SCOTTISH AMBULANCE SERVICE - ANNUAL CLIMATE EMERGENCY AND SUSTAINABILITY REPORT 2021/22

Introduction

This is the Scottish Ambulance Service's (the Service) first annual Climate Emergency and Sustainability Report.

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

The World Health Organisation recognises that climate change is the single biggest health threat facing humanity. Health organisations have a duty to cut their greenhouse gas emissions, the cause of climate change, and influence wider society to take the action needed to both limit climate change and adapt to its impacts. More information on the profound and growing threat of climate change to health can be found here: www.who.int/news-room/fact-sheets/detail/climate-change-and-health

The Service is committed to operating, delivering and developing sustainably. This means that sustainability must be at the core of all of our decision making to positively influence our policies and how we run our services.

In our Sustainability Plan in January 2020 we developed the following statement describing our commitment.

The Scottish Ambulance Service is committed to ensuring that it considers Sustainability in all its actions and decisions. Sustainable Development is one of the guiding principles in the Service's Strategic and Operational Planning process.

The Service recognises its responsibilities to promote development which meets the needs of the Service

- *without compromising the ability of future generations or other communities to meet their needs, and,*
- *without overburdening the ecosystems on which we all depend for our social, environmental and economic well-being.*

The Service acknowledges the great potential benefits within policies and practices relating to employment, training, procurement, transport, energy, waste management and capital development policies and practices that create and support sustainable communities, through minimising environmental damage and promoting social and economic well-being and development.

This plan was approved by the Board in January 2020 and at that time agreed to then develop a wider Sustainability Strategy to 2030, supporting our Board 2030 Strategy and the then soon to be released, NHS Scotland Sustainability Strategy. We never imagined at that time that one month later we would be in the midst of a global pandemic.

As we have been responding to this crisis, we have been refocusing the Service wide 2030 strategy, as the recovery and remobilisation of this unprecedented situation unfolded.

The Service 2030 strategy was launched in September 2022 with one of our 6 strategic aims to 'deliver our net-zero climate targets'. This reinforced the Board's priority and importance placed on this important issue.

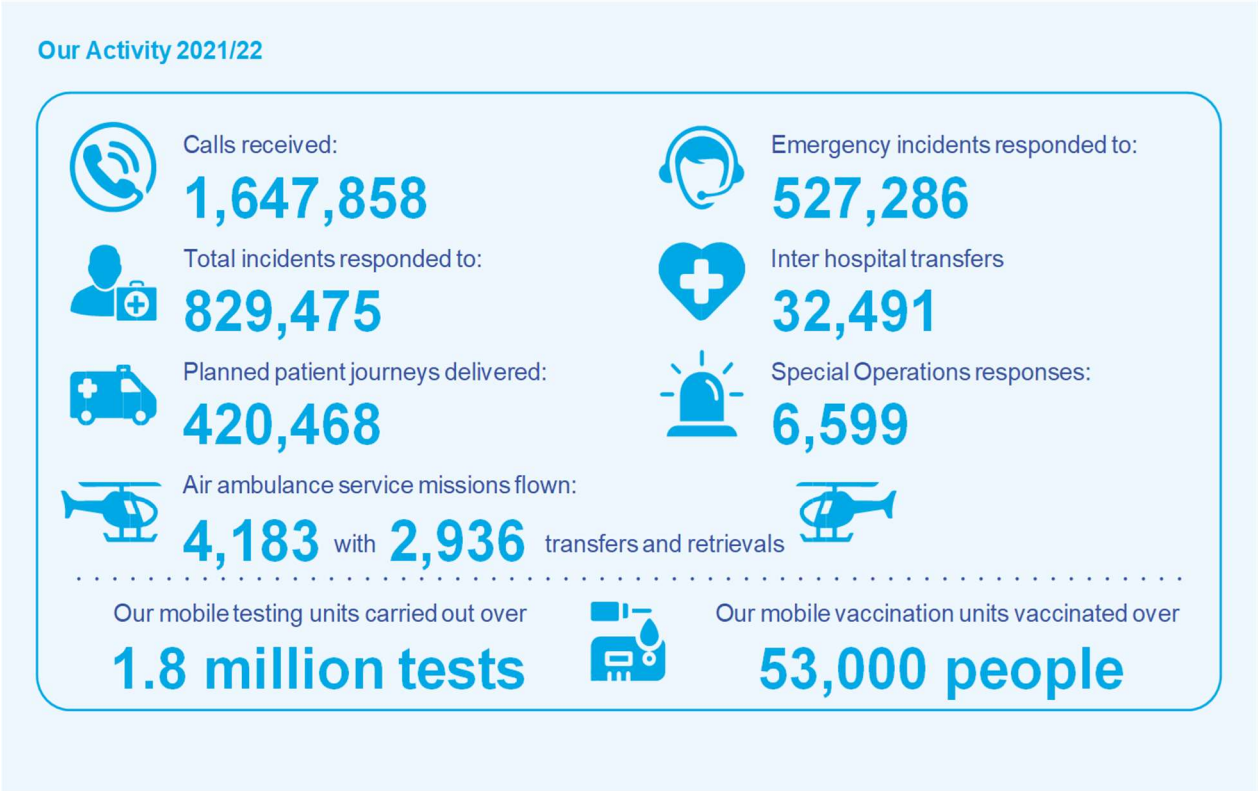
Our Sustainability plan was then updated to reflect

