

Regenerative SEPA Routemap 2022-2024

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Our Goal and Targets


OUR GOAL


Within this decade SEPA aims to reduce all of its emissions and impacts to zero or net zero while, at the same time, taking actions that repair the environment. We call this “Regenerative SEPA”. We will have achieved this goal when we have reduced our emissions and impacts as much as possible and when the positive effect of our regenerative actions to repair the environment are deemed to exceed any residual impacts.


OUR TARGETS


To help us become regenerative we have identified five long term targets to become net zero in emissions, water, materials and waste by 2030. These will be supported by annual targets (draft proposals below).



 **Emissions**
 Net Zero direct emissions by 2025
 Net Zero all emissions by 2030

 **Materials**
 Net Zero materials use by 2030

 **Water**
 Net Zero water use by 2030

 **Waste**
 Zero waste by 2030

Annual Emissions Reduction Targets

We will set interim annual targets for reducing our environmental impacts and emissions. For indirect emissions and impacts these will be set after we have established a baseline in 2022-2023.

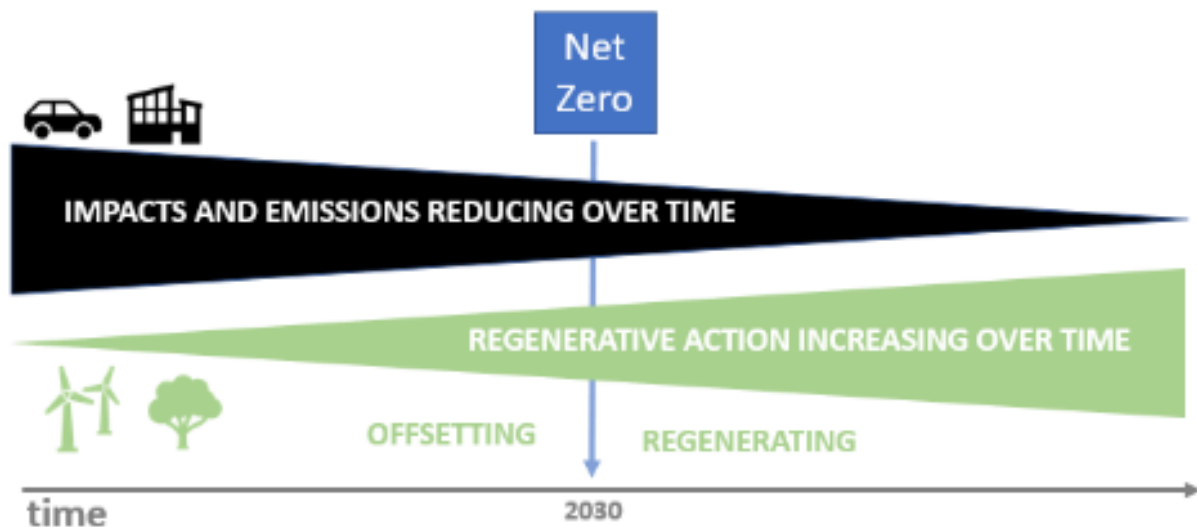
Year	Direct GHG emissions	Indirect GHG emissions, water use, materials use and waste production
2023	70% reduction from 2006/2007 baseline	Establish baselines for indirect GHG emissions, water use, materials use and waste production (subsequent targets will depend on these)
2024	80% reduction from 2006/7 baseline	Start measuring
2025	Achieve net zero	

2026	Continue to reduce emissions year on year thereby reducing amount of offsetting actions.	When 2023 baseline has been set a %age reduction target will be set for each year
2027-2030		
2030	Become a regenerative organisation with net zero greenhouse gas emissions, water use, materials use and waste.	
2030+	Continue to reduce all emissions. On-going implementation of offsetting projects to continually progress our regenerative status.	

Our Approach

We will integrate our Regenerative SEPA goal into every part of the business. It is the responsibility of everyone to deliver it. To integrate the goal most effectively, those leading key areas of work across the business will be empowered to build a regenerative approach into the things they and their teams are responsible for. A regenerative approach will therefore become an integral part of our service delivery, led by those that plan and deliver those services.

We will take action between now and 2030 to reduce all of our emissions and impacts as much as possible. Simultaneously, we will increase our work to offset residual impacts and regenerate the environment, starting with some pilot projects and then scaling up. This is illustrated in the diagram below.



Our Strategy

This is our first ever Regenerative SEPA Routemap. It sets out how we will turn our goal and targets into reality. It is a two-year routemap focused on the period 2022 – 2024. It sets out the strategy we will follow and the practical actions we will take to both build a clear foundation for the future and to take action where we can.

The imperative to act to reduce our impacts on the planet has never been more urgent. Through our core regulatory work under *One Planet Prosperity* we encourage businesses to reduce their environmental emissions and impacts and move beyond compliance. We must do the same ourselves and reduce all of the environmental impacts that arise as a consequence of us delivering our core regulatory work and other services.

