Partnerships on a Pan Ayrshire Net Zero Green Recovery plan addressing multi-disciplinary working

The NHS has a role to lead on joint integrated working throughout Ayrshire ensuring that our own practices are classed as best practice focusing on patient involvement, employment, and support to sustain the local economy. Putting sustainable actions at the heart of our work, within communities addressing inequalities through prevention and early intervention.

Awareness

Integrating sustainability into performance management and resource analysis will help drive the remobilisation of the service. Managing performance ensuring that we address aspects of environmental sustainability, good financial management, and more equal health outcomes.

Using the 4 pillars will assist here to achieve this. Integrated into transparent methodologies that can be developed and implemented where we can set goals and report on progress. The use of the staff appraisal system can help here to engage staff and ensure that they are accountable for their actions to support environmental sustainability in their area of work.

The aim here is to ensure resource management supports the delivery of sustainable development commitments, through good performance management.

2. Sustainable Models of Care

- Realistic Medicine
- Prevention
- Holistic Sustainable Care Policy
- Medical Equipment
- Respiratory Care and Inhalers
- Pharmaceutical Pollution
- Theatres and Anaesthetics
- Near Me
- Care in the community
- Prevention and Early Intervention
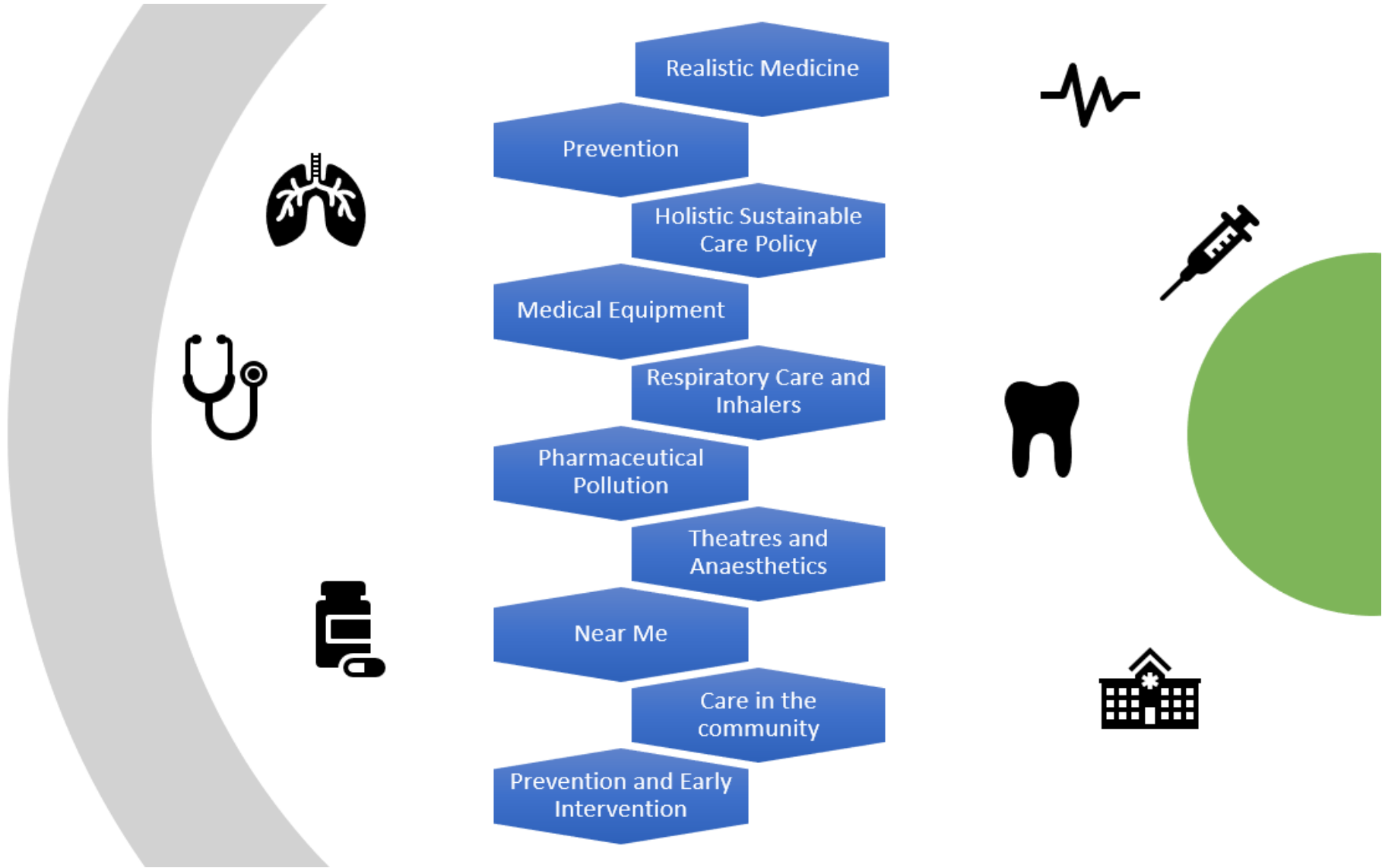
Sustainable Models of Care

At the heart of this strategy is the way we provide care. Transforming how we plan and deliver services to make our model of care more sustainable. This is where we can deliver the most impact, with rapid and long-lasting change. Much action has already taken place in 2020, where the service responded incredibly to the pandemic. We have in place members of staff who are already addressing areas of health care which have high carbon impacts.

Addressing sustainability in terms of environmental impact, financial viability, and social equality will be built into our plans for Caring for Ayrshire and all developments, service delivery, and strategic planning.

We have seen outstanding reduction in the use of Desflurane medical gas across the estate, and the move to low flow anaesthetics making great savings in our emissions from theatres. Areas such as ITU and respiratory care are also high carbon areas where lessons learned will be taken forward here. Redesign of outpatient areas will also reap benefits showing how all three areas of environmental, finance and social equality come together bring a more accessible and sustainable service.

The most sustainable model of care is one in which fewer people need any care at all. The best environmentally sustainable medical care is one where there is no care. Reorienting the service to move away from one which is a *National Illness Management Service* to one which is National Health providing Service.

The problem clinicians have is this duality providing health care to the person sitting in front of them, they are causing harm to the rest of humanity and the rest of the biosphere. Opening this blinkered view of clinical staff beyond just the one patient sitting in front of them is a challenge which can be really powerful. Reducing health inequalities must also be addressed. The inequality in society is much more damaging to everyone in that society than the absolute levels of affluence in that society. Equalities are important and not just the levels of affluence or poverty in societies.

Public health prevention will help improve the population's health using early intervention and ensuring an equality of health care. 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 needs.

We see the new NHS Assure moving towards a quality management system for new buildings and service redesign, in which it puts the patient at its centre. This approach will ensure lessons learned are built on, and we have a structured management system in place for all new designs.
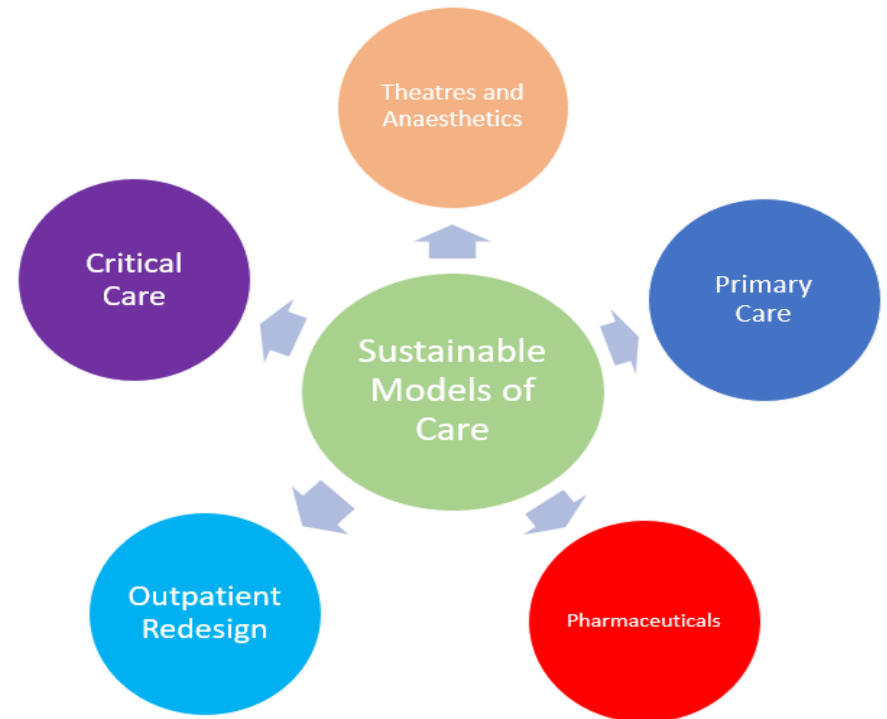
Theatres and Anaesthetics

Theatres and anaesthetics are high carbon and energy intensive areas within the organisation, and which produce high volumes of waste. Single use items are increasingly more and more common while reusable surgical instruments have a lifetime carbon impact through requirements for sterilisation and transportation.

Anaesthetic gas release to atmosphere contributes to 8% of the total carbon emissions of the NHS Ayrshire and Arran. Around 5% of the total NHS Scotland carbon emissions. There is a wide range of each of the gasses global warming potential, with some being worse for the environment than others. Desflurane is 2540 times that of CO_2, and nitrous oxide is 245 times that of CO_2.

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

Perioperative waste accounts for around a third of all the NHS Scotland's waste. Each operating theatre can produce 2300kg of anaesthetics gas waste and 230kg of sharps waste per annum. The opportunities for carbon reduction are significant and achievable reductions can be targeted.

Within the board we have a lead for Sustainability in theatres who is based at Ayr hospital, who has been working with the teams to reduce the environmental impacts. Reductions in desflurane have been underway for some time.
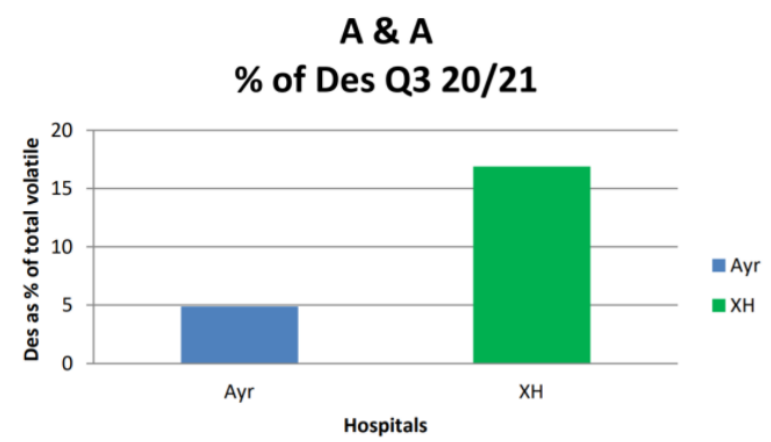
Desflurane Use Q3 Scottish League

From SEAG report

Pos	Hospital	Score (%)
1 =	Raigmore / Hairmyres / Monklands / GRI	0
5 =	Forth Valley / Western Gen. (Edin)	1
7	Edin. Royal	4
8	Ayr	5
9	Perth	7
10 =	Aberdeen / Ninewells	8
....	Wishaw, QEUH, Gartnavel	10. 14. 15
15	Crosshouse	16
19	Queen Margaret (Fife)	31

Competitive league tables have been set up to drive changes and show progress in this area.