- the NHS Scotland Sustainability Strategy has now been published and importantly
- the carbon net zero ambitions being clearly defined in our Service 2030 Strategy, and
- our now clear strategic direction in relation to our 2030 Service ambitions and impact on the wider health priorities

and in September 2022 the Board approved our **2030 Sustainability Strategy – Our path to net zero**. This reflected the Scottish Government ambitions and is being supported by a delivery plan, with targets, delivery dates and outcomes reporting on progress through our 2030 governance structure.

As a national Emergency Service and NHS Board, the Service has changed how it delivers its services, providing more support, care and treatment to people in their homes, and for those patients requiring very specialist support, conveying them to hospitals.

Our Current Service at a Glance



Leadership and governance

To deliver out 2030 sustainability strategy, the Service has a clear Sustainability Organisational and Governance Structure identifying key roles, responsibilities, and lines of communication. We use this to foster sustainable practices, provide direction and influence behaviours and cultures.

We have

- ✓ appointed one of our Non Executive Board members as our Climate Emergency and Sustainability Champion
- ✓ appointed an executive lead for our Climate Emergency and Sustainability response
- ✓ ensured that our progress in responding to the climate emergency and sustainability issues is regularly considered by our Board
- ✓ will include a specific reference to all Board reports that have a specific reference to “Sustainability Impact/considerations” to reflect this is considered in all of our Board decision making
- ✓ established reporting on progress of the aims of this strategy through our 2030 governance structures, ensuring that those aims are fully integrated into all planning, management decisions and operational practices across the Service

To deliver this we have put in place a Climate Emergency Response and Sustainability Team (CERAS) who have taken a lead role in the delivery of the strategy.

Progress is reported at each Board meeting through our 2030 Strategy Board updates.

Greenhouse Gas Emissions

The Service aims to become a net-zero organisation by 2040 for the sources of greenhouse gas emissions.

The table below sets out the amount of greenhouse gas produced annually by the Service.

		Amount of greenhouse gas (tonnes of CO2 equivalent)			Percentage change since 2019/20
Source	**Description**	**2019/20**	**2020/21**	**2021/22**	**2021/22**
Building energy use	Greenhouse gases produced in providing electricity and energy heat for NHS buildings	2582	2557	2396	-7%
Non-medical F-gas use	Greenhouse gases used for things like refrigeration and air conditioning	15	42	17	+13%
Medical gases	Greenhouse gases used in anaesthetics - nitrous oxide (N20), Entonox (which contains nitrous oxide), desflurane, sevoflurane and isoflurane	1312	1133	1211	-7.6%
Metered dose inhaler propellant	Greenhouse gases used as a propellant in inhalers used to treat asthma and chronic obstructive pulmonary disorder (COPD)	N/A	N/A	N/A	N/A
NHS fleet use (Inc. Air Ambulance)	Greenhouse gases produced by NHS vehicles	20557	17,956	19,791	-4%
Waste	The greenhouse gases produced by the disposal and treatment of waste produced by the NHS	13	22	24	+85%
Water	The greenhouse gas produced from the use of water and the treatment of waste water	7	4	4	-43%
Business travel	Greenhouse gases produced by staff travel for work purposes, not using NHS vehicles.	637	473	363	-43%
Sub-Total		**24,564**	**21,167**	**23,806**	**-3%**
Carbon sequestration	The amount of carbon dioxide captured per by woodland, trees, grassland and shrubs growing on NHS grounds.	Not Applicable	Not Applicable	Not Applicable	
Greenhouse gas emissions minus carbon sequestration		Not Applicable	Not Applicable	Not Applicable	