We have already significantly reduced our own impacts. We more than halved our greenhouse gas emissions in the five years between 2014/2015 and 2019/2020¹. We did this by reducing emissions from our buildings and from our travel, by putting in place policies and by investing in new assets. This is a great achievement, it's something we are proud of which has often delivered wider benefits than simply reducing emissions. Some examples of work that we have already carried out are described in [Annex 4](#). We now need to build on this experience and go further, wider and faster.

SEPA's goal is to become a regenerative organisation by 2030. This means tackling our direct and indirect environmental impacts by reducing them wherever possible and, at the same time, taking actions that restore the environment. If we are successful in becoming regenerative we will effectively end SEPA's emissions and impacts. We will become a net contributor to the restoration of our planet, not simply content that we are no longer damaging it.

¹ As reported in annual public body GHG emissions reporting: [Reports \(sustainablesotlandnetwork.org\)](#)

In 2022-2024, our focus will be on three aims:

Aim 1: To fully understand our main emissions and impacts and to establish ways to measure them.

Aim 2: To set SEPA up for successful long-term delivery of regenerative actions that reduce our impacts and emissions.

Aim 3: To continue to take actions that reduce emissions and impacts where we can.

While these aims will be our focus for the next two years, we will always be guided by our long term goal and targets. We will adopt a flexible approach, taking the best opportunities wherever and whenever they present themselves.

Alongside this routemap we will have a detailed work programme of tasks that will deliver our goals, targets and aims. This will encompass a tracking system which is updated as progress is made and opportunities are identified. To ensure ownership and accountability many actions will also be embedded in functional business plans of SEPA teams.

Regenerative SEPA principles

All of our work to reduce our emissions and impacts and meet our regenerative goals and targets will be guided by the following principles:

- **Regenerative SEPA will be embedded into the activities, culture and decision making of the whole organisation.**
- **All staff will be empowered to play their part in achieving our goals.**
- **We will focus our work on where we can make the biggest difference.**
- **We will take opportunities to do the right thing as they arise, we won't delay action unnecessarily by waiting for information.**
- **We will work in a flexible and adaptable way, trying out new approaches and ways of working as we go and learning from our experiences.**
- **We will reduce our emissions and impacts by as much as possible before we consider offsetting.**
- **We will work in partnership and share our experience and progress with partner organisations in the public, private and voluntary sectors.**

Aim 1 – To fully understand our emissions and impacts and find ways to measure and report them

The strategy for 2022-2024 to deliver this aim is to establish simple, practical baselines and information gathering and measurement processes that allow us to easily record and report our progress, understand where more work is needed and to celebrate our successes

Every journey starts somewhere. To measure the progress that we are making towards the goal and targets we have set, we need to understand two key things:

1. *Our starting point* – where are our main impacts and how big are they? To understand this we need to identify the main sources of impacts we are going to target and baseline them.
2. *Measuring Progress* – how will we know how we are getting on? To understand this, we need to develop simple processes that measure the effects our actions are having.

For some of our emissions and impacts this will be straightforward - we have for example measured our direct greenhouse gas emissions for many years - but for others, particularly those relating to indirect impacts through our supply chain, this will be new and challenging.

We will therefore need to take steps to increase our capability to understand, monitor and measure our progress. It is not practical to measure every impact. Our approach will be to reduce as much as we can across the board but also to identify the most significant impacts so we can particularly focus on reducing them.

We have already agreed the sources of the impacts that we are including in our inventory (set out in [Annex 1 on Scope](#)). For each part of our inventory, we will establish a baseline and ways of measuring. This is explained in more detail in [Annex 2 – Measuring Progress](#))

Our regenerative goal and targets are meaningless unless we deliver. So, we need to know the impacts our actions are having. We've reported our direct emissions annually for two decades. We will continue to do this, but the pace and scale of our regenerative ambition requires a step change. Through our reporting we need: to inspire others to act; to provide

assurance that our actions are having the desired effect; and to be routinely challenged as to whether our actions go far enough.

The approach we are taking means that our progress will be integrated into our corporate processes for reporting. As well as numeric reporting, we will also explain our progress through stories, case studies and events that celebrate the successful achievement of milestones, projects and outcomes. Using the power of demonstration to inspire our teams and those that we work with will be an important part of how we report our progress.

AIM 1 - KEY ACTIONS FOR 2022-2024

- **Understand where all our main emissions and impacts are.**

We will do this by:

- Clarifying the definition for some impacts, particularly materials use and waste.
- Understanding most significant sources of our direct and indirect emissions and impacts.
- Creating an inventory for our most significant emissions, this will include our direct greenhouse gas emissions, our indirect emissions, water use, materials use and waste production.
- Agree an approach that enables us to identify and baseline the goods and services we will target for our supply chain emissions and impacts.

- **Establish a 2022/3 baseline and agree how to measure progress.**

We will do this by: measuring the sources of impacts included in each inventory and agreeing an approach to establishing a 2022/23 baseline from which we can measure progress and set targets.

- **Develop a simple accessible system to record and report progress.**

We will do this by: establishing simple, automated ways to collect data for us to measure and routinely report our progress.