In terms of areas to highlight action there are 4 main potential areas to tackle. These include energy, anaesthetic gasses, single use items, and improved waste management.

Primary Care

Prescribing is by far the largest carbon footprint of this area of healthcare, along with transport, travel, waste, energy, and water consumption. Primary care can drive sustainable models of care across the organisation through the health and social care partnership, providing care closer to home which can alleviate the need for long travel, and can integrate care in the home setting.

Primary care has the largest reach to our communities and population with engagement with the public on sustainability, environment, and wellbeing. The health and social care partnership have a leading role in making changes within the care system and local community.

There is a continued interest from primary care to make the transition to a sustainable greener practice, improving its environmental footprint. Climate change can be an overwhelming thing to talk about. Clinicians have a position in trust in society, far greater than any other profession. A recent 2019 poll shows doctors, nurses, and dentists, are the most trustworthy. Climate action is a health issue and should be addressed in a positive framing. Talking about this now, will actively help people to make changes, highlighting the role that clinicians have in moving this agenda to the forefront.

Currently in primary health care there are existing sustainability networks are in place such as the Greener NHS, Greener Practices for GP's, Centre of Sustainable Health Care, Lancet Countdown, and most royal colleges have an environment statement.

We must begin to link Our Natural Health service demonstration projects into everyday practice. The NHS Greenspace and North Ayrshire Green Health Partnership work. Integrating green health prescription and signposting into clinical pathways, making better use of our outdoor spaces for health and wellbeing, supporting community green health

activities such as gardening, conservation, cycling, walking, swimming etc…

17

Pharmaceuticals

Pharmaceutical residues have been found in various environmental media throughout the world and concern is growing to the harm that these might be doing to human health and the environment. With an increasing prescribing rate mainly due to an ageing population, and a reliance on prescription drugs, pharmaceuticals are an area of priority from an environmental perspective.

Residues of pharmaceuticals come from leftovers not properly disposed of, or those that pass through the body and end up in the water supply and into wastewater treatment plants. These plants however cannot completely remove the drugs from the water and are found heavily diluted. Pharmaceuticals then enter the water, soil, sludge, and organisms at all stages of their lifecycles. These can then accumulate in humans, fish, and vegetables.

Active pharmaceutical Ingredients (API's) are designed to be biologically active and resistant to metabolic degradation, to be an effective drug. APIs in the environment can cause reproductive failure, growth inhibition, behavioural changes, and population collapse. Minimisation must occur across the entire life cycle of production, use, and disposal.

In some areas 30% to 50% of pharmaceutical waste can be avoided through improved prescribing, dispensing, and patient support. Reducing this waste has a double carbon benefit, as reduces upstream emissions in manufacturing and distribution, and downstream emissions where fewer medicines need disposal.

At present the propellant used in metered dose inhalers (MDI's) prescribed for asthma and chronic obstructive pulmonary disease (COPD) contribute to overall carbon emissions. Moving over to dry powder inhalers for example reduces the carbon impact. Achieving the required reduction in emissions is only possible if

- There is a significant increase in the DPI uptake
- Increase the frequency of the greener disposal of used inhalers
- Supporting the innovation and use of lower carbon propellants

The hydrofluorocarbons used in inhalers have a GWP of that 3800 times greater than CO_2. Pharmaceutical companies need pressure via us to start producing inhalers with lower associated emissions.

The rise of AMR – Antimicrobial Resistance

The more antibiotics that are used, the less effective they become as resistant bacteria develop to counter their effects. This gives rise to what is known as anti-microbial resistance (AMR), caused by these resistant bacteria. According the European Centre for Disease Prevention and Control AMR is responsible for over 25,000 deaths a year across the EU and already has an economic burden of over £1.5 billion pounds.

Whilst recognising that antibiotics are important part of modern medicine, the environment and health risks associated with over prescribing of antibiotics, pollution from production, and improper disposal of unused antibiotics cannot be ignored. In the UK the government has placed the risk of AMR in the top 5 risks to the country on the UK risk register.

AMR is "the single greatest challenge to infectious diseases today" WHO 2015 – Dr Keiji Fukuda – Assistant Director General for health security.

Outpatient Redesign

The vision of Caring for Ayrshire is putting the patient journey and needs at the heart of the service provision. The COVID-19 pandemic accelerated the ways in which the service adapted and changed to providing care during this period. This saw the roll out of the Near Me video service for consultation. The need for social distancing and the demand for providing

safe, timely, and effective care increased which provides further acceleration to re-design the service.

The patient pathway across the organisation is very varied as each speciality has its own carbon footprint, thus each patient will have a varying carbon emission associated with their treatment. One of the largest carbon pathways is patient journeys, the use of energy sensitive space and equipment in an acute setting and the use of tests and supplies.

Caring for patients closer to home will help reduce patient journeys, eliminate the need for unnecessary use of products, tests, and time, and reduce hospital admissions which have a higher environmental impact. Evidence to support these moves is broad and positive with a triple bottom line evaluation reporting on social impacts for staff and patients, financial impacts to NHS and to patients, efficiencies, and productivity as well as on environmental impacts.

Emergency and Intensive Care

These areas in the acute hospital setting are the most fraught with intensity, where critical intensive care means the intensive use of resource utilisation and environmental impact. Not only is it intensive in resources, but also on staff, patients, and families. The very sensitive nature of these areas makes changes difficult to integrate, but there are a growing number of professionals who are starting to make positive environmental impacts.

A typical 10 bed ICU can produce half a ton of waste per week. The procurement selection of products must focus on the packaging waste, and single use factor vs a product which can be sterilised and reused. The information around the environmental impacts needs to be addressed through life cycle analysis and the environmental impact in emergency and intensive care practises.

Medical devices

Medical devices are an essential feature of modern healthcare, playing an important role in prevention, diagnosis, monitoring, and treatment of diseases and disabilities. Exposure to hazardous chemicals through medical devices can be enteral (via the digestive tract), parenteral (intravenously), transcutaneous (via the skin), or through inhalation. Plastic medical equipment and devices can however be a significant source of exposure to harmful endocrine disrupting chemicals (EDC's), including phthalates such as DEHP, and bisphenol A (BPA). Phthalates are often used to make polyvinyl chloride (PVC) flexible, but these chemicals can be harmful to patients, not only causing fertility issues but also undermine the efficiency of treatments.

High exposure medical procedures include exchange transfusion of blood in neonates, extracorporeal membrane oxygenation (ECMO) treatment of neonates and of adults, total parenteral nutrition (TPN) in neonates, haemodialysis, enteral nutrition in neonates and adults, heart transplantation or coronary artery bypass graft surgery, massive blood transfusion of red blood cells and plasma, and peritoneal dialysis. Release of BPA from medical devices, external contact with a medical device containing BPA, contact with oral dental material and equipment, implants such as valves, pacemakers, and insulin dispensers made of polycarbonate, haemodialysis, prolonged surgical procedures, and prolonged exposure to BPA in intensive care.

The EU independent Scientific Committee concluded that premature neonates in intensive care units, infants undergoing prolonged medical procedures, and dialysis patients are particularly at risk of DEHP-induced effects from repeated medical treatment using medical devices. The endocrine disrupting properties of these chemicals are now well established, and we have seen an increase in endocrine diseases such as breast and testicular cancers, thyroid disorders, infertility, and diabetes across the world.

There are nontoxic alternatives for healthcare equipment out there in the marketplace to use, but these have a low uptake due to lack of awareness. Prevention is always better than the cure, so a move to safer materials is the best course of action, helping to fulfil the duty of first do no harm. Healthcare professionals have a moral duty to the public to inform and educate of the dangers of plastics.

It must be noted that industry has come up with alternatives for BPA, but we must not be fooled by the misleading marketing. BPA free, does not mean that the product does not necessarily contain BPA. In some cases, they replace the BPA with alternatives that are much worse like bisphenol S, bisphenol F, and bisphenol AP.

Non-toxic Healthcare:
Alternatives to Phthalates and Bisphenol A in Medical Devices

Plastics in healthcare

A growing increase in awareness of plastics is seen in society which is explained by the awareness of the environmental consequences of plastic production, consumption, and disposal. Dependency on plastics in everyday life is reflected in ubiquitous presence as litter in the environment. This has led to an increased focus on plastic waste in the air, ground, water, and food sources. Scientists are now addressing this from polymer scientist to ecologist, and toxicologist.

Recently microplastics have been found in fresh water and there are impacts on antimicrobial resistance as well. Single use plastics and plastic packaging present a substantial part of this problem. Most plastic ends up in landfill or is incinerated. Plastics and chemicals used in their production now contaminate our soils, waterways, and air we breathe. There are steps we can take in healthcare to start limiting and reducing the amount of plastic waste we produce.

Plastic forms an umbrella term for a wide family of varieties, over 5,800 different types of polymer formulations on the market exist, where 4,000 known chemicals are associated with plastic packaging alone. Plastics can be developed with any virtual combination of elements to meet any market need. However generally plastics can be put into 4 main categories. Oxo-degradable plastics, biodegradable plastics, bioplastics, and microplastics. They contain additives to help improve qualities during manufacturing like lubricants, solvents, stabilisers, and catalysts. Over 400 functional additives or pigments are used in the formation. In 2017, 16.7% of all plastics manufactured were used to make medical instruments, together with non-medical uses such as furniture and technical parts. Only 9% of all plastics are being recycled, and 95% of all

packaging material is lost, and not recycled. 41% of collected plastic is used for energy recovery, whilst 27% ends up in landfill. 31% is recycled with 63% of that being within the EU. It is estimated that there are now 5.25 trillion pieces of plastic in the oceans which total around 268,940 tonnes. As the use of global plastic rises, so does the initiatives to mitigate the health and environmental impacts.

To create a circular economy plastic recycling is required. By 2030, the design of plastic products should contain at least 50% of recycled plastic under the EU directive 2018/52 on packaging waste. EU Directive 2019/904 sets out targets on the reduction of the impact on plastic on the environment which states that 65% of packaging waste by 2025, and 70% by 2030. Single use plastic laws came into effect around cotton buds, straws and food and beverage items including containers made of expanded polystyrene.

Last year the European Chemicals Agency drafted a ban on microplastics added to cosmetics, paint, detergents, and nearly all other consumer and commercial products where they are used to fill, bind, coat, absorb, thicken, be abrasive, or control the release of medicines or pesticides. The ban would stop around 10,000 to 60,000 tonnes of plastics leaking into the environment each year.

In healthcare plastic medical devices and pharmaceutical packaging continues to grow. A versatile and low-cost material helps to mass produce many single use hygienic medical items. Without this the modern healthcare system would not function as it does today. The most widely used plastic item in healthcare is PVC, flowed by PE, PP, PS, and PET. Traditional glass, metal and ceramic were used in implants, devices and supports, but plastic polymers are often lighter and can have better biocompatibility. Plastic packaging has a great barrier property, lightweight, low cost and durable. Many high-quality medical procedures

and products provide treatments and solutions however this exerts great pressure on the environment through the supply chain including packaging, single use products made of a variety mix of plastics which often contain hazardous materials, which contribute to environmental harm.

Industry efforts are trying to keep plastics in use and stop them from going into the environment. Materials are being recycled that have not been optimised for human and environmental health. Foam, plastic food packaging, and textiles all contain flame retardants, plasticisers, modifiers, catalysts, and other performance enhancing additives. When recycled the outputs tend to be contaminated as polluted and not suitable for use in toys, food containers, and other applications. Detoxification of plastics must be addressed when looking at creating a plastic circular economy.