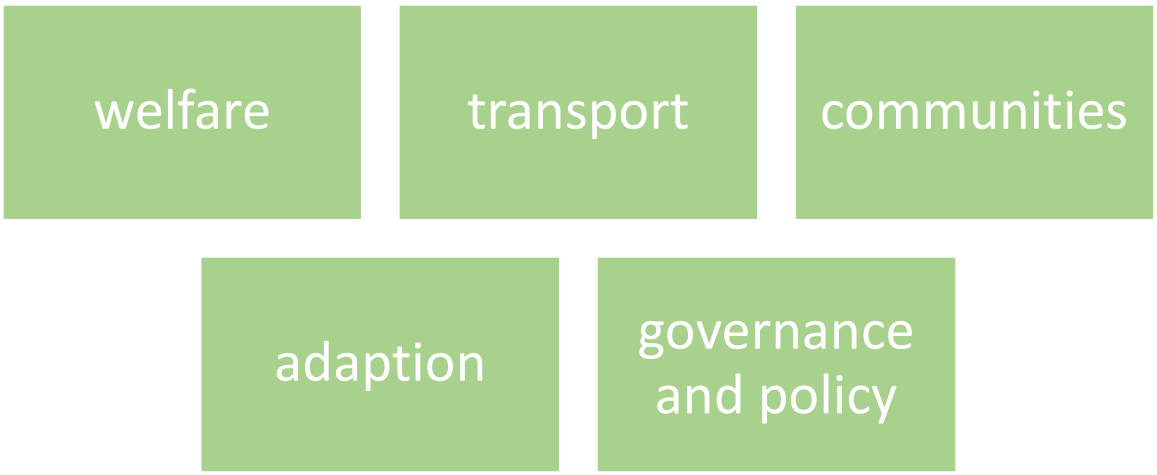
Our strategy and associated action plan describes how we plan to deliver this target to 2040.

National Sustainability Assessment

NHS Scotland has developed a National Sustainability Assessment Tool (NSAT) which all Health Boards use on an annual basis to measure their progress across sixteen different areas of sustainability.

In 2021/22, the Service undertook a self assessment

Our five highest scoring areas were:



Our three areas where we are focusing our improvement actions on are:

Climate Change Adaptation

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

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

We have undertaken the following to better understand the impact of climate change on the Service and the people and places we serve:

- Completed flood risk assessments for all properties
- Developed a Climate Change Risk Assessment
- Developed continuity plans for;
    - ❖ Adverse Weather
    - ❖ Business Continuity Frameworks
    - ❖ Fuel Shortages
    - ❖ Pandemic Outbreaks
    - ❖ Community Resilience
    - ❖ Community First Responders

A resilience lead for the Service has been identified and is a key member of the Service's Climate Emergency Response and Sustainability group.

Our Climate Change Risk Assessment & Adaptation Plan is reviewed annually. This risk assessment aims to improve the resilience of the Service's assets to current climate risks and future climate change, whilst also assisting in:

- Protecting vulnerable sites, services & communities
- Reducing the cost of service disruption
- Complying with legal requirements

The Service has adopted a six-stage approach, of:

- Identifying climate hazards that are likely to affect our assets
- Assessing the probability of the climate hazard occurring
- Identifying assets that could be affected by the hazards now or in the future
- Assessing the scale of the consequence for specific assets if the hazard occurred
- Completing the risk assessment (probability x consequence)
- Developing adaptation plans

In doing so, we have considered an appropriate management approach (Tolerate, Treat, Transfer or Terminate) to identify and have recommended adaptation measures.

The climate hazards that are a priority for the service for the year ahead are assessing the public, patient and staff impact on:

- Higher average temperature and extended periods of hot weather
- Extended periods of dry weather (including the impact of wildfires),
- Heavy downpours and driving rain
- Storm surge
- Flooding
- Cold spells
- Combined climatic effects including storm, high winds, lightning, fog mist and low cloud.

This will also include the impact on our air ambulance service, assets and our overall healthcare service provision.

