



2024-2029

LFRS Environmental Sustainability Plan

Plan 1

Executive Summary

Climate change is already having an impact on the Fire and Rescue Service; we are responding to new risks, such as wildfires, and new technologies designed to address climate change, including electric vehicles, lithium-ion batteries, and highly insulated buildings. Rising temperatures will have the greatest impact on the most vulnerable in our communities, such as reducing food and water availability.

Changing heating systems, insulating buildings, moving to an alternatively fuelled fleet and planting trees is essential in contributing to net zero, however, environmental sustainability is so much wider.

This plan aims to outline Lancashire Fire and Rescue Service's commitment to minimising its impact on the environment and to provide a clear approach and overall vision to the progress of actions that will contribute to the long-term achievement of Net Zero.

This is the first of five, 5-Year Plans in the journey to Net Zero by 2050.

The Climate Change Act 2008 commits the UK government to reduce greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050 whilst the Paris Agreement commits the UK and other countries to a global temperature rise this century of well below 2 degrees Celsius above pre-industrial levels.

Since launching our Carbon Management Plan in 2009 we have made good progress in terms of reducing our carbon footprint, however we recognise there's more work to do, and this plan outlines the initial actions we must take as a Service to continue to play our part in reducing our environmental impact as an organisation.

The new plan outlines aspirations in the following areas:

- Buildings
- Transport and Travel
- Procurement
- Operational Response
- Training and Communication
- Biodiversity and Habitat Protection

In this, the first 5-Year Plan, our focus will be on understanding where we are now and what our immediate next steps might be. This involves understanding our current emissions and the opportunities for reductions and to share this information to inform appropriate decision making.

Our commitment to high environmental performance is embedded throughout our key strategic documents, including the:

- Community Risk Management Plan
- Strategic Assessment of Risk
- Response strategy

The LFRS Environmental Sustainability plan sits alongside the existing Climate Change Operational Response Plan which is developing and building our capabilities and resilience in relation to operational incidents and our response in Lancashire.

Introduction

The aim of this plan is to outline LFRS commitment to minimising its impact on the environment and to provide a clear approach to the progress of actions that will contribute to the long term achievement of Net Zero. This is the first of five, 5 Year Plans in the journey to Net Zero by 2050.

The National Fire Chiefs Council have published an Environment, Sustainability and Climate Change Toolkit for use by the Fire and Rescue Sector. The aim is to enable the sector to share a range of research, data, information, good practice and case studies.

Their vision is to “Protect our communities ... Protect our planet ... Protect our future.” In developing this Environmental Sustainability Plan, LFRS have made extensive use of the toolkit¹.

We need our world and communities to be sustainable, not just for our generation but for future generations. It is easy to focus on the immediate and the local. It is harder to see that our actions now will have an impact in the UK, and a more significant impact in other parts of the world, not just today but in the future. This is a leadership challenge that is facing everyone on the planet.

Rising temperatures will have the greatest impact on the most vulnerable in our communities, such as reducing food and water availability. Climate change is already having an impact on the Fire and Rescue Service; we are responding to new risks, e.g. wildfires, and new technologies designed to address climate change, e.g. electric vehicles, lithium-ion batteries and highly insulated buildings.

Traditional thinking may lead us to conclude that the answer lies in changing heating systems, insulating buildings, moving to an electric fleet and planting trees. While this work is essential in contributing to net zero, environmental sustainability is much wider.

Protecting the environment and mitigating and adapting to climate change are key parts of creating a sustainable future. However, Fire and Rescue Services do not exist to be sustainable. They exist to reduce risk and vulnerability through prevention, protection, and response activities. We have the choice as to whether to deliver this in a sustainable way, but sustainability, like equality, diversity and inclusion, is not a self-confined objective. It cuts across all areas of our work.

For prevention, the most vulnerable to fires and other emergencies are also likely to be at risk due to climate change. 1.2 billion people live somewhere that will be uninhabitable because of heat by 2050. This will result in a transient population and increased numbers of vulnerable people in need of help. For protection, building construction, heating and insulation methods will change, creating new and emerging risks. Our response activities will also change, responding to more extreme flooding, storm and wildfire events. Hot and dry periods could lead to changes in soil structures and risk of building collapse.

How we enable our prevention, protection and response activities will need to change. To support Net Zero our buildings will need to change, and our vehicles will need to be fuelled in different ways. Our procurement will need to consider sustainability.

¹ Parts of the toolkit have been utilised directly or adapted within sections of this plan, including this introduction.

This challenges our way of leading, our way of thinking and our way of acting. It is too big to be solved by a few. However, it presents a chance for greater collaboration within the Fire and Rescue Sector and with our emergency service partners.

Current Research, Data and Information

The Paris Agreement² was developed in 2015. It commits the UK and other countries to a global temperature rise this century of well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. The United Nations has said that the implementation of the Paris Agreement is essential to the achievement of the sustainable development goals.

The United Nation's Intergovernmental Panel on Climate Change 6th Report³ has said that human-induced warming had already reached about 1.1 degrees Celsius above pre-industrial levels. Their 2021 report set out, with a high degree of confidence, that:

“The rise in weather and climate extremes has led to some irreversible impacts as natural and human systems are pushed beyond their ability to adapt.”

The Intergovernmental Panel on Climate Change has identified a number of far reaching risks with a global increase in temperature to 1.5 degrees Celsius. These become more acute if the global temperature is raised by 2 degrees Celsius, including:

- Drought
- Flooding
- Wildfires
- Heatwaves
- Water supply
- Rising sea levels
- Marine biodiversity
- Fisheries and ecosystems
- Species loss and extinction
- Risks to health and livelihoods
- Human security
- Food security
- Economic growth

Scientists stated that a northern hemisphere summer as hot as 2022 would have been “virtually impossible” without global heating and led to a record drought.