Impacts on human Health

Evidence surrounding the health impacts of plastics is mounting. It is important to recognise that plastic has a risk associated with human health during their whole life cycle through inhalation, ingestion, and contact with skin. Human exposure during the transportation of fossil fuels required for producing plastic results in cancers, neurotoxicity, reproductive and developmental toxicity. Burning of plastics causes the release of toxic chemicals into the air, sea, and soil. These also cause cancers, neurological and immune damage. During use these toxins are ingested and inhaled and lead to similar consequences.

Plastic particles are also of concern as human exposure through diet and inhalation reveals that the microplastics can accumulate and exert localised toxicity by inducing or enhancing an immune response. If inhaled or ingested chemical toxicity due to leaching of monomers, endogenous additives, and adsorbed environmental pollutants. Greater

concerns are the cumulative effects over time which will be based on particle size, dose, and pollutants contained therein. Microplastics in drinking water are also of concern, and much more study is required around this area of work. Young children at the highest risks and plastics are found in the highest concentrations in them.

Recyclable plastics – medical plastics

Most common plastics that can be recycled are:

- Polypropylene (PP) – sterilisation wraps for surgical instruments, bed curtains etc)
- Homo-polymer (PP) – pitchers, basins, cups.
- High Density Polypropylene (HDPP) – irrigation bottles
- Polyethylene terephthalate glycol (PETG) – trays
- Low density Polypropylene (LDPE) – flexibles such as non-woven and film plastics

Impacts of medical plastics

The phasing out of groups of chemicals is recommended here rather than individual chemicals one at a time. The class of chemical is therefore used

1. (PFAS) – Perflourinated Chemicals over 5000 types at present – including PFAO, PFOS, GenX, and others. PFAS remain in the environment and are found in the majority of humans.
Used in dental healthcare restorative material, medical devices, invasive medical devices, radiopaque catheters and introducer sheets, medical textiles like gowns, masks and caps, implants, and surgical patches.
Exposure is associated with – hepatic, cardiovascular, endocrine, immune, reproduction, and developmental disorders, can alter kidney and thyroid function.
PFAO exposure is linked to increased cholesterol, ulcerative colitis, thyroid disease, cancers, pregnancy linked hypertension, and reduced birth weight. Both PFOA & PFAS are immunosuppressants. Studies on health impacts in children found associations with PFAS exposure and dyslipidaemia, vaccine response asthma, renal function, and the onset

of menstruation. * The tolerable limit for PFOA was recently reduced from 1500ng daily to 6ng daily.

2. (PBDE's) – Flame Retardants – Polybrominated diphenyl ethers – structured similarly to that of PCB's – manufacture of polyurethane foam
These are used in the healthcare sector to stop things from burning. A family of 209 congers – brominated substances.
Exposure is associated with – impact on the developing nervous and reproductive systems, liver and male reproductive system, hormone disrupting effects on thyroid and oestrogen, and impaired spermatogenesis. Some PBDE's act as developmental neurotoxicants. (PFR) Phosphorus flame retardant was recently found in the urine samples of ICU patients much higher than a control group. The highest levels found in patients who were in contact with continuous venovenous hemofiltration (CVVH) and extracorporeal membrane oxygenation (ECMO), this study could suggest that PFRs are originating from indwelling medical devices used in the ICU.

Unfortunately, certain specialist healthcare devices contain plastics made using toxic materials, despite the availability of safer alternatives. Further, high volumes of plastic waste, including single-use products, packaging, and complex plastic composites (often made from toxic materials), are generated in healthcare facilities. Due to fear of contamination, recycling of medical devices has often been considered a "no-go" option in the waste industry.

Phasing out of hazardous and toxic chemicals in plastics and encourage nontoxic substitutions should be encouraged, highlighting aspects of patient safety and care – do no harm. Elimination of toxic chemicals will also encourage more recycling and circular economy of plastics. Avoiding banned toxic chemicals in recycled plastics will be key reducing secondary risk to human health and the environment.

Health care professionals have a moral obligation to educate and change the current system being the most trusted figures in society, triggering widespread behavioural changes in plastic use.

3. Our NHS

Active Travel

Increasing active travel among staff, visitors and patients has a twofold benefit. Not only does it improve your health and wellbeing, but it helps to reduce your carbon footprint. Active travel is about getting from one place to another without traveling in the car.

Capital Projects

Our built environment is critical to carrying out care to our citizens. The buildings contained within our estate are varied and require a large amount of servicing and attention to keep them up to the standards required to carry out health care activities. Maintenance keeps the buildings safe for our staff and patients, keeping them environmentally friendly and providing resilience to the organisation. We minimise our environmental impact through good design of our buildings to maximise resources.

Improving our estate in terms of refurbishment and new health care buildings will feature heavily in the "Caring for Ayrshire" vision, but also in our drive to meet our legally binding carbon neutral target of 2045 at the latest. This will be achieved through ensuring all new builds and refurbishment programs meet the highest levels of design, lowest use of energy, providing safe and nontoxic health environments to carry out care activities, promoting wellbeing and providing a welcome space to come and work from.

The overall aim will be for the organisation to rapidly transition to net zero, transitioning over to low carbon clean sources of heating and power, providing healthy buildings with exceptional indoor air quality with little pollutants and toxicants to staff and patients, with a focus on patient input and requirements, along with enhancing and increasing biodiversity within our boundaries.

This will be lead through our capital projects team with a focus on wellness, environment and legal requirements being focused on. Redesign of the estate should include sustainability at its heart.

Greenspace

There is now a raft of legislation to follow to meet the requirements around Greenspace. The NHSAA has worked extremely hard to make inroads into this work. Our greenspace provides diverse outside resources for both people and wildlife creating natural environments. Green gyms have been set up along with wild gardens and meadows, bee, and bug sanctuaries.

Our outdoor estate is a valuable and treasured asset to the organisation and somewhat underused. If we plan and manage well this space, it can contribute to the organisation's overall health improvement goals, not only for staff, but by patients and visitors alike. This has huge benefits for mental health improvement and is a great stress relieving activity.

Creating usable and amenable greenspace is "core" activity and should be seen as such, especially as we have legal obligations around this, and the health outcomes linked to this. Management of our complete estate will reap the benefits not only for staff, but the whole community providing much more than just some outside space.

Our aim will be to realise this asset to its full potential, mapping and planning to maximise its beneficial use for the whole community and wildlife, releasing its environmental and health benefits.

Biodiversity and Nature

"Biodiversity has declined since 1960 by 70%" – The Living Planet Report by WWF, 2020. A stark reminder that we are destroying our planet, our home. There is a huge need to increase the amount of biodiversity we have on our land. We must protect and restore natural habits to support healthy ecosystems. Connect people with world and nature for health and wellbeing, whilst maximising the benefits to our communities

creating a diverse natural environment contributing to sustainable economic growth.

Adopting an Ecosystem approach, measuring ecosystem health. We ourselves are a part of the ecosystem. This helps secure benefits for future generations to come.

Digital Services

The NHSAA eHealth transformation has been underway for many years, moving to a more sustainable healthcare system. Allowing for remote working, remote health consultations, telemedicine, and reducing the amount of travelling needed to carry out work tasks.

Transport

Travel and transport of our patients, staff, visitors, goods, and services, all have a significant impact on the climate and local air quality. Delivering more remote working and decarbonising our fleet and journeys will have both significant cost and environmental benefits. Our travel plans will actively promote our staff, visitors, and patients to become more active and use more sustainable methods of travelling.

4. Our Planet

Adaptation

The process of ensuring resilience to the current or expected climate changes is called adaptation. This forms part of our response to climate change. This mitigation forms our response to limit harm and ensure continued service. Adaptation actions can transform the organisation ensuring it to function during times of great stress.

In the UN Sustainability Goal 13 - it states the target to strengthen countries resilience and adaptive capacities to climate related issues. This includes such areas as infrastructure, agriculture, and education. The Paris Agreement also contains several provisions for adaptation including funding mechanism for countries to support technology transfer and promote adaptation. Without this the economic and social cost of unmitigated climate change would be very high.

Environmental Management

The environmental impact of health care is becoming more and more prevalent with focus on the impacts of such care to the planet being evident. Accumulation of pharmaceuticals waste and water pollution, increasing amounts of plastics in our water, soil, and air we breathe. Pollution of the air, in terms of nitrous oxide & greenhouse gases, also particulate matter which has impacts on health and climate change.

Carbon and greenhouse gas management forms the fundamental part of the environmental sustainability, but there are many aspects of healthcare which environmental footprint which we must be aware of, managed and reduced. Key features include water, waste, air quality, flooding, and environmental toxins which are all hazardous to health.

All public sector organisations must comply with environmental law but there are opportunities to go beyond this and make healthcare a safer environment for patients and staff alike. We must start monitoring and reviewing all our environmental impacts of our operations in line with a broader vision to do no harm.

Carbon and Greenhouse Gas Emissions

The greatest health opportunity is to address climate change. Carbon dioxide emissions and greenhouse gas releases to atmosphere are driving changes in global climate. These changes were addressed by oil giant Exxon in the 1980's, when even back then, they linked rise in global temperature with rises in atmospheric CO2.

Figure 3

GROWTH OF ATMOSPHERIC CO2 AND AVERAGE GLOBAL TEMPERATURE INCREASE AS A FUNCTION OF TIME
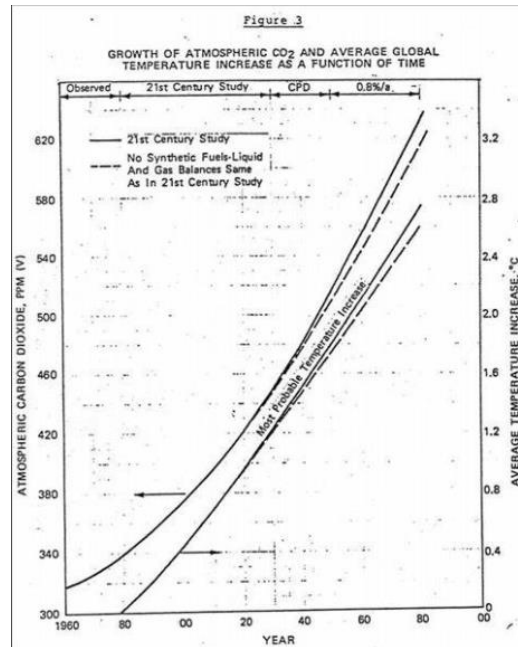
As an organisation we collect data on a wide sources of carbon emissions mainly focusing on scopes 1 and 2, with some emissions in scope 3. Over time, this will area of focus will grow, and we will start to widen our reporting on our goods and services that we procure and provide as a service, to capture a wider and broader carbon footprint. We understand the need to work with our partners looking at the wider picture of our actions and supply chain.

Procurement

Reducing the amount of unnecessary use of resources will be key to improving our carbon footprint. The goods and services we purchase contribute to the largest proportion of our emissions. There is a growing awareness of our environmental impact of the goods and services we buy.

The role of procurement in influencing the environmental impact of health sector operations is well acknowledged and sustainable procurement practices have the capacity to reduce a significant proportion of the health sector's greenhouse gas emissions. Ensuring that our products and services are compliant with environmental and social standards throughout their lifecycle, therefore, can be drivers for a significant shift towards inclusive, green economies.

This can help drive for sustainable manufacturing. Communities and the environment in developing countries continue to be negatively affected by health sector supply chain activities that increase greenhouse gases, deplete valuable resources, and increased chemical pollution.