Building Energy

Our path to net zero strategy aims to use renewable heat sources for all of the buildings owned by the Service by the year 2038.

The Service has 92 owned buildings including ambulance stations, fleet workshops and a further 67 leased buildings including our Specialist Operations Response Team bases, our Ambulance Control Centres, various regional ambulance stations owned by private landlords and an increasing number of shared facilities with NHS territorial Boards, Scottish Fire & Rescue Service and Police Scotland.

In 2021/22, the Service used 12,200,415 kWh of energy, 4,609,720 kWh(electricity), 7,590,695 kWh(gas) and 10,583 Litres of heating oil. This was a 2% decrease in electricity consumption, 2.5% decrease in gas and 3% decrease in heating oil from 2020/21.

In 2021/22 2396 tonnes of CO2 equivalent were produced by the Service's use of energy for buildings. This was a decrease of 6% from the year before, reported at 2557 tonnes of Co2 equivalent.

Sustainable Care

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

Greenhouse gases are used as anaesthetics and pain killers. These gases are nitrous oxide (laughing gas), Entonox (which contains nitrous oxide) and the "volatile gases" - desflurane, sevoflurane and isoflurane.

The Service's emissions from these gases are set out in the table below:

Anaesthetic gas use			
Source	**2018/19 (baseline year) tCO2e**	**2021/22 - tCO2e**	**Percentage change since 2018/19**
Volatile gases			
Desflurane	Not applicable	Not applicable	Not applicable
Isoflurane	Not applicable	Not applicable	Not applicable
Sevoflurane	Not applicable	Not applicable	Not applicable
Volatile gas total			
Nitrous oxide and Entonox			
Piped Nitrous oxide	Not applicable	Not applicable	Not applicable
Portable Nitrous oxide	Not applicable	Not applicable	Not applicable
Piped Entonox	Not applicable	Not applicable	Not applicable
Portable Entonox	1336	1211	-9%
Nitrous oxide and Entonox total			
Anaesthetic gas total	**1336**	**1211**	-9%

The Service is making good progress in reducing its carbon footprint through the adoption of more sustainable care practices through:

- Digital Service Opportunities through the development of our clinical hub where senior clinical decision makers working in our Ambulance Control Centres are able to assess the needs of patients at the point of contact (via '999 calls'). This improves the care for patients and allows patients to receive advice, or 'remote triage' over the telephone or by other means of digital communication, potentially reducing the requirement for hospital admission.
- The integration of health and social care and the drive for greater multi-disciplinary teams and blending of roles means that we are able to recruit from a variety of experienced healthcare professions and advance our clinical practice. The Advanced Practitioners in Urgent and Primary Care rotate through various work settings as part of their role. They are skilled in finding alternatives to admission, whether by treating the patient themselves, referring to appropriate partners in the community or bypassing ED with direct admission. They provide assessment and treatment in person, by phone or video consultation remotely and when working in collaboration with primary care partners.

- See and Treat and Hear and Treat - Increasingly the ability to treat patients at home without the need to convey to hospital has an overall better outcome for patients, while also reducing the miles travelled conveying patients to hospital unless absolutely necessary.

We remain committed to advancing our delivery of sustainable care, for the benefits of our patients and our environment.

Travel and Transport

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

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

In aiming to reduce travel costs we continue to encourage the use of online alternatives to meetings by utilising Teams. Continuing towards completing an Agile Working Policy in 2022/23. In addition we are committed to producing a business travel policy in 2023/24 as part of our strategy delivery plan.

In line with our strategic ambitions, we on target to remove all petrol and diesel fuelled cars from our fleet by 2025.

The following table sets out how many renewable powered and fossil fuel vehicles were in the Service's fleet at the end of March 2022.

	Renewable powered vehicles	Fossil fuel vehicles	Total vehicles	Percentage renewable powered vehicles
Cars	245	231	476	51.4%
Light Commercial Vehicles	35	60	95	36.8%
Heavy vehicles		1019	1019	0%

Greenspace and Biodiversity

In addition to health benefits for patients and staff, investment in greenspace around hospitals and healthcare centres helps tackle climate change and biodiversity loss.

Whilst there may be less opportunity to develop greenspaces at Service sites due to the operational requirement for hardstanding areas for A&E vehicles, Paramedic Response Units, Patient Transport vehicles, we remain committed to preserving and enhancing our land, creating more multi-functional greenspace that is valued by those who use and enjoy it and the ecosystems that it supports.