Key Legislation

The Climate Change Act 2008⁴ commits the UK government to reduce greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050.

² <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>

³ <https://www.ipcc.ch/assessment-report/ar6/>

⁴ <https://www.legislation.gov.uk/ukpga/2008/27/contents>

The Environment Act 2021⁵ is the UK framework for environmental protection. It allows the establishment of new environmental laws about air quality, biodiversity, water quality and wider environmental protection. The Environment Act 2021 also allows for new powers to set binding targets for key environmental themes, including air quality, water biodiversity and waste reduction.

The Act allows DEFRA to deliver a wider range of environmental policies, and enables a legal framework for reforms to waste and recycling services. It also places requirements on Local Authorities for key themes about the environment.

Signing-up to the Emergency Services Environment and Sustainability Charter

The Emergency Services Environment and Sustainability Group (EESG) includes members from UK Police Forces, Fire & Rescue Services, Ambulance Services and other Emergency Services.

Working collaboratively as a member of the EESG, LFRS recognises the need to work towards a set of common goals and aspirations, to embed sustainability within the organisation, and contribute towards achieving national and international sustainability objectives.

The EESG Charter has adopted the United Nations Sustainable Development Goals to provide a consistent framework with consideration to all areas of sustainability, with key goals linked under the People, Planet and Public Purse headings.

By embracing this Charter LFRS is agreeing to embed sustainability considerations throughout our organisation, recognising that this Environmental Sustainability Plan works hand in hand with the requirements of The Charter.

⁵ <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>

Our journey so far

Carbon Management Plan

Since 2009 LFRS have been monitoring use of gas, electricity, fleet vehicle fuel and water on all our sites. Conversion factors were applied using a toolkit to generate a carbon emissions total with the target of reducing this by 40% (initially by 2020 and then extended to 2030). The conversion factors for emissions were kept constant and therefore never fully reflected any changes such as decarbonisation of the grid, however based on this toolkit, as of 31st March 2024, fuel, gas and electric emissions had reduced by 25.4%. Water emissions had reduced by 30.1%. All this had been achieved within departmental budgets and part of business as usual with no specific additional funding for works to reduce carbon emissions.

The actual reductions in use over this period are as follows:

Gas (kWh)	43%
Electric (kWh)	15%
Vehicle Fuel (litres)	15%
Water (m ³)	30%

Since launching our Carbon Management Plan we've made good progress in terms of reducing our carbon footprint, however we recognise there's more work to do, and this plan outlines the initial actions we must take as a Service in order to continue to play our part in reducing our environmental impact as an organisation.

Fleet Progress

Whilst work goes on nationally and internationally to produce a viable alternately fuelled fire engine that can meet the needs of the modern fire and rescue service, there are opportunities within the rest of the fleet which are becoming more readily available. To date, the Fleet and Engineering Services Department, have introduced 4 electric vehicles into the pool, 17 self-charging hybrid cars for flexi-duty officers and are currently awaiting an electric van to trial in Service and 9 additional plug-hybrid cars for flexi-duty officers. The electric vehicles are supported by the installation across the estate of 15 electric vehicle charging points.

Property Progress

An extensive programme of works has been completed by Property Department including loft insulation, drying room upgrades, window and door upgrades and installation of LED lighting. These improvements prepare our buildings to use less fuel. Early on in the Carbon Management Plan, many boilers and controls were upgraded to improve energy efficiency.

At the outset of the Carbon Management Plan, it was anticipated that the SHQ building would be merged with STC, generating carbon emissions savings due to no longer running an aging and somewhat inefficient building. SHQ and STC generate the most carbon emissions from gas and electricity, together making up 28% of this total based on today's conversion factors. Hanger 54 on our Training Centre site is our first Net Zero building, constructed and operational in 2021.

Travel and Commuting

Due in part to the changing working arrangements required in response to the covid pandemic, LFRS has made considerable advances in reducing unnecessary work related travel. With the widespread use of Microsoft Teams for meetings (both local and nationally) and the ability for home working in certain roles, many journeys have been saved. Currently emissions related to commuting and business travel outside of fleet vehicles, are not captured and therefore there is further work to understand the environmental benefits of this progress and to explore potential further benefits.

Environmental Management System and ISO

The LFRS Safety, Health and Environmental Management System is based on internationally recognised standards including, for environment, International Standard for Environment Management Systems ISO 14001:2015.

LFRS utilises a UKAS accredited external audit process to provide assurance of the effectiveness of the environmental management system to the internationally recognised ISO standard. Since initial certification in November 2011, surveillance visits have been conducted annually and re-certification every three years to maintain the external certification.

The audit scope was for 'The Provision of Fire, Rescue and Supporting Services across Lancashire'. This broad scope encompasses all LFRS activities with audit visits to the SHQ site, Service Training Centre, fire stations operating different duty systems together with several supporting departments.

ISO standards have a range of clause requirements, which identify how an organisation should manage different environmental aspects and issues within the workplace.

LFRS continues to achieve certification for ISO14001:2015.

Zero to Landfill for General Waste

The Waste Hierarchy⁶ is the cornerstone for LFRS best practice of its Waste Management Policy. LFRS expects their waste contractor to follow the principles of the Waste Hierarchy by prioritising prevention, reduction and reuse, followed by recycling and recovery and finally viewing disposal to landfill as the least desirable option. LFRS aim for zero to landfill.