Sustainable health in procurement aims to reduce the harm to people and the environment caused by the manufacturing, use and disposal of medical products and the implementation of health programs. Reducing the toxicity of chemicals in the products and materials, reducing the greenhouse gas emissions in the supply chain and the conservation of resources.

Sustainable Development Goal no 12 – Ensure sustainable consumption and production patterns. Integrating sustainability criteria into procurement process aligns with and will contribute to results under a number of Sustainable Development Goals (SDGs)

SDG 3 – Good Health and Wellbeing

SDG 5 – Gender Equality

SDG 6 – Clean water and Sanitation

SDG 7 – Affordable and Clean Energy

SDG 8 – Decent work and Economic growth

SDG 11 – Sustainable Cities and Communities

SDG 12 – Responsible Consumption and Production

SDG 13 – Combat Climate Change

SDG 16 – Peace, Justice, and Strong Institutions

Sustainable Food

At present we provide a cook serve model to our staff and patients within our own kitchens across Ayrshire. Local produce is used where we can, though limitations are placed on us through national contracts and the cheapest price wins. We have developed our own in-house cafés where we keep employment and services local. Currently we donate any waste food to the Russell Trust, however our current food waste is very low, due to the patient meal management processes in place.

Food has a huge impact on staff and patient health and wellbeing and is an area of improvement in procurement. Increasing local, seasonal foods, increasing the growing standards, will pay health, environmental and financial dividends. Such a move needs backed by a sustainable catering strategy exceeding current national guidelines, and procurement that enables the local sourcing of seasonal food is an important area.
How our food is produced and distributed is misaligned with dietary guidelines and is largely reliant on methods of production and distribution that harm public and environmental health. We must start treating food, its production, and its distribution as preventative medicine that protects the heath of patients, staff, and communities. Food is the best medicine of all!

Waste

A recent UN report on adverse effects of waste concluded that over half the world's population is at risk from illness caused by healthcare waste, and many poor treatment practices cause violation of fundamental human rights. There is currently no international convention covering medical waste, however waste is categorised by the risk it carries. However, most of the waste that we produce is municipal waste at around 80% of our total waste produced each year.

Minimising or eliminating the generation of waste at the source itself through limitation techniques, technology change, and operating practices. Diverting recyclable waste from the solid / clinical waste stream will help increase our recycling rates and decrease our waste costs. Segregating ordinary waste from infectious waste will also maximise the amount available for recycling and minimising the amounts of infectious waste.

Medical waste incineration is the leading cause of dioxin, mercury, lead, and other harmful pollutants that threaten human health and the environment, if the best techniques are not used and a high enough temperature is not adhered to. Incineration of waste should not be supported as a waste management solution. There are no burn solutions which can safely treat and disinfect medical waste, and completely phase out the medical waste incineration.
According to a new report by the Journal of Royal Society of Medicine, https://journals.sagepub.com/doi/full/10.1177/01410768211001583, during the first 6 months of pandemic added an additional 1% onto the carbon footprint of the NHS England. The greatest contribution from the total was waste from gloves, aprons, face shields and type IRR surgical masks. A combination of in-country manufacturing, reducing glove use, reuse of gowns and face shields, and maximising recycling could have led to a 75% reduction. The estimated damage to human health was 239

DALYs (disability-adjusted life years), impact on ecosystems was 0.47 loss of local species per year, and impact on resource depletion was £9.3million.

Gloves

Gloves make up the highest volume of disposable medical product purchased, so reducing glove use where possible will eliminates the resources and waste associated with unnecessary use.
1. By only using gloves when indicated will help reduce use.
2. Avoid PVC, DEHP, and powdered latex gloves – as these are toxic through their life cycle & PVC is a known human carcinogen.
3. Move to sustainable alternatives that meet labour standards

Hand hygiene is the most critical intervention to protect against pathogens and HAI's. The glove chosen must always match the job that is being carried out.

Success in sustainable healthcare waste management will speed progress in working towards several of the UN SDG's. These include:

No3. – Good health and wellbeing
No.6 – Clean drinking water
No.8 – Decent work and economic growth
No.12 – Responsible consumption and production
No.13 – Climate Action

All waste generated comes through the front door of any healthcare building as a product. We must ensure the purchases we make do not contain toxic materials, non-repairable, non-recyclable, or simply unnecessary. We must advocate the replacement of these products with safer alternatives and in doing so we can kick start a global circular economy.

Strategy Delivery

The Sustainability Management Group (SMG) will be responsible for developing and implementing a work programme to deliver the strategic objectives. Progress to plan will be monitored by the Infrastructure Programme Board.

There is a need to embed sustainable principles contained within the strategy across the organisation, putting it into everyone's duties on how they can work and in a more sustainable fashion in their given field of work.

Board Level – there is a training need to improve awareness around sustainability, along with developing a clear set of indicators to show both legal compliance and sustainability progress. This will demonstrate how we are meeting our requirements and how we are publicly accountable for resources and strategic planning.

At a service level, a feedback mechanism is required to show how staff are undertaking actions, the monitoring of these, and feeding back to the board to show improvements. A need to show sustained changed in the service will be advantageous and to communicate and record change in a two-way manner to all staff.

At present sustainability is reported on via assessment and reported through annual public sector reporting requirements. This highlights that we are doing some really good work in this area and are an exemplar board on carbon reporting and management. However, we have gaps in our data that need to be addressed. Work will be required to calculate our wider carbon footprint from our goods and services.

A page on Pentana performance has been set up to record progress each of the topic areas and contains our current scores, in relation to our annual external assessment. It is envisaged that as the strategy is embedded, plans will develop for each of the action points within the document. These can be held within the Pentana platform and progress can be monitored tracked and updated.

Change is needed to drive us forward in a sustainable way, supporting our communities and improving the health of our people. This strategy sets out a route map to achieve the necessary change.

Contact: sustainability@aapct.scot.nhs.uk

Appendix 1 – Sustainability Action Plan

Allocation is defined as C = Compliance, NP = National Policy, LP = Local Policy, PHP = Public Health Priority, A = Aspirational

1. Our People

Governance			
	Action	**Allocation**	**NSAT**
1.	Climate Change and Sustainability will feature as a standing agenda item at our Executive Board meetings and accountability will be made clear across our board.	A	GP1
2.	Our Corporate Strategy, values and mission statement, vision and principles will explicitly reflect our commitment to sustainability, environment, social and economically.	NP	GP2
3.	Our Corporate Strategy, Property & Asset plan, and other annual reports will underpin our targets to reduce greenhouse gas emissions and maximise the health benefits.	C, NP	GP3
4.	Undertake a detailed assessment of the financial impacts of climate change to the organisation and calculate the cost of doing nothing. This information will then be indicated to the board and staff.	C, NP	GP4
5.	Show leadership with our partners in sustainability by leading local forums, contributing the plans of our key partners and local authority	A	GP5
6.	Sustainability will be a key consideration of all business cases and options appraisals where we will undertake a formal evaluation of the social, financial, and environmental aspects and co-benefits. Environmental Sustainability will be weighted equally with financial cost elements.	NP	GP6
7.	Create and develop a climate change and sustainability governance structure which engages with all parts of the board. It is suggested that a Sustainability Management Group will be responsible for delivery of the strategy reporting on progress to plan to the Infrastructure Programme Board.	NP	GP8
8.	Ensure we have an ambitious health and wellbeing strategy to promote and support healthy choices in all parts of the organisation with a senior board member who champions the board wide plan.	NP	GP9
9.	Develop a sustainable travel strategy for our estate with named responsible leads which reflect the current national regulations.	NP	GP10
10.	Create a travel policy that states where business travel is unavoidable, we apply a travel hierarchy, promoting active travel, public transport, car sharing and low carbon vehicles before single occupancy standard vehicles.	NP	GP11
11.	Create a Greenspace strategy which covers the whole estate with named responsible leads, created with staff, communities, and community planning teams, with board scrutiny.	C, NP	GP12
12.	Develop a biodiversity action plan covering the whole estate with named leads which has board approval.	C, NP	GP13
13.	Create a board wide Adaptation plan covering the whole estate with named leads which is directly linked to our business and resilience planning. (A full climate change risks assessment has been carried out with costs involved internal and externa partners).	C, NP	GP14
14.	Develop a board wide Sustainable Procurement Policy in place with named responsible leads which is subject to board scrutiny. Setting targets that exceed national statutory targets.	NP, LP	GP15

15.	Provide ongoing mandatory training requirement for all decision makers, procurement and commercial teams and budget holders to ensure they fully understand their role and responsibilities in meeting the Sustainable Procurement Duty.	A	GP16
16.	Create a formal policy to consider the sustainability of buildings when leasing or procuring based on their sustainability performance.	LP	GP17
17.	Create an Equity and Diversity Policy that measures equitable access to our services, employment opportunities, and training. Providing ongoing mandatory training to all our staff on equality and diversity.	C, NP	GP18
18.	Adopt a formal policy relating to the development of holistic sustainable care models.	NP, LP	GP19
19.	Adopt a formal policy regarding delivering of Realistic Medicine that underpins our clinical strategy in all heath care sectors.	NP, LP	GP20
20.	Provide training to our executive management board members on sustainable care models and how they are developed and deployed.	A	GP21
21.	Adopt a formal Policy for volunteering of our medical staff to low- and middle-income countries.	LP	GP22
22.	Routinely report key environmental, social, and financial performance indicators to our executive board members via our annual reporting and public sector duties reporting.	C, NP	GP23
23.	Regularly benchmark our performance in sustainability against other boards and similar organisations. Pro-actively seeking to identify best practice disseminating our findings to support others to improve best practice	NP	GP24
	Plans		
1.	Launch of the Strategy and development of the action plans	A	
2.	Development of the Sustainability Management Group membership	LP	
3.	Write and develop policy's – Sustainability / Procurement / Realistic Medicine / Sustainable Holistic care models / Travel / Volunteering	LP	
4.	To develop a Sustainability Leadership program	A	
5.	Develop an informing, engagement, and communications plan for the Strategy	A	
6.	Review and revision of the following business processes: - Annual Operational Plan - Caring for Ayrshire program modelling - Pan Ayrshire Net Zero Green Recovery Plan - Key NHSAA Policies - Property and Asset Management Strategy - Capital Investment Plan - Quality Improvement Strategy - Boards Financial plan	LP	

No.	Action	Allocation	NSAT
	Ethical Issues		
1.	To become a fully accredited Living Wage employer taking a proactive approach to reducing the staff risk of food and fuel poverty, including our subcontractors, and support the Service Providers Recognition scheme.	A	EL1
2.	Write an equity and diversity policy which measures our equitable access to our services, employment, and opportunities in training, exceeding the requirements in the equalities act 2010, and public sector equality duty.	NP	EL2
3.	Develop a clear modern slavery statement which is publicly available on our website, which is reviewed annually. Reducing those at risk and improving outcomes for those in our supply chain.	LP	EL3
	Our People		
1.	Conduct a consultation process to include all NHS Ayrshire and Arran key stakeholders to ensure all views, opinions and plans can be incorporated into the Sustainability Strategy action plan.	A	
2.	We will include all relevant networks and local partners in this work, to ensure we capture views from across pan Ayrshire. Including trade unions, professional associations, local community planning partnerships, Health promoting health services, NHSAA equality groups, Young people, LGBT+ youth, Enable, Health and wellbeing groups, and disability networks.	A	
3.	Develop, resource and plan an informing, engagement and communication programme to support the NHS A&A Sustainability Strategy, including feedback mechanisms to capture changes and then demonstrate how changes have been made	A	
4.	Help develop and nurture Sustainable Development Groups across the organisation to take forward actions and plans to achieve our sustainable key performance indicators.	NP	
5.	Maximising the opportunities for using online marketing and digital platforms to promote NHS Ayrshire and Arran and maximising the benefits of Job Train		
6.	Encourage local recruitment		
7.	Incorporate sustainable values into our person specification to embed values and actions Induction		
8.	Building in sustainability and the strategy as part of our induction handbook and include as part of the core values of the organisation		
9.	PDR - Setting good practice objectives in relation to travel, energy consumption and looking at ways of consuming less resources (paper and electricity as part of our working practices.)		
10.	Reviewing postage and paper systems to eliminate paper waste		
	Plans		
1.	To develop monitoring of sustainable changes in the organisation through the creation of an NHSAA Sustainability and Wellbeing App, to provide two-way feedback and open communications platform for all staff. This will track sustainable action progress, providing vital feedback to the organisation of progress towards organisational change, enabling a feedback mechanism for wellbeing and sustainability. Having this form of communication in the largest provider of jobs in Ayrshire will help drive change.	A	