- **Agree interim targets for indirect emissions, water use, materials use and waste to 2030.**

We will do this by: establishing emissions and impact reduction pathways once we understand and have baselined our indirect impacts. We will set interim targets where necessary to ensure that we keep the pathways on track.

- **Report our progress.**

We will do this by: Reporting annually on our progress through internal performance reporting, the Annual Report and through mandatory reporting of our work to meet the Public Bodies' Duties under the Climate Change (Scotland) Act 2009.

Aim 2 – To set SEPA up for successful long-term delivery of regenerative actions that reduce impacts and emissions

The strategy for 2022-2024 to deliver this aim is to:

- **Establish simple governance that provides clarity on the roles we expect everyone to perform and which integrates Regenerative SEPA into key decision making and policymaking.**
- **Involve all of our staff so that everyone knows what Regenerative SEPA means and how they can help to deliver it.**

GOVERNANCE

We will integrate our Regenerative SEPA goal into every part of the business. It will not be successful if it is seen as separate to our core work and the responsibility of a few to deliver. It is the responsibility of everyone to deliver it.

Regenerative SEPA will therefore be embedded into our Corporate Plans, Annual Operating Plans and our functional business plans. It will also be integrated into the governance, strategic direction, policy and investment decisions we make.

Our aim is for the regenerative ambition to be at the heart of who we are and what we do. It will be embedded throughout existing governance, built into our service delivery and led by those that plan and deliver those services.

This integrated approach also applies to decision making. We will not have a separate Regenerative SEPA decision making group. As we build back from both Covid and the cyber-attack, we will integrate regenerative ambitions into key decisions, particularly with respect to the future of work, procurement and developing our new way of working.

AMT will be lead decision makers for our regenerative work, including policies, priorities and spending. All significant policies and decisions will go through AMT and, where

appropriate, Board for approval – in doing so they will need to demonstrate how they embed Regenerative SEPA.

LEADERSHIP

This approach requires ambitious leadership from right across the organisation: from our community of 150 managers, from those that lead the delivery of our services, those that lead policy and from those that lead the vital support services upon which we all depend to do our jobs.

Becoming regenerative will ultimately require the commitment, enthusiasm and creativity of the whole organisation. Every staff member must understand what the Regenerative SEPA goal means for their job and feel empowered to take opportunities that will reduce impacts

Specific responsibilities are set out in [Annex 3 – Roles and Responsibilities](#).

INVOLVEMENT AND ENGAGEMENT

To succeed, we need everyone to feel ownership of our regenerative ambition. We need to provide all staff with opportunities to contribute their ideas and solutions towards a work programme which we can all commit to. We have consulted with staff, AMT and some key external partners over the content of this routemap.

Many of the changes we need to make to achieve our goal and targets will be the result of behaviours and choices we all make. We need to make sure that everyone is equipped with the information that empowers them to deliver our regenerative goal and to make the most sustainable choices in their work.

We don't have all of the answers to the challenges that becoming a regenerative organisation will pose. As well as the talents and experience of all of our staff we will need advice and help from others who have found great ways to reduce their impacts. Working with partners will therefore also be an important element in becoming a regenerative organisation.

Our focus for the 2022-2024 period will be on developing a range of accessible platforms for staff to engage with Regenerative SEPA work and to develop materials that provide guidance and support to everyone.

AIM 2 - KEY ACTIONS FOR 2022-2024

- **Integrate Regenerative SEPA into all relevant governance, decision making, policymaking and business planning.**

We will do this by: Ensuring that relevant governance processes build in consideration of how corporate policies and decisions take us towards our Regenerative goal and targets. This will be particularly important as we continue to build back these processes following the cyber-attack. This work may include establishing simple decision-making frameworks that help integrate Regenerative SEPA into our planning and decision making.

- **Develop specific corporate policies where necessary to achieve our regenerative goal.**

We will do this by: Reviewing and where necessary developing or redrafting specific SEPA policies that will be key to achieving our regenerative goal. In particular, we will review and update our travel hierarchy and our corporate environmental policy.

- **Deliver a communications and engagement plan.**

We will do this by: Implementing a programme that ensures we involve and engage people in planning and delivering our Regenerative SEPA work. This will include learning and development opportunities, support materials and events. We will explore opportunities to develop and roll out carbon literacy training for all staff. It will also include establishing regular ways to contribute through digital channels and the work of our Green Network.

- **Agree an approach to offsetting our residual impacts.**

We will do this by: undertaking research about the most robust and environmentally beneficial approaches for offsetting our residual emissions and impacts. This work will be driven by clear aims to ensure that all offsetting is last resort, genuinely additional and delivers multiple benefits. We will present options for agreement. Once the approach is agreed, we will commence the scoping and development of projects for approval.

- **Prepare an updated routemap for 2024-2026.**

We will do this by: Reviewing the progress we have made on this 2022-2024 routemap and updating and accelerating it. This routemap is focused on setting us up for delivery whilst continuing to get on where we can, however the 2024-2026 routemap will be firmly focused on implementation.