Our current contractor, Suez Recycling and Recovery UK, has pioneered the circular economy as a concept and business model. They have re-engineered and diversified their business. Today, they are resource managers, power generators, fuel manufacturers, commodity traders and a supplier of high-quality products – from compost to solid recovered fuel. They are committed to extracting as much value as possible from their customers waste. In the UK they are investing in new facilities and advancing technologies such as waste gasification, anaerobic digestion and smart management of water networks, including advanced energy software.

Our waste management cannot be considered separately to our procurement activities, as procurement of goods will always raise the question of end of life and final disposal. Procurement tender exercises have continued to consider environmental and sustainability aspects when evaluating submissions. Wider life cycle environmental benefits have been realised through contract reviews and tender returns to focus on ensuring environmental sustainability.

⁶ Appendix D

Climate Change Operational Response Plan

Our Climate Change Operational Response Plan aims to address the increasing threat of flooding and wildfires, lessen the impacts on communities and public services, and improve firefighter safety when dealing with these emergencies.

We plan to:

- Expand on existing research into all-wheel-drive appliances suitable for off-road travel to address the challenges posed by flooding and wildfires.
- Trial these appliances over the course of the emergency cover review period in areas of the county at high risk of flooding and wildfires.
- Introduce specialist flood water incident managers to support large-scale flooding incidents and two tactical advisors who will form part of national fire and rescue resilience arrangements.

Environmental Protection

National Operation Guidance is made available electronically on the UKFRS website. The information and guidance provided is designed to support fire-fighters, managers and trainers in their work at operational incidents, training events and during day-to-day activities within the fire and rescue services. The guidance is supported by a Handbook which provides technical, scientific, legal and practical advice on how, when and where to consider environmental impact. LFRS has included this information as part of the Standard Operating Procedure 80 (Environmental Protection) document which has been aligned to the requirements of the current national guidance on Environmental Protection.

LFRS has transitioned bulk foam stocks fully to fluorene free type foam during 2022, removing PFAS risks from the bulk foam pods. Appliance based foam stocks currently remain utilising Angus Petroseal foam, however this has been changed to C6 technology which are not subjected to the usage restrictions of the previous C8 derivative Petroseal foam. A review is underway with a change to fluorine free foam on appliances being planned.

Environmental Champions

We currently have 45 Environmental Champions across the Service. This is a role that sits within any other role, not a role in itself. The main purpose of the Environmental Champion role is to influence others. Our Champions are people who have a passion and concern about the impact we have on the environment. They promote relevant messages such as reducing energy use and waste and improving recycling. Environmental Champions encourage others to make changes in their daily lives and question practices they feel might be damaging to the environment.

A calendar of environment and sustainability promotions is provided each year for Environmental Champions and each quarter, a quarterly promotion is created, displayed at SHQ and shared with Champions to replicate on station.

Aims and aspirations

LFRS will continue to consider environmental aspects as part of all our activities both during operational response and our wider organisational activities. All our existing core strategies are aligned to this plan.


The overarching target for this Environmental Sustainability Plan is to reduce carbon emissions to net zero no later than 2050. Net-Zero⁷ refers to a state in which greenhouse gases going into the atmosphere are balanced by removals out of the atmosphere.

	Plan Phase 1 Aspiration	Adopt a Net Zero carbon emissions vision for LFRS by 2050.
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Whilst as we move along our Net Zero path, the steps to reaching this goal will become clearer, in this first 5 Year Plan, our focus will be on understanding where we are now and what our immediate next steps might be. This involves understanding our current emissions and the opportunities for reductions and to share this information to inform appropriate decision making. We will need to identify the costs associated with this action and how this might be funded.

LFRS recognise that not all answers are available to us now and many changes are expected in the future. Being mindful of the severe consequences of inaction, we must not allow this uncertainty to prevent progress towards the target.

Interim Target

	Plan Phase 1 Aspiration	Progress interim targets for use of gas, electric, petrol and diesel in line with the original Carbon Management Plan.
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The Carbon Management Plan aimed to reduce carbon emissions from buildings and fleet, with the stated reductions in usage given on page 6 of this plan, working towards a 40% reduction by 2030. The actions detailed below are to ensure we continue to work towards this aim.


Over the duration of this plan, we will:

Area	Action	Monitor and Measure	Responsible/Lead
Gas	Ensure usage of gas or other fossil fuels for heating does not increase above the 40% reduction already achieved compared to the baseline year.	<ul style="list-style-type: none"> Gas/fossil fuel boilers or heating systems are not installed in new-build property. Explore future options for retrofitting of heat pumps to replace fossil fuel heating systems. 	Head of Property

⁷ Institute of Environmental Management and Assessment Pathways to Net-Zero Course Learner Notes, 2022

Area	Action	Monitor and Measure	Responsible/Lead
		<ul style="list-style-type: none"> Explore future options for removal of gas ovens and hobs. 	
Electric	Reduce usage of electric by 40% by 2030 compared to the baseline year.	<ul style="list-style-type: none"> Identify sites for installation of onsite renewables to achieve reduction in grid electricity. Explore options to combine with battery storage. 	Head of Property
Vehicle Fuel	Reduce use of the petrol and diesel by 40% by 2030 compared to the baseline year.	<ul style="list-style-type: none"> Move to electric vehicles for cars, vans and mini bus. Explore installation of HVO (Hydrotreated Vegetable Oil Fuel) as alternative to diesel at STC. 	Head of FES

Transport and Travel

	Plan Phase 1 Aspiration	Prepare for the ban on the sale of new internal combustion engine (ICE) cars and vans.
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Over the duration of this plan, we will:

Area	Action	Monitor and Measure	Responsible/Lead
Transport	Increase number and use of electric and hybrid vehicles (cars and vans) and consider adding livery to promote the reduced impact on the environment from these vehicles.	<ul style="list-style-type: none"> Number of electric vehicles. Reduction in direct vehicle (fossil) fuel use. Utilisation of electric pool/fleet cars compared to ICE vehicles. 	Head of FES
Transport	Expand electric vehicle charging infrastructure across the estate, whilst also considering arrangements for charging electric vehicles off-site and at partner	<ul style="list-style-type: none"> Number of EV charging points and number of sites with EV charging points. Understanding of interoperability of 	Head of FES/ Head of Property

Area	Action	Monitor and Measure	Responsible/Lead
	agency sites, including reciprocal arrangements.	chargers with consideration to future alignment. <ul style="list-style-type: none"> Development of ability to recharge wider vehicles eg staff and non-LFRS, with suitable recharge of costs. 	
Transport	Review of driver training to ensure 'eco-driving' is embedded within delivery including elements such as unnecessary idling.	<ul style="list-style-type: none"> Details provided of how eco-driving is included in driver training and how these elements are assessed. 	Head of FES/Head of Leadership & Development
Transport	Ensure LFRS are aware of potential future technologies including alternatively fuelled fire appliances.	<ul style="list-style-type: none"> Update provided to include possible and potential future options, considering costs and benefits. 	Head of FES
Travel	Consider extension of incentives for staff to undertake greener travel. Currently limited to Cycle to Work salary sacrifice.	<ul style="list-style-type: none"> Options outlined to include EV salary sacrifice, car sharing, bike storage including for e-bikes (including charging). 	Environmental Sustainability Group (ESG)
Travel	Clear understanding of Service position and relevant technologies/working practices regarding agile/flexible working, attendance in person at meetings or other potentially unnecessary journeys ⁸ .	<ul style="list-style-type: none"> Look at ways to represent staff commute and include in carbon emissions reporting. Survey staff on flexibility of working arrangements and unnecessary travel. 	Environmental Sustainability Group (ESG)

⁸ Travel Hierarchy – Appendix A

Buildings

	Plan Phase 1 Aspiration	Develop a de-carbonisation strategy for LFRS buildings.
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Over the duration of this plan, we will:

Area	Action	Monitor and Measure	Responsible/Lead
Buildings	Explore the costs and benefits to procure our energy via a green tariff that comes from 100% renewable sources.	<ul style="list-style-type: none"> • Presentation of options at appropriate level. • Understand the value and how this contributes to targets and future investment nationally. 	Head of Property
Buildings	Continue to maximise the environmental benefits and impacts of maintenance works and projects. ⁹	<ul style="list-style-type: none"> • Record kept detailing all relevant improvements eg replacements windows, LED lighting, insulation etc. 	Head of Property
Buildings	Undertake a Service wide feasibility study for options to reduce carbon emissions related to our building use.	<ul style="list-style-type: none"> • Individual reports for each site detailing costs, pay back and reduction in carbon emissions. • Collaboration with PFI providers to explore the same on these 6 sites. • Realise benefits of existing BMS, including remote access and consider cost/benefit/payback of expanding across estate. 	Head of Property/ Head of ICT
Buildings	Develop a funding strategy for carbon emission reduction across the LFRS estate, including evaluating available grant funding.	<ul style="list-style-type: none"> • Funding model developed to allow environmental enhancement of building performance and carbon reduction. 	Environmental Sustainability Group (ESG)

⁹ Energy Hierarchy – Appendix B

Area	Action	Monitor and Measure	Responsible/Lead
Buildings	Amended specifications for energy and water contract renewals to include: <ul style="list-style-type: none"> Expanding to entire estate the use data from installed automatic metering to identify the most inefficient buildings on the estate. Delivery of proactive water management reducing usage and costs.¹⁰ 	<ul style="list-style-type: none"> Contracts renewed to include elements outlined. Data available to assist prioritisation of remedial actions to reduce emissions. Reduced energy and water use. 	Head of Property/ Head of Finance & Procurement
Buildings	Review LFRS sites for climate resilience to ensure all relevant environment aspects are addressed, such as pollution prevention, adjacent watercourses, ecologically sensitive areas and those at risk of flooding.	<ul style="list-style-type: none"> Individual reports for each site detailing relevant aspects, risk and recommendations. Collaboration with PFI providers to explore the same on these 6 sites. 	Head of Property/ Head of SHE/ Head of Service Improvement

Procurement

	Plan Phase 1 Aspiration	Embed sustainable procurement principles into LFRS purchase of goods, works and services.
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Over the duration of this plan, we will:


Area	Action	Monitor and Measure	Responsible/Lead
Procurement	Raise awareness amongst staff and the supply chain of the importance of sustainable procurement ¹¹ such as: <ul style="list-style-type: none"> discuss with suppliers the possibility of a more sustainable version of current purchases (eg, furniture with a higher recycled content) or less 	<ul style="list-style-type: none"> Cost savings may be realised through sustainable procurement by focusing on whole life costing methods for sourcing goods and services. Encourages innovation amongst the supply chain to 	Head of Finance & Procurement / Head of SHE

¹⁰ Water Hierarchy – Appendix C

¹¹ [Developing a Sustainable Procurement Strategy | CIPS](#)

Area	Action	Monitor and Measure	Responsible/Lead
	<p>environmentally harmful products (eg unbleached paper hand towels).</p> <ul style="list-style-type: none"> • Embed in procurement processes full life cycle of product including re-purpose, return or recycling at end of life, which should be determined prior to purchase. • Challenge suppliers on non-returnable packaging rather than rely on internal re-use and recycling. 	<p>think of alternative ways to manage waste and add value.</p> <ul style="list-style-type: none"> • Sustainable supply chains minimise business disruption from environmental, social, and economic impacts. 	
Procurement	<p>Evaluation of LFRS procurement processes by an environmental specialist to evaluate how well the principles of sustainable procurement are embedded and identify options for improvement within LFRS.</p> <p>A future impact assessment will consider the full life-cycle of a product and the associated costs and impact on the environment.</p>	<ul style="list-style-type: none"> • Develop/research options for supplier engagement including understanding whether our suppliers measure and take steps to reduce their carbon footprint. • Develop and implement assessment method. 	Head of Finance & Procurement / Head of SHE