Our strategy describes ambitions to

- proactively seeking collaborative opportunities with local partners to improve the natural links between our greenspace and other local areas of greenspace.
- increasing the opportunity to introduce biophilic design across our estate, better connecting people with nature.
- identifying opportunities to sensitively support local biodiversity action plans, by means of any planned external enhancement.
- to publishing a report every three years on the actions taken by us in support of preserving and enhancing greenspace and biodiversity, recognising that we have a public duty, under section 2A of the Nature Conservation (Scotland) Act 2004.

We aim to realise these ambition through the planned redevelopment of our Glasgow South Ambulance Station, currently at outline business stage development. In addition our action plan for 2023/24 builds upon the success of outside space development in 2022/23 and empowers our local operational teams to develop these further.

Sustainable Procurement, Circular Economy and Waste

Earth Overshoot Day marks the date when our demand for resources exceeds what Earth can regenerate in that year. In 2020, the Global Earth Overshoot Day was 22nd August. In 2021, it was 29th July. The current global trend shows a concerning picture of over consumption.

For the UK, the picture is more worrying. In 2022, the UK's Earth Overshoot Day was 19th May. The current level of consumption of materials is not sustainable, it is the root cause of the triple planetary crises of climate change, biodiversity loss and pollution.

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

During 2021/22 the Service's Procurement team have updated their policy and procedures to incorporate the continuing development of the Scottish Government's sustainability requirements, including realising the benefits of being an anchor institution in progressing toward net zero by 2030.

When procuring goods and services, we continue to recognise that supply chain sustainability must be considered to help determine the extent of the associated greenhouse gas emissions and social and environmental impacts.

The Service is utilising the suite of sustainable procurement tools and guidance that Scottish Government has made available to all public bodies to assess current levels of performance, helping to inform the actions required to embed good procurement practice to realise intended sustainable outcomes.

We also continue to look for opportunities to broaden access to contracts for Small and Medium Sized Enterprises (SMEs), the third sector and supported businesses.

This encompasses:

- Looking for innovation and harnessing more sustainable technologies
- Encouraging our suppliers to provide more sustainable goods and services with lower carbon emissions
- Expanding the use of community benefits
- Embedding fair work practices
- Promoting equality and tackling inequality and
- Inclusion of Life cycle impact mapping as part of the sustainability test.

For any Procurement undertaken by the Service's Procurement, there is a mandatory requirement for every tendering supplier to confirm their position in relation to climate change related aspects.

We continue to promote the use of items which have been designed for durability and upgradability. Tendering contracts can apply a focus on durability / upgrade ability where appropriate.

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

The table below provides information on the type of waste we produce and the progress from 2020/21 to 2021/22.

Type	2020/21 (tonnes)	2021/22 (tonnes)	Percentage change
Waste to landfill	23	24	3%
Waste to incineration	0	0	0
Recycled waste	440	422	-4%
Food waste	Not applicable	Not applicable	
Clinical waste	10	11	10%

Environmental stewardship

Environmental stewardship means acting as a steward, or caretaker, of the environment and taking responsibility for the actions which affect our shared environmental quality. This includes any activities which may adversely impact on land, air and water, either through the unsustainable use of resources or the generation of waste and pollution.