Aim 3 – To continue to take actions that reduce emissions and impacts where we can

The strategy for 2022-2024 to deliver this aim is to:

- **Build Regenerative SEPA into the transformational changes taking place to deliver *One Planet Prosperity*.**
- **Implement regenerative action into key functions and projects as we build back following the pandemic and cyber-attack.**
- **Ensure we make the right choices on decisions we need to take now so that they do not prevent us from reaching our goal.**

APPROACH

Although the focus of this 2022-2024 routemap is to lay the foundations for successfully achieving our regenerative goal, it is important that we still take opportunities to reduce our emissions and impacts now. Reductions made now will reduce our cumulative impact and are also likely to be more cost effective.

While our overall approach is to build our Regenerative SEPA goal into everything we do, there are certain areas of the business that will have a profound influence over achievement of our goal. This includes procurement, buildings, travel and operation of key infrastructure, such as our laboratories and science support hubs, our hydrometric network and our IS estate.

Low emissions and impacts need to be baked into how we build back following the global pandemic and the cyber-attack. We particularly need to ensure that our new cloud based IS systems, which will underpin work across the whole organisation, lock us into a low carbon trajectory for the future.

PROCUREMENT

One of the biggest changes brought in by our new goal is to account for our indirect emissions and impacts as well as those we have directly. This means that we need to

understand and take account of the impacts associated with the goods, works and services that we procure – our supply chain.

Our regenerative goal means that, as well as reducing the impacts associated with the things we buy, we also need to reduce the amounts we buy. We are already fundamentally reviewing how we deliver our procurement services and this will help to support achievement of our regenerative goal.

SEPA is not always a significant buyer in the markets that we procure from, however our role as Scotland's EPA will sometimes mean that we can influence wider change by demonstrating what is possible.

Many of our contracts and assets have a long life. Some decisions we take now will have a direct influence on our ability to achieve our goal and targets in 2030 so it is essential that we make procurement decisions now that avoid us being locked into long term contracts which give rise to high impacts and high emissions.

KEY ACTIONS FOR 2022-2024

Our procurement work can contribute towards our achievement of regenerative goals in two different ways:

- **By helping to determine the relative levels of impact** associated with different contracts and therefore prioritise where we focus action.
- **By directly working with units and teams across SEPA** to help them take account of regenerative impacts when procuring goods and services.

Work in both of these areas is already being taken forward by the procurement team in SEPA and will continue in 2022-2024.

FUTURE OF WORK

Our future of work vision has regenerative SEPA at its core. One of the key outcomes is that our workspaces will be low emissions and low impact, thereby helping us reach our goal of being a regenerative organisation.

KEY ACTIONS FOR 2022-24

Work to achieve the regenerative SEPA goals and targets will be embedded in the future of work programme over the period 2022-2024 and is likely to particularly focus on the following:

- **Phased re-opening of buildings** - Our workspaces currently represent the largest share of our greenhouse gas emissions and are the most significant contributor to our direct water use, materials use and waste generation. Regenerative SEPA (low emissions and low impact) will guide our decision making on the phased re-opening of our buildings and the future direction of our workspaces.
- **Staff travel** - Staff travel represents just under half of our emissions and reducing these will be essential to achieving our regenerative SEPA goals. The need to reduce emissions will be embedded into the future of work principle of 'digital first' in how we work and deliver our services so that we reduce staff travel overall in 2022-2024.
- **New ways of working** - As we recover from the cyber-attack and pandemic, and implement our future of work vision, we will deliver our statutory purpose in flexible ways which sustain 24-hour flooding and regulatory services response and support our goal to be a regenerative organisation. This will provide opportunities to review many of the ways that we work and make them as low impact as possible.

EVIDENCE HUBS

Our evidence hubs incorporate SEPA's laboratories (chemistry, ecology and microbiology), science support centres, workshops, response vehicles, the Sir John Murray, survey and field equipment. They have historically had a significant impact on our emissions due to their high levels of energy use, materials and chemicals consumption and waste production. The evidence hubs were, and continue to be, significantly impacted by the pandemic and cyber-attack. There is a significant opportunity now to embed regenerative SEPA considerations into operational procedures and processes as they are built back to full operational capacity.

KEY ACTIONS FOR 2022-2024

The following opportunities are likely to enable regenerative considerations to be incorporated as our evidence hubs become fully operational again over the 2022-2024 period:

- **Continuing existing work** - SEPA labs have already implemented and trialed a number of regenerative practices. These include using technology to reduce paper use, new cloud-based data storage systems and file storage protocols and establishment of a specific group for greening lab working. These will all continue and become embedded as we rebuild of our evidence hubs work.
- **Capacity and capabilities** - Regenerative considerations will be embedded as we review our evidence gathering and processing systems and associated equipment and consumables. We will explore opportunities to reduce our single use plastic usage through reuse and recycling.
- **Procurement** - We will embed regenerative considerations in any updates to or replacement of aging equipment. We will explore opportunities to reduce our overall procurement and review processes to ensure we only procure new consumables and equipment when absolutely necessary.