2.	Identify communications leads within the board to build up the success of the strategy. This will need to be widened from the usual format to ensure as wide a reach as possible recognising people access information in a variety of ways. It will also include, staff, patients and all stakeholders as outlined below.	A	
	Welfare		
1.	Actively work with our strategic partnerships and other key partners such as the job centre, princess trust, Enable, Redeploy etc…to plan improved access to employment opportunities.	A	W1
2.	We will proactively work with local colleges, universities, and other employment agencies to develop programs including Youth Employability and Apprenticeship programs. Engaging with staff to support developing of roles and new ways of working.	A	W2
3.	Actively work in partnership with professional and local organisations, trade unions and all our staff in the development of our working practices. We will engage our staff in shaping and supporting service improvements, developing new ways of working. Exceeding the minimum standards set out in the Partnership Information Network polices.	LP	W3
4.	Develop our workforce strategy to have a positive impact on our staff's health, wellbeing, and sustainability. Ensure the Staff Governance standard is well established, and we exceed the current requirements.	LP	W4
5.	We will demonstrate that we are taking actions to improve and support the wellbeing of our staff exceeding that of the Scottish Governments policy.	A	W5
6.	Provide staff with schemes to support flexible working, targeted mentoring, parents, and childcare vouchers, play areas, breastfeeding areas, staff discounts and access to credit unions.	LP	W6
7.	Create a visible process to and access to interventions for all staff to improve both physical and mental health of our work force. Undertaking a workplace health and wellbeing assessment allowing us to identify any issues which require interventions.	A	W7

Communities		**Allocation**	**NSAT**
1.	Seek to ensure that underrepresented and disadvantaged groups are engaged in our sustainability initiatives. We will provide the resources to include these groups, reaching voices that are seldom heard.	PHP, NP	WC1
2.	We will offer accessible energy advice and warm homes support to our patients, carers, their families, and the wider community.	LP	WC2
3.	We educate our staff and patients alike in about the importance of a balanced nutritional diet and the benefits of healthy local foods.	NP, LP	WC3
4.	We provide a variety of volunteering and other opportunities for members of local community directly relating to the delivery of our sustainable objectives. Outdoor growing, physical activity, maintenance of greenspace work.	NP	WC4
5.	We will measure the impact of our travel and transport in environmental, financial, and health terms and taken action to reduce traffic and associated air pollution emissions.	C, NP	WC5
6.	We will work with local agencies including local authorities, universities and third sector to contribute to the delivery of area wide greenhouse gas emissions reduction strategies.	LP	WC6

7.	Work with local stakeholders including local authorities, community groups, local and regional health resilience groups, community planning and civil contingence groups in identifying risks posed by current weather and climate change review these annually at least.	NP, LP	WC7
8.	We will work actively with our community planning partners in developing clear action plans to ensure venerable communities are supported during extreme weather events.	C, LP	WC8
9.	We shall actively consult other local health and social care organisations, public agencies (HSPC, SAS, and Police) and local communities as we brief, design, build, and operate our facilities.	NP, LP	WC9
10.	Our PAMS (Property Asset Management Strategy) is informed and developed with a wide range of stakeholders including staff, patients, users, and local community as appropriate. Evidencing outdoor activity improvements in quality and accessibility.	NP	WC10
11.	We will work with local Greenspace, biodiversity partners, and voluntary organisations (wildlife trust, beekeepers, and nature groups) to promote the use of our greenspace within and out with our own estate.	PHP, NP	WC11

Awareness		Allocation	NSAT
1.	Ensure we have a current engagement campaign that encourages all our staff to be more sustainable and promote healthy lifestyles. This includes activity across multiple media channels. Review staff working practices and engaging senior managers to champion sustainable choices.	NP	A1
2.	Have an informing, engagement, and communications plan to promote sustainability to staff, patients, visitors and the local community	A	A2
3.	Encourage our staff to be a part of our sustainable journey through engaging and coordinating approach /campaigning that staff can identify with and contribute to.	A	A3
4.	Clearly communicate the value we place on being a net zero carbon organisation and the effects of climate change on human health is clearly articulated to all staff and patients.	C, NP	A4
5.	We have an active group of Sustainability Champions who help support sustainability awareness and action across our board. Our sustainability champions have access to a variety of sources and support including social networking, webinars, and workshops.	A	A5
6.	Staff are expected to demonstrate sustainable behaviours in their role and are supported with training (Marrakesh / Sustainability modules on LearnPro)	NP, LP	A6
7.	Integrate sustainable actions and management in everyone's job role through the annual Personal Development Review process (PDR).	NP, LP	
8.	Develop a process to help drive the triple bottom line calculations for products, goods, and service decision making / procurement processes.	NP, LP	
9.	Ensure sustainability is include in all performance management activities across the board.	NP, LP	

2. Sustainable Models of Care

No.	Action	Allocation	NSAT
Sustainable Models of Care			
No.	Action	**Allocation**	**NSAT**
1.	Embed the principles set out in realistic medicine to ensure we have a whole system wide approach for the best use of resources including financial, staff, patients, public, infrastructure, and nature.	NP	S1
2.	Commit to providing the best value for taxpayer's money and the most cost effective, fair, and sustainable use of finite resources is explicitly reflected in our values, and definition of quality.	NP, LP	S2
3.	We will routinely link sustainability as a dimension of quality such as fairness, inequalities, and social justice when designing, delivering, and commissioning care models.	PHP, NP	S3
4.	Create care models that are holistically sustainable and have taken a formal evaluation of the health, social, environmental, and direct financial co benefits.	NP	S4
5.	Routinely engage with patients, their carers/families, their families, and the wider community in our service design.	LP	S5
6.	Routinely engage with our staff as part of our approach to service design asking staff to place themselves as the patient. This will be set out as part of our policy relating to realistic medicine.	NP	S6
7.	Ensure prevention is embedded in the development of all our models of care, both internally and with external partners. We will undertake a formal evaluation of at least one preventative action and produce a case study.	PHP	S7
8.	To embed the sustainable use of resources in our decision-making process at all stages of service design and service commissioning. Our decision criteria far exceed a simple statement of intent within our boards sustainable care policy and statutory duties.	NP	S8
9.	Include resilience and flexibility within our formal approach to service design and service commissioning. Our care models demonstrate how we are transforming service delivery.	NP	S9
10.	Calculate the environmental impact, including greenhouse gas emissions, of specific care models and identified the areas of greatest impact. We will then use this information to reduce our environmental impact and produce more environmentally sustainable care models.	PHP, NP	S10
11.	Include environment, social, and financial sustainability as key component of population assessment / joint strategic needs assessments. We can show how the population need assessment has influenced a final model of care.	PHP, NP	S11
12.	We will routinely use a range of mechanisms including patient engagement, better incentives, and the innovative use of technology to test more sustainable care models.	LP	S12
13.	Actively work with all the community planning partnerships in which we are a statutory planning partner to help improve local systems of care. We will put in place formal agreements to meet these requirements in planning and will ensure that environmental sustainability is included in any modelling.	LP	S13
14.	Routinely capture and share learning, both internally and with external partners, both of good practice and where we can do better to support care models in being future proof. We will evaluate our new care models and share evidence about impact costs, efficiency, and sustainability gains.	A	S14

	Theatres and Anaesthetics (Including ICU, Day Surgery, and Theatres)	Allocation	NSAT
1.	Review controls of theatre air and scope potential for investment in systems to make improvements including sensor controls		A
2.	Clinical quality improvement work to reduce the use of Desflurane evaluating the cost and environmental impact across all sites		C
3.	Clinical quality improvement work to reduce the use, optimise management and reduce waste of nitrous oxide evaluating the cost and environmental impact across all sites.		
4.	Complete change over to low flow anaesthetic machines		LP
5.	Review high volume single use products and review environmental impact		C
6.	Review cost / carbon savings in moving over to the following systems: - Neptune 3 – fluid capture and disposal system - Alphacore 5 – Patient warming system – Neonatal, paediatric & perioperative care - ivNow – Enthermics ivNow – Efficient fluid warming equipment		C
7.	Sit on National Procurement Commodity Advisory Panels to promote the use of low carbon fluid warming technologies		
8.	AGSS switch off – investigate efficient practices to reduce power consumption and switching off the system when not in use		A
9.	Use of Low Flow anaesthetics as standard removing desflurane from normal stock items, though a supply should be available in theatres if required		C, A
10.	Investigate destruction technologies using UV to break down nitrous oxide prior to entering atmosphere.		C, A
11.	Reuse, scavenging, and extraction of anaesthetic gasses for example SageTech		C, A
12.	Establish board wide working group to liaise with AAGBI and SEAG.		A
13.	Increase Recycling: - Anaesthetic bi products - single use plastic - introduce reusable sharps boxes		C, NP
14.	Tie in theatre recycling into the "Plan on a Page" – Pentana reporting - Sustainable Action in waste – lead by support services / waste.		C, NP

Primary Care			
No.	Action	Allocation	NSAT
1.	To develop the understanding of climate change on health	PHP	
2.	To develop the impacts on health of taking action	PHP	
3.	Understand and develop values as a health professional	PHP	
4.	Develop practical actions clinicians can take to share good practices in a local Ayrshire network	A	
5.	Promote and support virtual consultations/clinics where clinically appropriate highlighting the positive impact on the environment.	NP	
6.	Adaption of realistic medicine CMO Strategy care closer to home	NP	
7.	Private practices to review energy statements and provide reports to the board	C	
8.	Provide support for building networks and environmental sustainability including active travel, links to the Green Health Partnership, green prescribing, and increase use of green space	A, LP	
9.	Engage primary care in developing a circular economy, waste management and recycling programs	C, NP	
10.	We will prioritise low carbon alternatives for metered dose inhalers in our joint formulary and switch patients to these alternatives where it is clinically appropriate to do so and is in the best interests of the patient	C, NP	
11.	Put primary care at the heart of Caring for Ayrshire program, strategic plans for mobilisation, re-design, and capital planning services, for environmental sustainability.	NP, LP	
12.	We will focus on the high impact pharmaceuticals developing a process for monitoring of the triple bottom line.	C, NP	
13.	Develop a sustainable primary care model – promoting diet changes, decarbonising of people's lives, being more active, creating greener and healthier lands	PHP	
14.	To produce an NHS Ayrshire and Arran annual property energy display certificate to promote improvements such has heating, glazing, lighting upgrades.	C	
15.	Increase rates of recycling	C	
16.	Half all-clinical waste streams	C	
17.	Removal of plastic water coolers, and provide mains fed water	LP	
18.	Audit printed materials and reduce paper production	LP	
19.	Develop a social prescribing strategy that includes green prescribing	PHP	
20.	Promote Polypharmacy Reviews – We will continue to undertake and widen access to polypharmacy reviews in accordance with our polypharmacy action plan.	LP	