Operational Response

	Plan Phase 1 Aspiration	Maintain and improve our operational response activities which protect the environment within Lancashire.
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Area	Action	Monitor and Measure	Responsible/Lead
Operational Impact	<p>Understand the impact of our operational activity on the environment and identify areas for development eg:</p> <ul style="list-style-type: none"> • Impact of fire fighting use of water 	<p>Develop a framework for Environmental Impact Assessments that are appropriate to use for:</p> <ul style="list-style-type: none"> • Introduction of new equipment and procedures. 	Head of Service Improvement

Area	Action	Monitor and Measure	Responsible/Lead
	<ul style="list-style-type: none"> • Current and proposed firefighting procedures, techniques and technologies. • Use of firefighting foam. • Impacts from training activities. 	<ul style="list-style-type: none"> • Changes to training exercises and operational procedures. • Recognise the essential balance of operational need with environmental impacts, whilst looking for opportunities to reduce negative impacts. 	
Operational impact	Continue to assess and develop appropriate response to increase in wildfire, flooding and storm related incidents.	<ul style="list-style-type: none"> • Delivered by the CCORP. 	Director of Service Delivery

Training and Communication

	Plan Phase 1 Aspiration	Improve LFRS staff understanding of environmental issues, climate change and our vision to reach Net Zero.
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Over the duration of this plan, we will:

Area	Action	Monitor and Measure	Responsible/Lead
Training and Communication	Further strengthen our Environmental Champion Engagement with refreshed input options and relevant knowledge development.	<ul style="list-style-type: none"> • Review results of survey and implement items, such as Teams Groups, improved information on Engine House and flexible training options. 	Head of SHE
Training and Communication	Ongoing environment and sustainability communication campaigns to refresh knowledge, promote behavioural change and highlight that small changes make a difference.	<ul style="list-style-type: none"> • Annual programme of promotions supported by Environmental Champions and promulgated via Routine Bulletin, Engine House and notice boards. 	Head of SHE

Other

Area	Action	Monitor and Measure	Responsible/Lead
Biodiversity and Habitat Protection	Develop a Biodiversity Policy to incorporate grounds maintenance requirements, arrangements for wildflower areas, hedgehog friendly sites and other opportunities to improve outdoor spaces, reduce habitat harm and improve wellbeing.	<ul style="list-style-type: none"> • Publication of policy. • Review of grounds maintenance contract. • Introduction of wildflower areas. • Introduce mechanism to measure biodiversity net gain. 	Head of Property/ Head of SHE
Reporting	Review how we record and report on our carbon emissions including what is included within the scope.	<ul style="list-style-type: none"> • Reviewed methodology and scope. • Prepare for setting of interim targets. 	Head of SHE
Collaborating	Continue active involvement in the UK Emergency Services Environment and Sustainability and NFCC Environment, Sustainability and Climate Change Groups. Consider sign up to ESESG Sustainability Charter.	<ul style="list-style-type: none"> • Regular Meeting attendance and feedback. • Review of benefits of sign up to Charter. 	Head of SHE
Funding	Explore potential funding and resourcing opportunities to enable progress with required improvements.	<ul style="list-style-type: none"> • Present options. 	Head of Finance & Procurement / Head of SHE

The Importance of Adaptation

The UK Government’s 3rd Climate Change Risk Assessment states that “To achieve net zero, we must integrate adaptation action into mitigation efforts. Successful mitigation will in turn ensure adaptation remains achievable”.

Limiting carbon emissions is the most effective way to combat climate change, but while mitigation might save the planet, it is adaptation, preparing for climate shocks, that will save millions of lives. Adaptation should be a cornerstone of any net zero ambition, not as a competing priority but as roots to a tree. There are two main elements we need to achieve, adaptation and mitigation. Adaptation is where we change our practices to adapt and reduce our vulnerabilities to future climate change. Mitigation is where we reduce and prevent the release of greenhouse gasses into the atmosphere in the first place.

Unfortunately, global land temperatures have already risen by about 1.1°C, and further increase is inevitable due to the carbon emissions of the past. Temperatures will soon be teetering on the edge of +1.5°C, which is the most optimistic international goal, with +2°C in sight.

We are increasingly seeing the devastating impacts of increasing floods, heatwaves, droughts and wildfires across the world. In the UK, we are already experiencing extreme weather, rising sea levels and sustained increases in temperature that disrupt lives, livelihoods and nature. We need to be clear that neither +1.5°C nor +2°C increases are 'safe'. The IPCC has shown that the global impacts of even +1.5°C are significant, and the severity of climate impacts increase rapidly as temperatures go up (IPCC, 2018). An increase of +2°C may sound similar to +1.5°C but it is much, much worse for people and the environment. In the UK, the Climate Change Committee has also shown that England faces substantial climate impacts under +2°C.

The speed and inevitability of climate impacts mean that adaptation must be central to all environmental planning – 'business as usual' approaches that disregard climate change are simply not viable, and our thinking needs to change faster than the climate.

Governance and reporting

Our mechanism for identifying and reviewing performance internally is undertaken within our Health, Safety and Environment Advisory Group meeting (HSEAG). The SHE Department collate and produce reports on environmental matters, which can be raised at quarterly HSEAG meetings, whilst in the first instance, discussions and progress will be reviewed at Environment and Sustainability Group (ESG) Meetings.