WATER ENVIRONMENT FUND

The WEF team has set an ambition to directly contribute towards the regenerative SEPA goal by ensuring that all the projects they take forward actively tackle, rather than contribute towards, climate change.

Together with internal and external partners, we will be looking at the WEF programme for opportunities to act now. They will also explore how net zero/regenerative actions can be embedded in existing governance and processes so that all projects meet the SEPA targets and timescales. A project is already underway which is exploring opportunities for WEF and hydrometry projects and net zero construction.

KEY ACTIONS FOR 2022-2024

Key areas likely to be included in the WEF team business plans over the next two years are:

- **Current Programme** - Looking for opportunities to act now on projects in the current programme, particularly with willing partners.
- **Reporting** - Exploring ways to measure and report emissions and environmental impacts associated with WEF projects.
- **Knowledge Sharing** - Working with internal and external partners to share knowledge in relation to net zero technology, particularly around construction.
- **Decision Making** - Working to embed net zero ambition into decision making for project appraisal, and project management guidance.
- **Procurement** - Working with procurement to encourage and incentivise net zero/regenerative goods, works and services.

HYDROMETRY

The Hydrometry team in SEPA is responsible for maintenance and operation of the network of hydrometric monitoring stations across Scotland. This network is widely dispersed and much of it situated in remote locations. This means that the hydrometry team is responsible for a significant proportion of SEPA's travel and construction works. Over the next two years work already underway to reduce the need to travel will be expanded to encompass other environmental impacts and indirect as well as direct emissions.

Key areas likely to be included in hydrometry business plans over the next two years are:

- **Reduce material use** - Explore new innovative technologies to reduce the need for concrete, increase the use of reclaimed or recycled materials and reduce waste.
- **Reduce travel** - Explore increased use of remote flow measurement using cameras, UAVs and satellites to see how we can harness these technologies to reduce our travel, we will continue our investment in increasing the resilience and adding redundancy

sensors to our sites in order to reduce the amount of reactive maintenance we carry out.

- **Sustainable procurement** - Explore ways to reduce the environmental impact from the supply chain and contractors, including use of lower impact materials and ways to reduce travel. Our Next Generation Telemetry System considers sustainability of the solution as a key part of the procurement.
- **Systems** - Continue to make data more readily available using a data sharing Application Programming Interface (API), and reducing the need for files to be shared and stored. Hydrometry will be an early adopter in SEPA of a cloud-based data archive. This will be in place by 2024, it will reduce the need for inhouse IS hardware and lower emissions as well as increase resilience and reliability.
- **Knowledge sharing** - We will continue to work with internal and external partners to benefit from their knowledge and experience, and share the learning from our pilots to help others embed Net Zero thinking.

Annex 1 - Scope

The following are the sources of emissions and impacts that are included within the scope of Regenerative SEPA. It is not practical to include in scope every impact. Trying to do so will mean spending too long working out how to do that rather than taking action on the biggest things. Our approach will be to reduce as much as we can across the board, but to identify the most significant areas of impact so we can target them. The detail in the scope below may change as the routemap is implemented and as we increase our understanding of the sources of our emissions and impacts, however the main principles will not change.

GREENHOUSE GAS EMISSIONS

Greenhouse gas emissions from all sources are included in scope. This includes emissions identified under scopes 1, 2 and 3 in the Greenhouse Gas protocol.



As public bodies in Scotland are now required to set a target date for achieving zero direct emissions, the scope of our emissions are split into direct and indirect sources to enable us to report this.

We have therefore set two targets for greenhouse gas emissions.

- Direct emissions include those from our buildings, our travel and the Sir John Murray.
- Indirect emissions include those embedded in goods and services we buy, water we use and emissions generated by others working on our behalf.

By 2025 we will have some residual emissions and we will use appropriate carbon removal schemes to offset these to become net zero. We aim to reduce this offset every year. The sources of emissions that are included are detailed below.

SEPA's DIRECT EMISSIONS (Scopes 1,2 and 3)	SEPA's INDIRECT EMISSIONS (Scope 3)
<p><i>SEPA Buildings, including offices, labs, stores and hydrometric network</i></p> <ul style="list-style-type: none"> • Electricity use / generated (Scope 2) • Gas use (Scope 1) • Biomass use (Scope 1) • Oil use (Scope 1) • Working from home energy use (Scope 3) <p><i>SEPA Travel</i></p> <ul style="list-style-type: none"> • Fleet vehicle and hire car miles (Scope 1 / 3) • BCM Mileage (Scope 3) • Sir John Murray fuel use (Scope 1) • Flight miles (Scope 3) • Ferry miles (Scope 3) • Rail miles (Scope 3) • Bus miles (Scope 3) • Taxi miles (Scope 3) • Commuting miles (Scope 3) 	<p><i>Buildings</i></p> <ul style="list-style-type: none"> • Emissions from water use in SEPA offices • Emissions from waste generated in SEPA offices (incl savings from landfill avoidance) • Emissions from manufacture/transport of the goods and services we will target for our supply chain emissions and impacts. • Rented meeting spaces / venues / overnight accommodation for staff <p><i>Projects</i></p> <ul style="list-style-type: none"> • Emissions associated with contractors working on SEPA's behalf • Emissions associated with significant projects <p><i>Travel</i></p> <ul style="list-style-type: none"> • Emissions associated with travel undertaken by those working on SEPA's behalf.