Pharmaceuticals			
No.	Action	Allocation	NSAT
1.	We will use NICE Asthma patient's decision aid to support decision making and a shift to low carbon inhalers https://www.nice.org.uk/guidance/ng80/resources/inhalers-for-asthma-patientdecision-aid-pdf-6727144573	C, NP	
2.	We will support and promote greener disposal of inhalers as such schemes are developed	A	
3.	We will use the learning from improved asthma/COPD prescribing to build sustainability and environmental impacts into our prescribing management systems and clinical impacts decision making process	A	
4.	We will work with National Procurement on the provision of inhalers to put pressure on the industry to produce lower emission inhalers.	A	
5.	We will work with National Procurement to incorporate sustainability indicators in the contracting process for medicines	A	
6.	We will include national sustainability indicators where appropriate in prescribing guidelines	NP	
7.	We will consider sustainability as part of formulary applications and the regular Formulary review process	NP	
8.	We will aim to reduce pharmaceutical waste through improved prescribing practices including supporting patients' adherence to medicines	C	
9.	We will continue to undertake waste review projects in all clinical settings including care homes, primary care, and secondary care	C	
10.	We will work towards the 2030 goal of no medical pharmaceuticals to enter the water system from any NHSAA hospital sites as technology moves to support this.	A	

The Rise of AMR		Allocation	NSAT
1.	To bring pharmaceutical companies accountable for the waste and pollution associated with effluent in the production of antibiotics through procurement channels and EMS requirements	C, A	
2.	We will continue to promote and monitor our performance in relation to antimicrobial stewardship.	NP	
4.	We will raise awareness of the appropriate disposal of antimicrobials – i.e. return to pharmacy for safe disposal	NP	
5.	We will develop and promote collection schemes for expired and unused antibiotics		
5.	We will aim to achieve zero discharge of antimicrobials into the water supply from all major hospitals and health centres by 2030 as technology develops to support this.	PHP	

Outpatient Redesign		Allocation	NSAT
1.	Environmental sustainability must be addressed during service re-design within the Caring for Ayrshire Vision, strategy, and new clinical strategies.	LP	
2.	The new clinical strategic development post sitting in Infrastructure will need a redesign framework to assess the redesign impact of the system considering the complexities and journey through the system and the impact this has on sustainability of the service overall. Outcome mapping should be used to capture the changes and impacts of the service redesign in terms of their environmental impact, social, and economic sustainability. The triple bottom line.	C, LP	
3.	Use Near Me to estimate carbon impacts of changes	LP, A	
4.	Develop an outcome map for the overall transformation process including outcomes for social, environment and financial modelling.	A	

Emergency and Intensive Care		Allocation	NSAT
1.	Increase waste segregation	C	
2.	Build up a support program to staff to help increase awareness of recycling in this area	LP	
3.	Access to greenspace for staff, patients, visitors to increase wellbeing	PHP	
4.	Evaluate and develop research around the environmental impact of products both single use and reusable items along with costs, carbon, and environmental factors to inform product choices.	A	

Medical Devices		Allocation	NSAT
1.	To eliminate BPA, EDC's & PVC from all medical instrumentation.	PHP	
2.	To eliminate the use of pipes and tubes in neonatal and maternity care which involve the use of phthalates such as DEHP.	PHP	
3.	Phasing out of all endocrine disruption chemicals, carcinogenic, mutagenic, and toxic reprotoxic substances, in particular phthalates in medical devices.	PHP	
4.	Sustainable procurement of medical devices will incentivise for the substitution of hazardous chemicals in medical instruments.	PHP	
5.	Use PVC free blood bags www.pvcfreebloodbag.eu using materials such as polyolefin-based polymers	PHP	
6.	Open discussions with suppliers to include versions of equipment which are free from PVC, DEHP, and BPA – these are contained within the resource safermedicaldevices.org	PHP	

No.	Action	Allocation	NSAT
	Impacts of Medical Plastic		
1.	To sort medical plastic out in theatres / trauma areas into 3 categories – PP, PE, & PET for recycling.	C	
2.	Investigate the recycling of drug container cups & other consumable products like baby bottles for example	A	
3.	Develop a blue renew medical plastic recycling program – joint partnership with other boards and waste contractor, or group together to collect, melt and sell off plastic for re-use (PP) sterimelt machine technology	A	
4.	Investigate joining the RECOmed scheme – to remove DEHP plasticiser from PVC plastics so they the PVC can be recycled – Vinyl plus scheme	A	
5.	To reduce the un-necessary use of plastics in healthcare	C	
6.	Reduce the amount of single use plastics and non-essential plastics where possible	A	
7.	Reductions in plastic should be included in the New Care delivery models	A	
8.	Build relationships across healthcare to strength our buying power to change the plastic industry through purchasing of safer plastics, new products, and packaging.	PHP	
9.	Educate staff and patients about the environmental and health hazards of plastic use	PHP	
10.	Carry out a baseline assessment to scope the scale of the plastic waste and where it is generated most	C	
11.	Encourage the use of re-usable instruments where possible using informed whole life costing information	A	
12.	Phase out of non-medical single use plastics	A	
13.	Substitute harmful to health medical plastics with existing safer alternatives	PHP	
14.	Establish an overarching strategy for plastics in healthcare (reduce, replace, reuse, recycle, rethink)	PHP	
15.	Open dialogue with suppliers, procurement, specialists, clinicians, and recyclers, to assess the full scope of opportunity across the supply chain.	A	

3. Our NHS

No.	Actions	Allocation	NSAT
Active Travel			
1.	Put in place a dedicated active travel lead and/or champion with responsibilities for promoting walking and cycling. Start to regularly monitor staff walking and cycling rates and report on these.	NP	AT1
2.	Set ambitious targets to significantly increase the number of everyday journeys our staff make by bike which is in line with the Cycling Plan for Scotland.	NP	AT2
3.	Introduced facilities at all our sites to encourage active travel including washing, changing facilities, lockers, and secure cycle parking.	PHP, LP	AT3
4.	Provide cycle / cycle awareness training to all our staff and they have access to discounts or free bicycles (cycle to work scheme, bike loans, and negotiated discounts). Training courses and bike courses are to be actively promoted via staff pages.	PHP	AT4
5.	Become a lead partner with other local agencies and transport providers to increase both the provision and connectivity of active travel infrastructure across the whole estate.	A	AT5
6.	Carry out annual staff travel surveys at each of our sites to monitor the travel choices of our staff, patients, visitors and suppliers and measure shifts in modes of transport.	NP	AT6
7.	Provide detailed information to all our patients and visitors on how to avoid using a car when accessing our sites including details of cycle routes and paths, cycle parking and public transport options.	A	AT7
8.	Actively promote the health, environmental and cost benefits of walking, cycling to our staff, patients, and visitors, providing information and advice on personal travel planning, different modes of transport and their financial savings including health benefits.	PHP	AT8

No.	Actions	Allocation	NSAT
Capital Projects			
1.	Produce a sustainable capital projects plan which ensures all potential opportunities in new buildings and refurbishments are leveraged for sustainability benefits and climate change and net zero targets.	NP	CP1
2.	We appoint a clear capital planning lead to manage sustainable capital and refurbishment projects. The person will be supported through a defined description and have access to training.	A	CP2
3.	All capital staff are to receive on-going training in sustainable construction / design and achieving sustainable outcomes within their roles, covering topics such as energy efficiency, resource use, climate change mitigations and adaptation, biodiversity, and active travel.	A	CP3
4.	We will apply a set of clear sustainability aims and objectives to all capital projects and major refurbishments. Design quality and sustainability principles will be integrated throughout each stage of the process.	A	CP4
5.	We will adopt a process to assess the sustainability of buildings/locations when leasing or procuring based on their sustainability performance. Considerations such as flooding, embedded carbon, resources, travel links, and greenspace	NP	CP5

6.	We will take a long-term view to sustainability and energy efficiency and apply whole life costing to all capital projects. Our economic appraisal and comparison of lifetime costs covers capital costs, finance costs, and future costs, including all operational costs.	NP, LP	CP6
7.	We will appoint a commissioning manager early in any project	A	CP7
8.	During commissioning and handover, we will monitor and report on the in-use performance of new buildings and refurbishment projects and aspirations, and work with the contractor to rectify any areas of poor performance.	LP	CP8
9.	Soft landings will be adopted to ensure the digital modelling matches that of the new building / refurbishment. The model will be used to ensure the HH sub meter data matches that of the model and any discrepancies will target where issues arise.	NP	
10.	All our new buildings and major refurbishments will be designed to allow short term and long-term flexibility to adapt, convert, and expand. We use initial feasibility studies future projections and long terms plans to inform the development of flexible spaces.	NP	CP9
11.	All our new facilities will incorporate resource efficiency and pollution prevention principles at all stages of the procurement process, including the waste hierarchy, low embedded carbon principles, circular economy, and designing for deconstruction.	NP	CP10
12.	All our capital projects and major refurbishments will be designed to be usable during future projected weather profiles. We will avoid sites with risks of flooding both now and in the future. We will use future temperature and climate change modelling during the design process.	NP	CP11
13.	All our new facilities and external public spaces will be designed to promote equality and healthy choices. Greenspace, active travel routes, garden and terrace areas, community growing spaces, roof gardens, way pointing for walking routes, stairs which are appealing and visible from lifts.	NP	CP12
14.	All our sites will incorporate a wide range of physical activities and active travel facilities will be available to both staff and visitors.	PHP, NP	CP13
15.	We will embed a broad range of community benefit outcomes into the brief, design, construction, and operation of all our capital projects.	NP, LP	CP14
16.	On occupation of our new buildings, we will communicate with and induct all staff on the wat it works. We will support staff to make energy efficiency decisions aligned with BMS controls and design strategies.	LP	CP15
17.	Following completion of all our capital projects we will carry out post project evaluation, soft landings, and post occupancy surveys including health, sustainability, and other outcome monitoring.	NP, LP	CP16
18.	We will assess our energy performance of the building in use between 6 to 12 months after occupation to ensure the parameters set in the design process have been achieved, and work with the contractor to rectify and areas of poor performance.	NP, LP	CP17
19.	BREEAM Excellent will be achieved in all new builds if subscribed to using SCIM, and very good for refurbishments works, agreed through the NDAP process. All to be carbon neutral following the sustainable construction & Scottish Government public sector net zero buildings guidance.	LP	CP18