The function of the ESG is to ensure LFRS achieve the Service's net zero target as detailed in this plan. This group, previously known as Carbon Management Team, was initially established to create and manage projects under the Carbon Management Plan. The ESG provides a forum where management can bring together their knowledge, skills and experience in pursuit of future sustainability for the Service.

Every year through the HSEAG meeting, we agree a SHE Audit and Development programme which sets out the aspects of the health and safety, and environmental management systems which are going to be evaluated and reviewed. We report and evaluate the findings of our internal audit process at the HSEAG meeting.

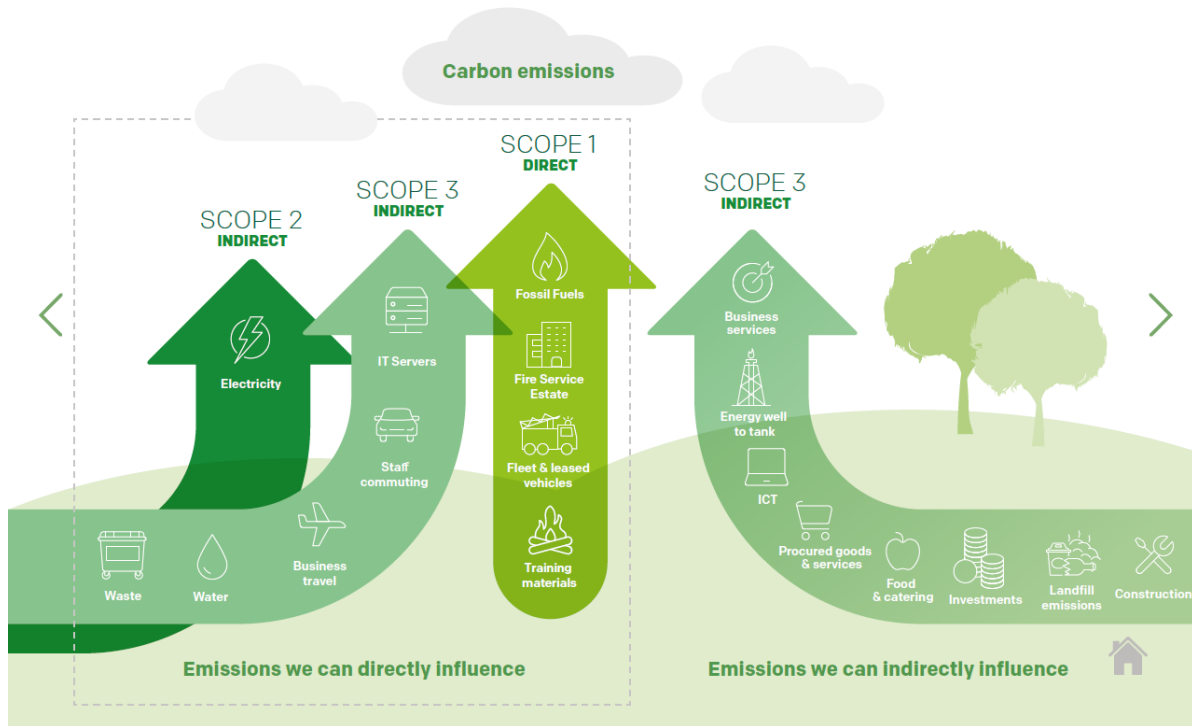
A key mechanism for reporting this Environmental Sustainability Plan to the Combined Fire Authority will be through the Annual SHE Report.

Greenhouse Gas Accounting

Greenhouse gas accounting is used to understand an organisation's emissions from greenhouse gases. Typically, greenhouse gas accounting enables an organisation to understand its direct and indirect carbon footprint. Greenhouse gas (or carbon) emissions are broken down into scope 1, scope 2 and scope 3 emissions. When aggregated, emissions from these sources make up an organisation's carbon footprint.

LFRS current greenhouse gas reporting focusses on a limited scope, defined around 15 years ago and baselined in 2007. Moving forward as we look to expand the scope of our reporting, it is important to maintain the flexibility to adjust this as new information becomes available and changes in the way we operate occur. Focussing an overall carbon footprint figure is not always useful and LFRS will look to implement a reporting dashboard that reflects progress across a number of areas set against a new baseline year.

Scope 1, 2 and 3 emissions – an overview



Scope 1 includes emissions from sources that an organisation owns or controls directly, eg, burning of gas for heating buildings or fuel for running fleet vehicles and including bottled fuels such as LPG and paraffin.