WATER

All water use, both directly and indirectly are included in scope.

This includes:

- Direct water use in our buildings.
- Indirect water use that is embedded in goods and services we buy and by others working on our behalf.

Water

Net Zero water use by 2030

By 2030 we will have some residual water use and we will use regenerative actions to offset these to become net zero. We aim to reduce this offset every year.

The sources of water use that are included are detailed below.

WATER USE

- Water used in SEPA buildings, including offices, labs and stores
- Water use in significant SEPA projects, including WEF projects, buildings maintenance, hydrometric network maintenance and upgrades.
- Water use by contractors working on SEPA's behalf.
- Water used in the extraction, manufacture and transport of the goods and services we will target for our supply chain emissions and impacts.

MATERIALS

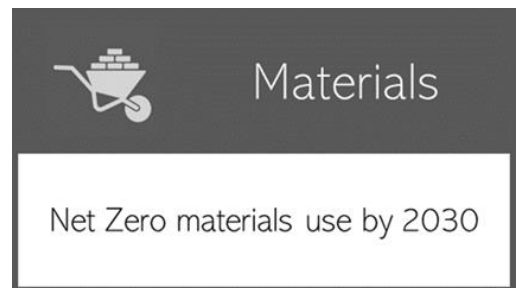
All materials use, both directly and indirectly are included in scope.

This includes:

- Direct materials use in our buildings and projects.
- Indirect materials use that is embedded in goods and services we buy and by others working on our behalf.

By 2030 we will have some residual materials use and we will use regenerative actions to offset these to become net zero. We aim to reduce this offset every year.

The sources of materials use that are included are detailed below.



MATERIALS USE

- Materials used in SEPA buildings, including offices, labs and stores – This will focus on those the goods and services we will target for our supply chain emissions and impacts.
- Materials used in significant SEPA projects, including WEF projects, buildings maintenance, hydrometric network maintenance and upgrades.
- Significant materials use by contractors working on SEPA’s behalf.

WASTE

All wastes generated, both directly and indirectly are included in scope. We will measure and take into account the routes by which SEPA’s waste is managed – reuse, recycling etc.



The scope includes:

- Waste directly generated in our buildings and from our operations.
- Waste generated that is embedded in goods and services we buy and by others working on our behalf.

The sources of waste that are included are detailed below.

WASTE

- All wastes directly generated by us in our buildings, including offices, labs and stores. This will focus on the most significant waste streams. This could include organic wastes, office consumables such as paper, electronic waste, hazardous wastes and office furniture.

- Wastes generated through significant SEPA projects, incl WEF projects, buildings maintenance, hydrometric network maintenance and upgrades. This could include construction wastes.
- Wastes indirectly produced by manufacturers and suppliers in production and transport of goods we procure. – This will focus on the goods and services we will target for our supply chain emissions and impacts.
- Significant wastes generated by contractors working on SEPA's behalf

REGENERATIVE ACTIONS

Any actions that result in a positive effect and which are additive - i.e. beyond what we do to reduce our emissions and impacts. The nature, scale and detail of regenerative actions will only emerge after we have completed early scoping work and explore opportunities. The following are examples of the types of emissions savings and impacts reductions that are likely to be included in our regenerative calculations.

- **Emissions** - Renewable energy generated on SEPA premises where the emissions savings exceed SEPA's GHG inventory.
- **Emissions** - Working with partners on a genuinely additional project that sequesters carbon through e.g. tree planting, soils and peatland restoration, novel solutions (e.g. seagrass)
- **Emissions** - Planting native trees on SEPA owned premises.
- **Water** - Water use reductions through specific actions with non SEPA regulated organisations – e.g. schools or communities.
- **Materials** - Specific actions to reduce plastic use by working with non SEPA regulated organisations – e.g. schools, communities.

Annex 2 – Measuring Progress

GREENHOUSE GAS EMISSIONS

We already understand our direct greenhouse gas emissions very well and have a baseline that extends back to 2006/2007. We have reported most of these for almost two decades and for the past seven years under the mandatory public bodies reporting process.

We currently have little data on our indirect emissions, particularly those associated with our supply chain. It is not practical to identify and measure embedded emissions in every product or service we procure. Our approach will be to identify the most significant sources of emissions so that we can set a baseline for these and then establish processes so they can be measured. Once that baseline is established we can set more specific targets, take actions and monitor progress. In some cases, indirect emissions will be measured through proxy data (e.g. average embedded emissions in products we measure). We will be working with other public sector agencies and Scottish Government to develop and implement protocols that are agreed for measuring supply chain emissions.