Greenspace		Allocation	NSAT
1.	Appoint a "Green Health Champion" on our executive board to send strong signal about the importance and contribution of green health activities.	NP	G1
2.	Assess the extent and quality of our greenspace across the whole of our whole estate including potential opportunities to expand current greenspace provision, using GIS mapping to help plot the landscape.	NP	G2
3.	Set out tangible short- and long-term targets to increase the quantity and quality of greenspace across the whole of our estate. Identify opportunities to protect existing areas of greenspace and natural habitat as an important sink for carbon.	LP	G3
4.	Provide space for a wide range of nature-based health promotion initiatives and interventions at all sites where practically feasible. Build up a dedicated team lead within our board to engage staff, patients, and the wider community in outdoor activities.	PHP	G4
5.	Provide free and open access to high quality well maintained green spaces at all our sites where practically feasible. Working with residents and the wider community to pro-actively encourage the use of our outdoor estate.	NP	G5
6.	Encourage local community groups and third sector organisations to access and use our built assets and estate, including commercial and green spaces. Make available relevant information along with Register of Land on our website for community bodies wishing to submit a participation request under the communities planning act 2015.	NP	G6
7.	Provide access to green and natural areas and/or views of green land at all our sites where land is constrained, such as window boxes, green walls, green roofs, rainwater gardens, verges, and plotted gardens.	A	G7
8.	Develop an informing, engagement and communications plan to promote the health benefits of green space and contract with nature to staff, patients and the wider community. We will regularly advertise greenspace activities across our region.	NP	G8
9.	Implement a wide range of awareness raising and culture and behaviour change measures to encourage and support greater use of our outdoor estate by staff, patients, and visitors.	PHP	G9
10.	Work with our community partners, health and social care partnership, local authorities, voluntary/third sector, and other agencies to increase the use of outdoor estate and its connectivity with the surrounding environment. Establishing physical green links and wayfinding.	LP	G10
11.	Create a Green Health Strategic Framework to develop our outdoor resource and increase awareness and importance of this asset for future and current projects.	A	

Biodiversity and Nature		Allocation	NSAT
1.	Assess the impacts of the provision of our service on local biodiversity. This will allow us to put in place mitigation actions to reduce any adverse impacts and identify enhancement actions to increase biodiversity.	C	B1
2.	Write a policy stating that we must achieve a net gain for biodiversity.	NP, LP	
3.	Write a biodiversity Action Plan (BAP)	C	B2
4.	Gain board approval to have the plan financial backed.	NP	B2

5.	Appoint a lead board member for our biodiversity action plan (BAP) is supported financially and we have a dedicated expert lead within our board to oversee its implementation. Key staff are involved in its implementation and are supported with the appropriate training.	NP	B2
6.	Our grounds and greenspace are maintained in ways to minimise negative impacts and increase biodiversity value.	NP	B3
7.	We will remove the use of pesticides, sustainably manage organic waste, change mowing regimes to allow floristically rich grassland, and increase native planting with nectar fruit bearing and those better for foraging at all our sites.	LP	B4
8.	We will build up evidence that biodiversity has significantly improved across our estate due to our actions. There will be an increase in local animal and plant species.	NP	B5
9.	Create a program to identify and eradicate invasive species.	LP	B5
10.	Routinely communicate our Biodiversity Action Plan (BAP) progress to our staff, patients, and stakeholders.	A	B6
11.	Our information on biodiversity conservation will be made publicly available on our website and a variety of other formats.	A	B6
12.	We will provide our staff with the opportunity to get involved in biodiversity conservation activities.	A	B6

Digital Services		Allocation	NSAT
1.	Roll out of office 365	LP	
2.	Carry out a cost assessment for the private/public hosting of servers on the cloud using the IT costing tool by SG.	NP	
3.	Work with partners to assess what servers can be hosted on the cloud and what the costs would be for this work	LP	
4.	Evaluate and make efficiencies in our existing IT server rooms.	A	
5.	Introduce free air cooling for IT server rooms	A	
6.	Adjust climatic controls within server / node rooms to introduce temperature dead bands to stop heating and cooling at the same time within the building	A	
7.	Evaluate the process and cost savings of introducing virtual desktops replacing the need for a desk PC	A	
8.	Use an IT based energy management system to control the electronic equipment throughout the estate, identifying where pieces of surplus IT equipment is, like printers etc…	A	
9.	Continue and support the roll out of technologies to assist remote clinic consultations and remote working practices	LP	
10.	Improve Wi-Fi across all sites, health centres & clinics to promote agile working.	LP	
11.	Ensure end of life IT equipment is upcycled, recycled, promoting a circular economy.	NP	
12.	All IT procurements environmental sustainability is considered equally along with costs when purchasing new equipment. Whole life costing to be used, with power consumption, whole life carbon accounting, end of life materials disposal, and circular economy aspects.	NP	
13.	Sustainability to be introduced as part of the board's IT strategy.	LP	

Transport			
No.	Action.	Allocation	NSAT
1.	To deliver an estate wide electric vehicle infrastructure plan in place to highlight the areas where electric vehicle infrastructure will be required to meet the fleet requirements.	NP	
2.	Put in place a full time sustainable active transport lead encompassing fleet, logistics, private user scheme, car parking, transport services and business travel. The individual is supported through a defined remit and budget and will have access to training.	NP	T1
3.	We specify low emissions transport options across staff benefits and Board policy and strategy in line with our travel hierarchy. Senior level approval is required for all high emissions business travel.	LP	T2
4.	Adapt / Create a lease policy that promotes ultra-low emissions and electric vehicles and doesn't support high emissions vehicles.	LP	T2
5.	Reduce our greenhouse gas emissions from travel and transport by setting ambitious targets for decarbonising our fleet (small/medium) by 2025 in line with SG aspirations.	C	T3
6.	Cut our business mileage by 20% by 2025. Working in partnership with our local planning authority.	LP	
7.	Calculate our greenhouse gas emissions associated with our business travel and patient transport services.	C	T4
8.	Calculated the greenhouse gas emissions associated with commuting to and from staff's place of work.	C	T4
9.	We will segment business travel / mileage claims by directorate, departments, and services and assess trends on high users. This information will be reported to our executive board and we have implemented a range of actions to reduce business mileage.	LP	T5
10.	Put in place processes in place for staff that favour active travel, conference VC / teams, and public transport when choosing locations for meetings, training, and events.	LP	T6
11.	We will provide information to support healthy/active travel choices on our staff intranet and in room/event booking systems.	LP	
12.	Provide access to staff on a range of different processes and technologies to avoid business mileage including tele and video conferencing / TEAMS. We will raise awareness of the facilities available and provide training and support on their use.	LP	T7
13.	Procurement of our pool cars, fleet vehicles and logistics and transport solutions will assess the most sustainable option. This assessment includes the greenhouse gas CO_2e, NOx and $PM2.5$ particulate matter impacts of each vehicle.	NP	T8
14.	Ensure our policies are written to ensure that we procure sustainable and socially responsible transport.	NP	T8
15.	Use a range of technologies and innovations to minimise travel in the delivery of our services such a geographical information systems and freight consolidation.	LP	T9
16.	Patients and the public can access our services through mechanisms such as telemedicine and localised management of long-term conditions.	NP	T9
17.	Write green travel plans covering staff travelling to and from work and on business, patients, visitors, contractors, and fleet management. These are clearly communicated to our staff, patients, visitors, suppliers and to local communities.	NP	T10

4. Our Planet

No.	Action	Allocation	NSAT
Adaptation			
1.	We will undertake to carry out a Climate Change Risk Assessment which will highlight areas requiring business continuity plans/arrangements and additional resilience around supply across all our sites, and this is reviewed annually or after an event or near miss.	C, NP	AD1
2.	This assessment will then drive an adaptation action plan which will have costed actions.	C, NP	AD1
3.	The top RED identified issues will go onto the corporate Climate Change Risk register.	C	AD1
4.	We will appoint an adaptation lead, responsible for coordination of adaptation planning, resilience, and emergency preparedness in relation to climate change adaptation.	NP	AD1
5.	We will update our sites flood risk assessments the risk of flooding and address our key transport and access routes, supporting infrastructure (utilities, IT, and supplies) and workforce based on current and future projected climate conditions.	NP	AD2
6.	Develop a program of monitoring to capture data that will enable a robust assessment of the nature and severity of overheating at selected in-patient facilities.	LP	AD3
7.	We will review the risks to workforce and service delivery due to changes in disease patterns and in the health needs of the population.	PHP	AD4
8.	We will update our adaptation strategy policy guidance document to reflect current risks.	NP	
9.	We will ensure our staff are prepared to deal with different extreme weather scenarios. We will clearly communicate our Climate Change Risk Assessment & Adaptation plan and how this ties into our major incident planning to staff.	NP	AD5
10.	We will include contingencies for water and power shortages, adverse weather effecting service delivery and supply chain interruption to our sites.	NP	AD6
11.	We will put in place mitigation and contingencies to ensure scarcity issues within key resources which will affect business continuity and delivery of care.	NP	AD7
12.	Work with our community planning partners and key partners to develop local protocols in relation to civil contingencies act, UK CCRA and SCCAP. Introduction to the CCRA - Climate Change Committee (theccc.org.uk) Scottish Climate Change Adaptation Programme (SCCAP) - gov.scot (www.gov.scot)	NP	AD8
13.	Develop to work up at least on example evidence report of how we have implemented innovative/new technologies that help improve the resilience, flexibility and adaptation of our systems and infrastructure.	LP	AD9
14.	Risk asses the impacts of all adaptation decisions on local communities, and seek to identify adaptation measures with wider social, economic, and environmental benefits.	A	AD10

15.	Embed the effects of climate change in our organisations risk register in relation to clinical needs, types of clinical intervention, the quality of our estate and supporting infrastructure.	C	AD11

Environmental Management		Allocation	NSAT
1.	Aim to broaden quality management systems to include environmental impact and health assessment and environmental performance.	C, NP	
2.	Roll out a new EMS (Environmental Management System) tool across the organisation to ensure compliance with the current legislation.	NP	EM1
3.	We will use regular audits to assess current impacts to raise awareness of the opportunities and compliance issues of environmental sustainability.	C, NP	
4.	We will work alongside partner organisations to learn from and share learning, building up a framework that can protect, people, place, and planet, promoting health and wellbeing.	A	
5.	Develop KPI targets for the EMS and report on these to the board.	A	
6.	Put in place ambitious short and longer terms targets to reduce our energy demand and improve the energy efficiency of our estate in line with and exceeding the governments regulations and benchmark standards.	C, NP	EM2
7.	Introduce a measurement and evaluation process for all our energy and water efficiency measures, projects, and programs covering cost savings, energy, and water savings, energy, and water demand savings, avoid emissions and other non-quantified co-benefits such as environmental benefits, productivity improvements, jobs created, improved comfort and convenience.	C, NP	EM3
8.	Increase our automated monitoring of our energy and water use through the use of modern fully integrated energy management and control tools linked to localised smart metering at all our sites.	LP	EM4
9.	Increase our submetering of energy, heating, cooling, and water across the estate in areas where savings can be identified. Creation of a metering budget will be required to take forward costs for data collection, storage, and purchase of metering.	LP	EM5
10.	We will actively encourage and support new technologies that help reduce our demand in energy and water, and these must be considered in any investment for managing our demand in utilities, ventilation, cooling requirements, heating, and insulation.	NP	EM6
11.	To set targets to meeting 70% of our heat and cooling demand from renewable low carbon sources by 2032.	NP	EM7
12.	We will assess our space utilisation across the whole of the estate at least annually and monitor the potential for making more efficient use of our assets and facilities.	NP, LP	EM8
13.	To create a policy to monitor and manage pharmaceutical pollution on human health and the environment.	NP	EM9
14.	Create a risk-based system for recording the use of both directly and indirectly, of hazardous substances and chemicals including endocrine disrupting chemicals (EDC's), chemicals that are carcinogenic, mutagenic, or toxic to reproduction (CMR's), PVC, phthalates, mercury, brominated flame retardants, nanomaterials, pesticides, disinfectants, and fragranced chemicals, and for ensuring that all legal requirements are met.	C, PHP, LP	EM10