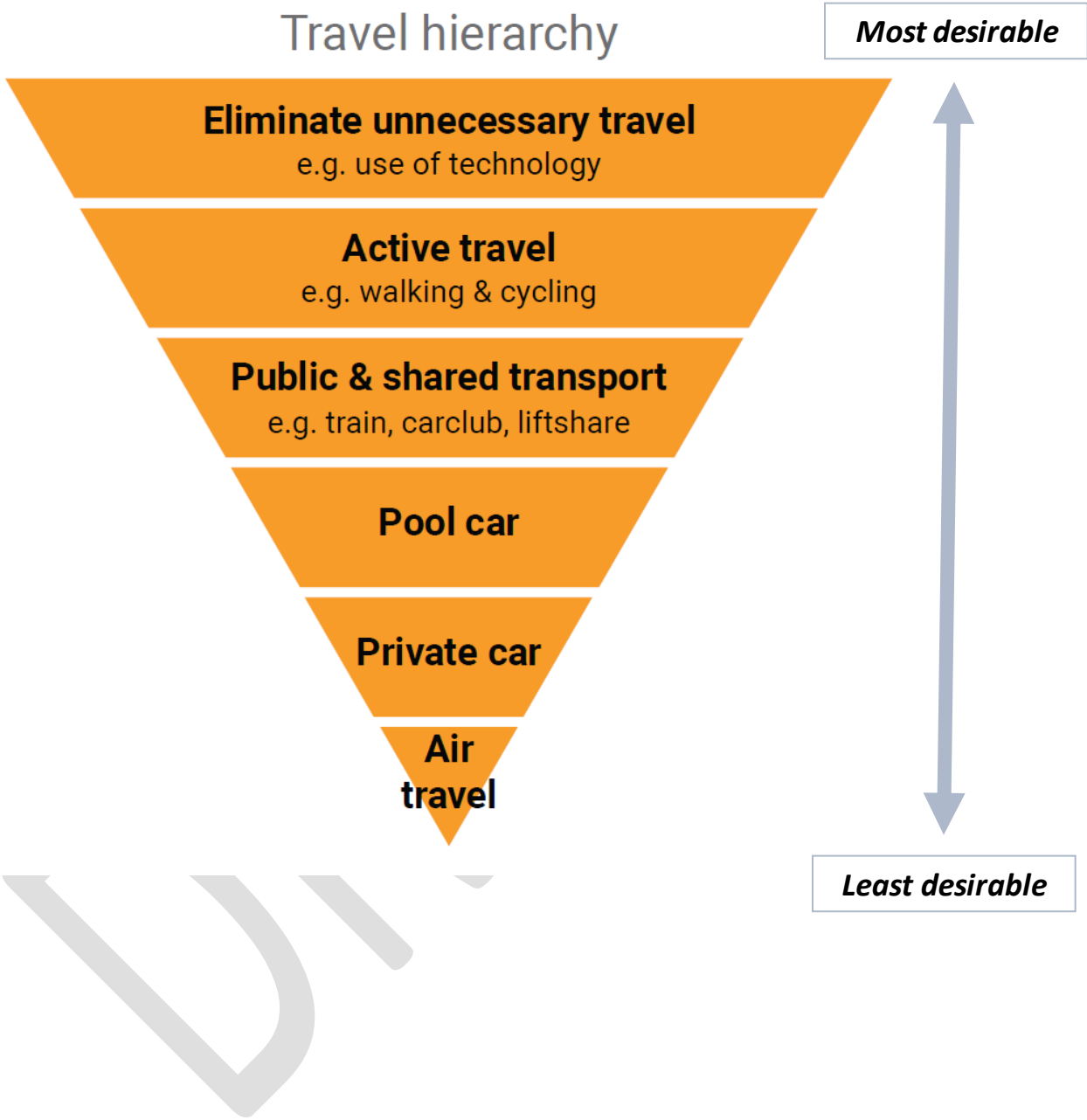
Scope 2 includes emissions that an organisation causes indirectly through purchased energy.

Scope 3 includes emissions that occur within the organisation value chain. These can occur from downstream and upstream sources. Our organisation supports and influences a wide range of activities and services such as investment funds, employee commuting, business travel and procured goods and services. These emissions are known as scope 3 emissions which are emissions that occur within our value chain, over which we have influence but not direct control. It is our commitment to start mapping and, where feasible, quantifying these emissions as a means of identifying our high impact areas that require actions to reduce them.

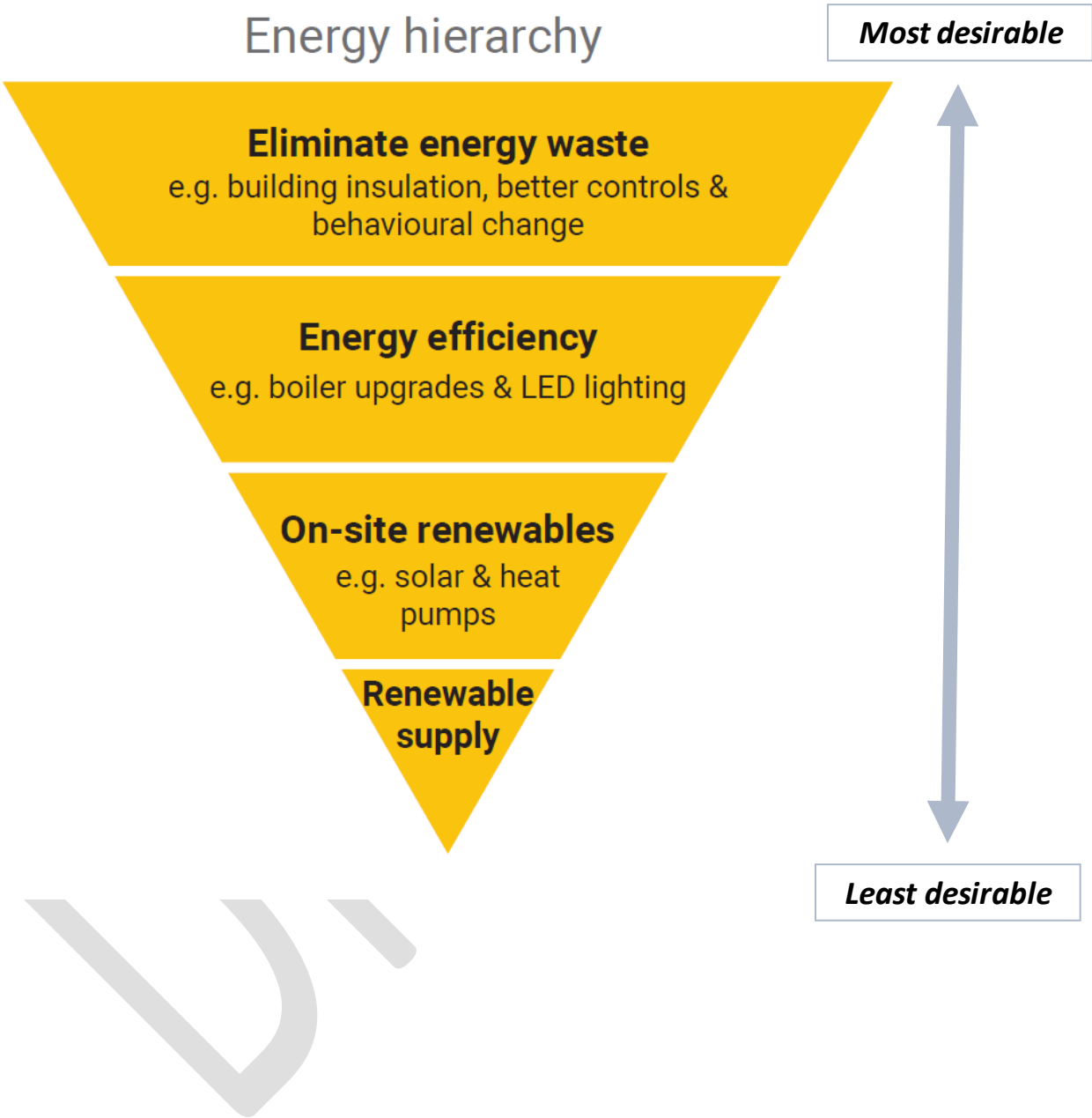
We will seek to understand the scope and organisational boundary for emissions, collecting activity metrics from a variety of internal sources. These will be converted into carbon emissions using established carbon factors, such as the ones found on the gov.uk website.