Target	Measured by	We will have met this target when...
Net zero direct emissions by 2025	Annual total CO ₂ e emissions from direct sources.	<ul style="list-style-type: none"> • Our direct emissions are reduced to as close to zero as possible from the actions we take. • We implement appropriate carbon removal schemes to offset residual direct emissions.
Net zero all emissions by 2030	Annual total CO ₂ e emissions from direct and indirect sources. (Where necessary these will be measured by proxy via a CO ₂ e metric).	<ul style="list-style-type: none"> • We have established a new baseline for our emissions from all sources. • Our combined direct and indirect emissions are reduced to as close to zero as possible due to the actions we take. • We implement appropriate carbon removal schemes to offset residual emissions.

WATER USE

We do not currently measure our water use and have little data, particularly that associated with our supply chain. Measuring our water use in buildings should be straightforward. However indirect water use will need to be measured through proxy data (e.g. average embedded emissions in products we measure).

It is not practical to identify and measure embedded water use in every product or service we procure. Our approach will be to identify the most significant sources so that we can set a baseline for these and then establish processes so they can be measured. Once that baseline is established then we can set more specific targets, take actions and monitor progress.

Target	Measured by	We will have met this target when...
<p>Net zero water use by 2030</p>	<ul style="list-style-type: none"> • Actual water use from meters in SEPA buildings. • Estimated water use for staff working at home. • Estimated water use embedded in goods we monitor through procurement. • Estimated water use by SEPA contractors. 	<ul style="list-style-type: none"> • We have established a baseline for our water use from monitored sources. • We have reduced our water use as much as possible and the regenerative work we do to reduce water use equals or exceeds our residual water use

MATERIALS USE

We do not currently measure any aspect of our materials use and therefore have little data, particularly that associated with our supply chain. It is not practical to identify and measure every material we use. Our approach will be to identify the most significant areas of materials use so that we can set a baseline for these and then establish processes so they can be measured.

In some cases, the volume of materials we use can be readily measured (e.g. units of paper or laptops or cubic metres of concrete), however in many cases, materials use will need to be measured through proxy data (e.g. materials used in products we measure). We need to establish a new baseline based on the products we identify as the most significant

ones to measure. Once that baseline is established, we can set more specific targets, take actions and monitor progress.

Target	Measured by	We will have met this target when...
Net zero materials use by 2030	<ul style="list-style-type: none"> Estimated materials use in goods we monitor through procurement. Estimated materials use by SEPA contractors. 	<ul style="list-style-type: none"> We have established a baseline for materials use from monitored sources. We have reduced our materials use as much as possible in the areas we monitor and the regenerative work we do to reduce materials use equals or exceeds our residual materials use.

WASTE

Prior to the closure of offices due to the pandemic we had a good understanding of waste generated in our buildings. Data were supplied by building management contractors and were augmented by periodic audits. This capability will need to be resumed as part of the re-opening of our estate.

We do not currently measure waste arisings associated with our supply chain. It is not practical to identify and measure where all wastes occur – which may include sourcing raw materials, manufacture, shipping, utilisation and decommissioning. Our approach will be to identify the most significant wastes embedded within products and services so that we can set a baseline for these and then establish processes so they can be measured.

Target	Measured by	We will have met this target when...
Zero waste by 2030	<ul style="list-style-type: none"> Actual waste arisings in SEPA buildings. Waste management routes for waste arisings (e.g. % recycled). Estimated waste generated in goods we monitor through procurement. Estimated waste generated by SEPA contractors. 	<ul style="list-style-type: none"> None of the waste we produce goes to landfill. We have reduced our waste from indirect sources as much as possible and the regenerative work we do to reduce waste equals or exceeds our residual waste.

Annex 3 – Roles and Responsibilities



Annex 4 – Case Studies

We have already made great strides in reducing our impacts on the environment. We are not at a standing start in our work to become regenerative. We need to build on work we have already begun, but we need to go further and faster. There are lots of examples that have already been taken forward, here is a selection.

TELEMETRY SITES

SEPA's network of 600 sites are often in remote locations. In the past all sites had to be visited routinely to change batteries and/or to fix equipment. To reduce mileage associated with visiting sites, we have installed:

- solar panels
- larger batteries
- equipment with reduced power demand
- double data loggers for backup in case of breakdown

90% of sites now have some of this technology in place. Alongside these improvements, we also now prioritise sites on a nationwide basis. As a result, staff are travelling less, emitting fewer greenhouse gases and are better able to plan workloads.

OFFICE HEATING AND POWER

It is routine practice to consider environmental impacts when SEPA makes decisions about fitting out offices. Many offices have now been better insulated, have PV panels installed and new heating systems. Installing solar panels reduced our direct greenhouse gas emissions by more than 14 tonnes CO₂e in 2019/2020.

REDUCING EMISSIONS FROM TRAVEL

Between 2014/2015 and 2019/2020 we reduced emissions associated with all of our travel by almost 20%. We did this by reducing staff mileage in private vehicles by about 50% and instead asked them to use to lower emission fleet and hire cars, and to think more carefully about

travelling to meetings. We also issued managers with team based milage reports on a regular basis and started to require the highest levels of authorisation for air travel.