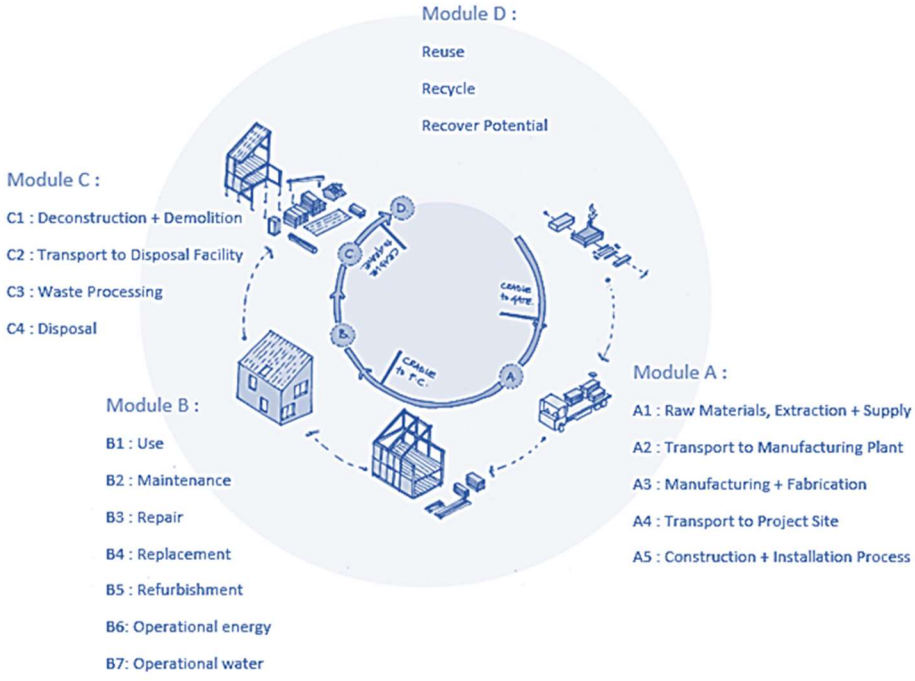
Having an Environmental Management System (EMS) in place provides a framework that helps to achieve our environmental goals through consistent review, evaluation, and improvement of our environmental performance. We are currently assessing the resource requirement and benefits realisation of implementing a SAS EMS.

Sustainable construction

Where there is a need for new healthcare facilities, we want both the buildings and grounds to be safe, nature-rich, sustainable, resilient and accessible.

The Service is working on applying these ambitions to our Glasgow South Ambulance Station Replacement Building programme, with an outline business case being developed.
The Service is committed to adopting a whole life approach to sustainability, considering carbon mitigation and environmental impacts during every life cycle stage.

Whole Life Approach – Construction Life Cycle Stages as defined by BS EN 15978



We are considering whole life impacts as part of our future investment decisions, for existing assets, planned refurbishment and new build projects. This includes:

- Product stage (Modules A1 – A3) – emissions arising from extracting and transporting raw material, then manufacturing into usable material.

- Construction process stage (Modules A4-A5) - emissions arising from transporting material to site and constructing the building.

- Use stage (Modules B1-B7) - emissions arising during an asset's use stage, including the need for and the associated impact of maintenance, repair, energy and water use, replacement and refurbishment.

- End of life stage (C1-C4) - emissions arising from the final deconstruction, waste processing and disposal.

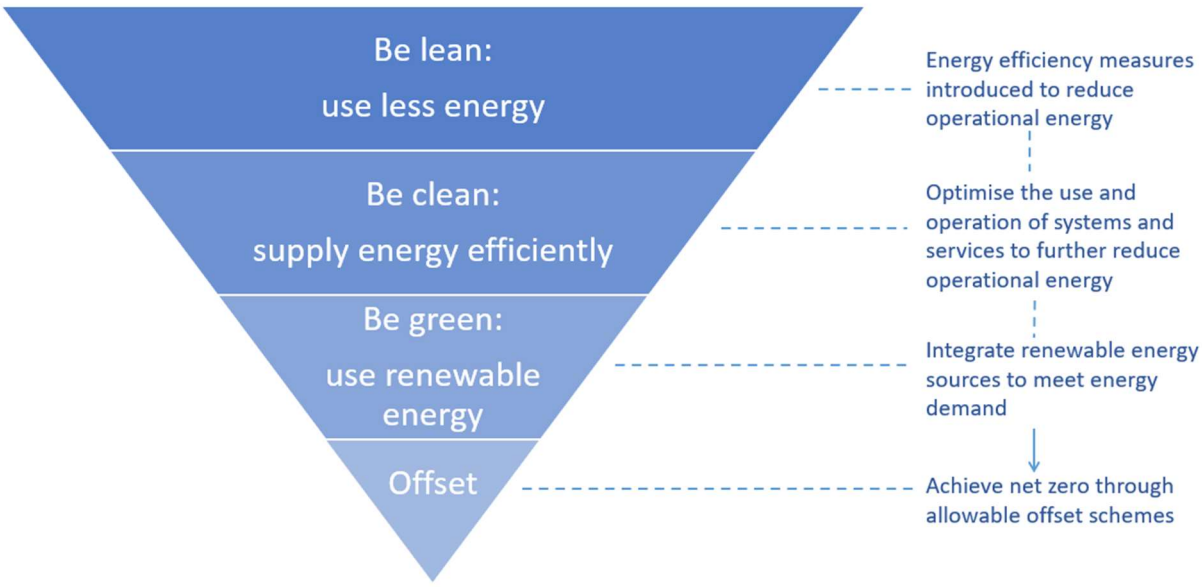
- Benefits beyond the boundary (D) - reuse, recycle and recover potential i.e. all emissions that can be avoided, typically as a result of diverting waste from landfill, essentially supporting a transition to a more circular economy.