Carbon Emissions		Allocation	NSAT
1.	Set SMART targets for the reduction of greenhouse gasses including energy, water, waste, fleet, business travel, F-Gases, medical gasses, anaesthetic gasses, and the emissions associated with our supply chain.	C, NP	GHG1
2.	Monitor and report our scope 3 emissions from our supply chain to influence and reduce associated emissions from indirect sources.	NP	
3.	Work across Ayrshire in a joined-up approach to bring about a net zero green recovery work program looking at the wider impacts of the community to assist with a positive recovery to COVID.	LP	
4.	Encourage and utilise our staff's knowledge on the road to net zero emissions enabling them to act	A	
5.	Improve monitoring and reporting methodologies to capture wider emissions sources	C, NP	
6.	Ensure we report and share our carbon reduction journey at all levels of the organisation to encourage participation and share in the positive actions that are being taken.	A	
7.	Create a net zero route map to zero emissions (prior to 2045)	NP	
8.	Undertake a review of our supply chain emissions out with of the national contract centre, where we spend higher costs than through the NDP.	C, NP	
9.	We will ensure that all procurements address and identify carbon emission opportunities and maximise greenhouse gas emissions reduction opportunities in all our investments.	C	
10.	Our investments in buildings, transport, and energy specify the lowest emissions possible.	C	
11.	Make visible the impacts of greenhouse gas emissions on the climate visible for a range of activities where choice is available to our staff and patients.	A	
12.	Write a decarbonisation plan to assist us to reach a 50% reduction in emissions by 2030.	LP	

Procurement		Allocation	NSAT
1.	All the products and services we buy will undergo an assessment of sustainability opportunities and impacts using the sustainable public procurement prioritisation tool, Scottish Government Sustainability test, and life cycle mapping.	NP	P1
2.	Whole life cycle costing and mapping will become a core part of all procurements within our board. We will evaluate the environmental externalities including energy and water consumption, climate change mitigation, waste, and prevention pollution as well as acquisition, use, maintenance, and end of life costs during the procurement of relevant goods and services.	NP	P2
3.	We will require high ethical and labour standards from all our contractors and request our suppliers to provide us with equality and diversity policies and indicators like % of female leaders, and unrepresented groups. We will ask suppliers that they conform to the modern slavery act.	C, NP	P3
4.	We will encourage our suppliers to exceed government guidelines for sustainability for purchasing not via national procurement frameworks including through external accreditations such as Food for Life, Red Tractor, Dolphin friendly, Soil Association, sustainable fish marks, FSC recycling content etc…	LP	P4
5.	We will routinely engage with and communicate our sustainability commitments and expectations to our suppliers, encouraging suppliers to use resources sustainably in their own operations.	LP	P5
6.	We will pro-actively engage with all our key suppliers to understand their vulnerability to climate change disruptions and the resilience and contingencies within their supply chain during extreme weather events. We will identify the parts of our supplier chain that are at the highest risk and we work with our suppliers to implement risk mitigations.	NP	P6
7.	We will undertake to routinely monitor the environmental impact (CO2e and air pollution) associated with our supplier's transport and logistics, and work with them to find ways of minimising their traffic burden. We will ask our suppliers to demonstrate ways of how they will minimise burden through more efficient planned deliveries / fewer polluting vehicles / driving training.	C, NP	P7
8.	The sustainability of hazardous substances and chemicals are reviewed as part of the procurement cycle. We will pro-actively seek to eliminate suspected hazards and switch to safer alternatives in all building materials, medical equipment, furniture, clothing, and PPE.	C, NP	P8
9.	Proactively work with all relevant suppliers to minimise the adverse environmental impact of disposable single use items where their use is unavoidable. We will identify all products where this is feasible and specify in our contracts that disposable products should incorporate a high minimum recycled content and are fully recyclable.	LP	P9
10.	We have systems and procedures in place to ensure full traceability of food and drink products in our supply chain. We track consumption patterns and disposal of food and drink products for patients and staff. Aim of 50% Scottish and 75% Scottish produce.	NP	P10
11.	We will create ambitious targets to increase the amount of healthy and sustainable food choices within our board in line with Good Food Nation aspirations, including catering services and food to staff, patients and the public in vending machines and retail products.	NP	P11

12.	We have committed to increase our spend with SME's, third sector bodies and supported businesses for products and services. We pro-actively engage with potential suppliers to support and facilitate their involvement in our procurements. We will create a process to award contracts to directly to SME's, third sector bodies and supported businesses where appropriate.	NP	P12

Sustainable Food	**Allocation**	**NSAT**
1. Develop and implement a circular economy model for food and food waste	NP	
2. Analyse food waste at all hospital sites to monitor and track waste	LP	
3. Remove the use of polystyrene food containers and provide recyclable / decomposable food containers	PHP	
4. We will participate on National Commodity Advisory Panels for the procurement of food to influence more sustainable local choices		
5. Remove the burning of fossil fuels from all kitchens, and electrify all our equipment	C, NP	
6. Introduce lower carbon impacting dishes	LP, A	
7. Look at mechanisms to address food waste and address donating to local charities where possible	LP	
8. Target of 5% food waste across all sites – measurements should be regularly throughout the year at varying times of the day.	NP	
9. Look at addressing portion sizing – offering smaller plate to help reduce food waste.	A	
10. Create systems and procedures to ensure full traceability of food and drink products in our supply chain.	NP	
11. We will track the consumption patterns and disposal of food and drink products for staff and patients.	LP	
12. We will use this information to identify key product lines and implement measures to minimise environmental impacts for all of them, sourcing 50% Scottish products, and 75% British produce.	LP	
13. We will create ambitious targets to increase the amount of healthy and sustainable food choices within our board in line with Good Food Nation aspirations, including catering services and food to staff, patients and the public in vending machines and retail products.	NP	P11
14. Ensure that our Catering Strategy is sustainable and embodies or exceeds national nutritional guidelines. Work with the supply chain to ensure that suppliers can deliver these requirements	NP	

Waste		Allocation	NSAT
1.	Minimise our waste	C	
2.	Encourage segregation of waste at its source	LP	
3.	Avoid waste incineration through influencing contracts and investigation no burn clinical waste treatments	A	
4.	Recycle and conserve resources where possible, investing in facilities to encourage recycling practices	C	
5.	Set board SMART targets for waste reduction and increased recycling with a baseline year and clear target date, which exceeds Scottish Government waste reduction targets.	C, NP	WA1
6.	Set interim targets and report our progress regularly to the executive board.	LP	WA2
7.	We will take a pan Ayrshire approach to ensure a co-ordinated action on waste minimisation, and each area (FM, Pharmacy, clinicians etc) has specific targets and objectives to reduce waste and increase material recovery.	LP	WA2
8.	We will monitor and record waste arising for all our waste streams regarding tonnage and associated costs across different parts of the organisation, and over time, including, general waste, recycling, clinical waste, hazardous waste, WEEE, and total waste.	C, NP	WA3
9.	Review the product lines used by our Board and look to streamline these.	LP	WA4
10.	We will implement a stock management system which is used by most of our departments.	LP	
11.	Create multiple initiatives to reduce material use in products purchased and services delivered, in line with Scottish Government Strategy "Making things last".	NP	WA5
12.	We will take a stewardship approach to ensure that our waste does not cause environmental harm.	PHP	WA6
13.	We will require our waste contractors to demonstrate the final destination of all our wastes. Any oversees facilities have been properly vetted and that any non-target (contaminated) material is within agreed thresholds.	NP	
14.	We will segregate all food waste and exceed requirements of the Waste Scotland Regulations 2012.	C, NP	WA7
15.	We will segregate green waste and we send food and green waste for composting.	C, NP	
16.	We will create an ongoing program of activities to support our staff to minimise waste and expense at home including hosting events on site with waste and energy savings experts, swap shops, repair facilities, encouraging recycling and re-use, offering year-round support and advice, and signposting to wider support agencies.	LP	WA8
17.	We will work with our partners to provide repair services and routinely make use of reuse systems/tools to maximise the repair and reuse of durable goods EG Warp IT.	NP	WA9
18.	Any of our surplus goods will be made available to other health boards, community partners, third sector organisations.	A	
19.	Engage with Zero Waste Scotland and National Scottish Procurement to support changes to accelerate the move to a circular economy in health care	C, NP	
20.	Introduce critical sustainability weightings into our procurement of products to support a stronger and more transparent process	NP	
21.	Implement multidisciplinary waste management groups on every hospital site and across the community.	LP, A	
22.	Promote a culture of reuse and repair items including the use of WARPit web platform to implement a more circular economy	NP	
23.	Work with procurement colleagues to shift away from the purchase throw away current model, to one of a circular economy	NP, LP	

24.	Review plastic medicine pots and move to a biodegradable/reusable alternative		

Appendix 2

Contributions and Resources		
Caring for Ayrshire Daring to Succeed	Helen Ross - Helen Ross Associates	
Global Health Citizenship SDG cards	Dr Emily Broadis – Specialist Register in Public Health – Chair of NHS Scotland Global Citizenship Lead Champion Network, Co-Founder of ReBaS	
Climate Change Deliverables	NHS England Net Zero Strategy - delivering-a-net-zero-national-health-service.pdf (england.nhs.uk)	
Theatres and Anaesthetics	Dr David Belch - Speciality Doctor Anaesthetics - SAS Educational Advisor for Ayrshire & Arran Departmental Lead for the Environment and Sustainability - University Hospital Ayr Scottish Environmental Anaesthesia Group	
Pharmaceuticals	Collette Kerr – Lead Pharmacist – Medicine Utilisation Respiratory Prescribing Group Royal Pharmaceutical Society – Declaration to tackling climate change and ecological emergency RPS commits to tackling climate emergency (rpharms.com)	
Rise of AMR	Dr Phillip Korsah Associate Medical Director – Anaesthetics – University Hospital Crosshouse Lindsay Lawless – Senior Pharmacist – University Hospital Crosshouse AMR	Health Care Without Harm (noharm-europe.org)	
Emergency and Intensive Care	Dr Claire Gilroy – Clinical Lead for Service Development and Improvement	
Realistic Medicine	Policy Office – Scottish Government -Realistic Medicine Team – Directorate of the Chief Medical Officer Phil Mackie – Lead Consultant at Scottish Public Health Network	

	Dr Claire Gilroy – Clinical Lead for Service Development and Improvement Dr Peter O'Brian Dr Stacey Armstrong	
Primary Care	Extreme Team – addressing prescribing in primary care Elaine Caldow – Public Health Program Lead – Ailsa Hospital David Meechan – Senior Project Officer – Greenspace for health – Ayrshire Central Hospital North Health and Care Social Partnership	
Medical Devices	Health Care Without Harm – Global Medical Devices Database www.safermedicaldevices.org EU Medical Devices reprocessing Regulation 26th May 2021 – Article 17 requirements	
Plastics in Healthcare	Plastic free healthcare system - Towards plastic-free healthcare in Europe | Health Care Without Harm (noharm-europe.org) Why PVC remains a problematic material Why PVC remains a problematic material | Health Care Without Harm (noharm-europe.org) Evaluating the case for recyclable PPE Building resilience: Evaluating the case for reusable medical protective clothing | Health Care Without Harm (noharm-europe.org)	
Carbon and Greenhouse Gasses	Shell and Exxon's secret 1980s climate change warnings | Climate crisis | The Guardian	
Greenspace, Biodiversity and Nature	Elaine Young – Head of Health Improvement – Assistant Director of Public Health – Ailsa Elaine Caldow – Public health Program Lead – Ailsa	
Procurement, Waste, Sustainable Food	Health Care Without Harm (noharm-europe.org)	