TELEMETRY SENSORS

In 2019 we needed to replace our analogue telemetry sensors with modern, lower powered digital sensors to improve efficiency and future proofing. The aluminum casings for the old sensors were in good condition and potential suppliers were requested to propose solutions which reused them. Tenders which proposed casing reuse were scored more highly, the successful contractor is reusing the casings and upgrade of the telemetry network is now underway. This has been delivered at lower financial cost with reduced environmental impacts than would have been the case had new casings been required.

LABORATORY CALIBRATION CERTIFICATES

We are implementing new software to calibrate laboratory equipment which allows us to maintain electronic rather than paper-based records.

FUTURE FLOOD AND INFORMATION MESSAGING SERVICE (FFIMS)

In January 2022 we let a long-term contract for delivering FFIMS. This will run beyond 2030 and therefore have a direct impact on our ability to meet our goal. Regenerative requirements were included in the tender and in the tender evaluation. The successful contractor will work with SEPA to develop and implement an action plan to reduce environmental impacts of delivering the service and they will regularly report the environmental impacts of service delivery to us. An added bonus is that this will help the contractor to improve their understanding of impacts associated with delivering their services and be able to apply this knowledge to other contracts.

LED LIGHTING

LED lighting has been installed in many SEPA offices. LED lights can be more expensive than traditional ones but, the extra cost is balanced by reduced electricity use and longer lifespan.

They also provide a better quality of lighting. Lower cost, lower greenhouse gas emissions and better working conditions – what's not to like?

LABORATORY PROCUREMENT

We have recently been included in the Advanced Purchasing for Universities and Colleges (APUC) framework which allows for easier bulk ordering of consumables and chemicals. Accessing suppliers via the framework is already delivering resource efficiencies as well as a marked reduction delivery mileage and packaging. Other areas of the business could benefit from the APUC framework and we're keen to increase awareness of it.

GREENING EVIDENCE HUBS

A group of staff have been using the Laboratory Efficiency Assessment Framework (LEAF) to explore, identify, and implement sustainable practices within our evidence hubs. Staff have looked at options to reduce plastic use and are currently looking at ways to share materials with other labs through development of a Chemswap program.

CLEANING CONTRACTS

For many years SEPA has included innovation and environmental evaluation criteria for cleaning contracts. For example, service providers now make use of robotic equipment for special cleaning services (for example in labs), they use electric vehicles and they use local providers to reduce travel. Changes like these mean that our cleaning services are delivered with reduced environmental impact. An added benefit is that cleaning contractors who have worked for SEPA are able to share their experience of reducing environmental impacts when delivering other contracts.

Annex 5 - Glossary

Term	Meaning
Regenerative	<p>Being regenerative recognises that it is not enough to simply avoid damaging the environment, it means that overall we contribute to its repair. It means that our positive work to enhance the environment more than offsets any residual adverse impacts that it gives rise to.</p> <p>It is important that action we take to reduce our environmental impacts does not give rise to unintended side effects. This is an important benefit of us including all of our water, waste and materials impacts, as well as our greenhouse gas emissions, in our regenerative target.</p>
Net zero	<p>The term 'net zero' is predominantly used with respect to greenhouse gas (ghg) emissions. In the context of a Regenerative SEPA however, net zero represents when we have reduced our impacts as much as possible and when the outcomes from the offsetting actions we take are calculated to equal any residual impacts.</p> <p>For example, we can significantly reduce our water demands but will not be able to become absolute zero water use. However, through targeted non regulatory actions that enable others to save water we can become net zero water use where our share of these reductions are deemed to offset our residual water demands.</p>
Offsetting	<p>Although our focus will always be to try to reduce our impacts by as much as possible it is likely that we will have some residual impacts and emissions. We will need to take action that 'offsets' these residual impacts.</p> <p>Offsetting actions will counteract any residual emissions or impacts that we are unable to reduce to absolute zero. As we progressively reduce</p>

	<p>our emissions and impacts to bring them closer and closer to net zero we will need to offset less and less.</p>
<p>Direct greenhouse gas emissions</p>	<p>Our direct greenhouse gas emissions are emissions from:</p> <ul style="list-style-type: none"> • our buildings, including our offices, labs, stores and hydrometric network; • all our business travel using public transport, fleet and private vehicles, taxis, Sir John Murray; • commuting to work; • working from home. <p>Our direct greenhouse gas emissions include emissions that would be defined as being in scopes 1, 2 and 3 of the Greenhouse Gas Protocol.</p>
<p>Indirect greenhouse gas emissions</p>	<p>Our indirect greenhouse gas emissions are emissions associated with products or services that we buy to do our work. They include emissions associated with:</p> <ul style="list-style-type: none"> • water use and waste production in our offices; • manufacture and transport of goods and service we purchase; • goods, travel and services used by contractors working on our behalf. <p>Our indirect greenhouse gas emissions all fall under scope 3 of the Greenhouse Gas Protocol.</p>

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