DRAFT

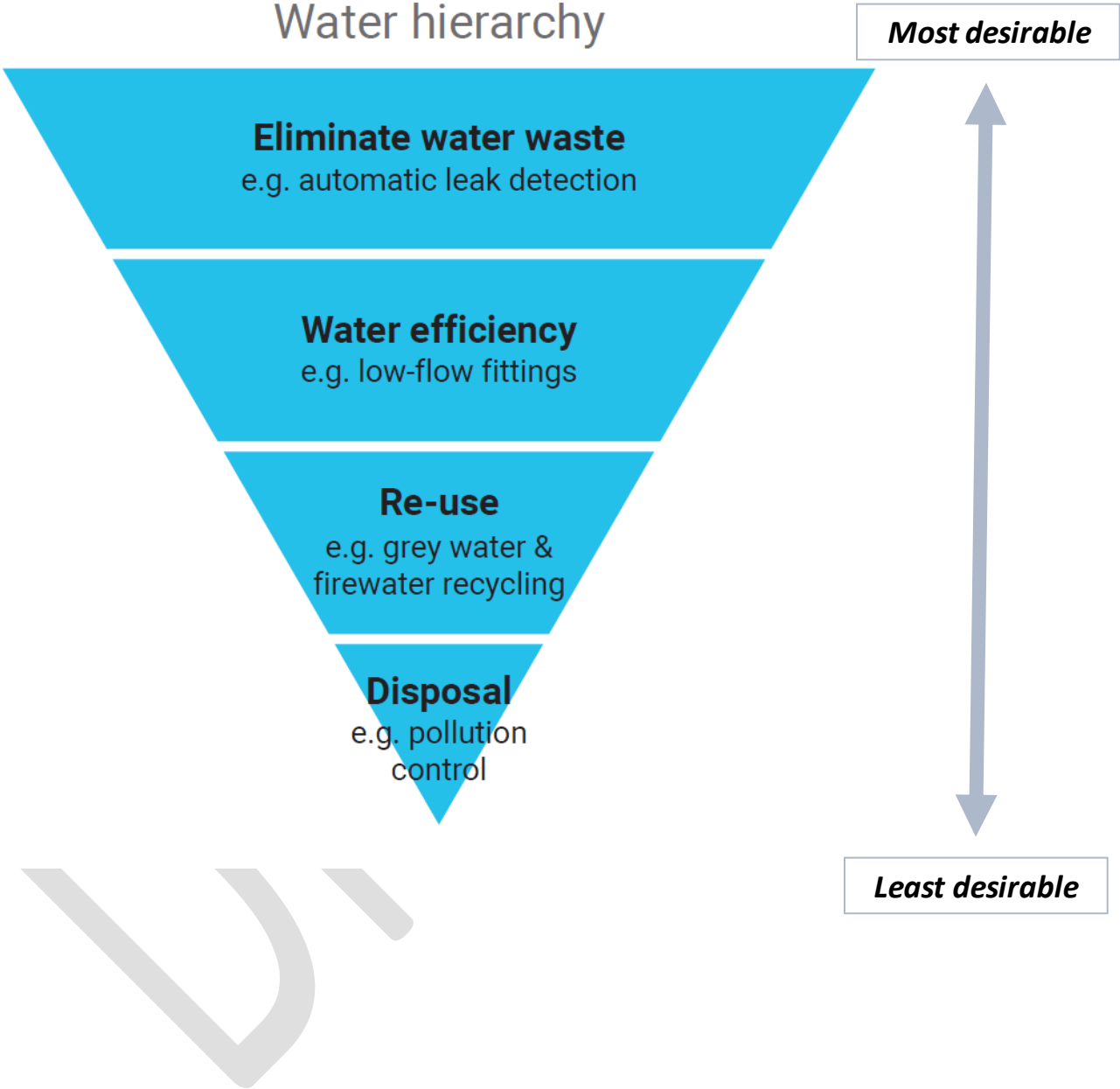
Appendix A – Travel Hierarchy



Appendix B – Energy Hierarchy



Appendix C – Water Hierarchy



Appendix D – Waste Hierarchy