We recognise that it is essential that we design and operate our assets efficiently to maximise resources and minimise environmental impact. Improving our estate and embedding best practise in new builds and refurbishment will help to reduce emissions and improve our internal environments.

For new build and major refurbishment projects, whole life carbon targets and/or objectives for each life cycle stage will be set by the Service. This will include ambitious Operational Energy Targets, Embodied Carbon targets and Whole Life Carbon objectives that will support SAS in their transition towards achieving Net Zero.

Through more robust facilities management we can monitor our existing estate to help develop, identify, prioritise and implement measures to reduce demand for energy.

We are committing to the **'Lean, Clean, Green'** approach across our estate, optimising the opportunity for a fully sustainable outcome.



Sustainable Communities

The climate emergency undermines the foundations of good health and deepens inequalities for our most deprived communities. The Scottish Ambulance Service touches every community in Scotland. We have a responsibility to use our abilities as a large employer, a major buyer, and one of the most recognised brands in the world – an ‘anchor’ organisation – to protect and support our communities’ health in every way that we can.

The Service in our role as an 'anchor institution’, is key to community wealth building. We are an employer with a strong local presence in an all areas across Scotland. We will use this role to exert influence through our commissioning and purchasing of goods and services, through our workforce and employment capacity, and by creative use of their facilities and land assets. All aiming to have a positive impact on social, economic and environmental change in an area.

We are committed to maximising the five core principles to community wealth building including:

- Progressive procurement – developing local supply chains of businesses likely to support local employment and keep wealth within communities.

- Fair employment and just labour markets – using anchor institutions to improve prospects of local people.

- Shared ownership of the local economy – supporting and growing business models that are more financially generative for the local economy.

- Socially just use of land and property – developing the function and ownership of local assets held by anchor organisations, so local communities benefit from financial and social gain.

- Making financial power work for local places – increase flows of investment within local economies by harnessing and recirculating the wealth that exists.

We are committed to building upon our role as an anchor institution in communities across the country both rural and urban locations.

The redevelopment of our Glasgow South Ambulance Station provides us with an opportunity to develop our asset to benefit the wider community, and we are using this model as a flagship across similar urban communities.

Conclusion

This annual plan sets out the current position, work in progress and aims of the deliver of our ‘path to net zero’ 2030 strategy.

We have developed a delivery plan with clear actions over the life of our strategy with a key focus over the next 12 months on:

- Identifying and applying to designated funding schemes to support the financing and mobilisation of activity that supports our transition to net zero - this will include a review of the Scottish Government's Heat in Buildings Strategy. Applications and approvals to date for pre-capital grant funding is to survey Paisley Ambulance Station to assess decarbonising options (August 2022). A bid has been submitted and approved for LED upgrade to sites within Fife, Forth Valley and Borders. BID submitted by end of December 2022 for ED Lighting Replacement for the remaining estate over a 2 year period.
- we will consider the potential savings of harnessing rain or grey water for reuse to support flushing demands and washing of vehicles
- we will utilise our sustainable procurement strategy and support staff training and awareness activities in support of meeting these targets and to ensure greater use of reusable items
- We continue to phase out the need for purchasing or leasing any petrol or diesel light commercial vehicles by 2025 and any vehicle by 2032.
- We are developing and implementing a sustainable transport and travel policy that supports us in achieving the above aims in an inclusive and supported way and that is tailored to and made bespoke for each of our sites, for promotion to our staff, the public and wider community.
- A detailed project plan is in place and progressing well with the electric vehicle charging roll out. This includes engagement with other blue light stakeholders & NHS for shared infrastructure where possible including 48 locations with charging infrastructure already installed
- Work in partnership with infection control and operational staff to identify further areas where circular economy principles can be adopted.
- Develop our green champions network and support and
- Progress the redevelopment of our South Station Ambulance Replacement